



**ASSESSMENT OF VEHICLE DISPOSAL METHOD (END-OF-LIFE VEHICLES):  
IN THE CASE OF DEFENSE VEHICLES ADMINISTRATION SERVICE  
DEPARTMENT**

**BY  
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DEPARTMENT**

**A THESIS SUBMITTED TO THE SCHOOL OF GRADUATE STUDIES OF ADDIS  
ABABA UNIVERSITY SCHOOL OF COMMERCE IN PARTIAL FULFILMENT FOR  
THE REQUIREMENT FOR THE DEGREE OF MASTERS IN LOGISTICS AND  
SUPPLY CHAIN MANAGEMENT**

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Addis Abeba

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**DEPARTMENT**

A thesis Submitted to the School of Graduate Studies of Addis Ababa University in Partial Fulfillment of the Requirement for the Degree of Master of Art in Logistics and supply chain management

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Examiner (External) Signature

# **DECLARATION**

I declare that the thesis work entitled

“ASSESSMENT OF VEHICLE DISPOSAL METHOD (END-OF-LIFE VEHICLES):

IN THE CASE OF DEFENSE VEHICLES ADMINISTRATION SERVICE DEPARTMENT”

is my original work that all sources of material used for the work have been duly acknowledged.

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**SOLOMON WERETA SISAY**

**(The Student Researcher)**

## ***Abstract***

*The purpose of this study was to assess the vehicle disposal method (end-of-life vehicles) in the case of defense vehicles administration service department .For this purpose a sample of 20managers and 122employees' respondents were drawn through simple random sampling technique. Self administrative questionnaires and document analysis were used to gather data. Data obtained through questionnaire has been analyzed with descriptive statics (mean and frequency). The study revealed that the method of disposing unused vehicles in defense vehicle administration hasn't simple and clear method of dispose vehicles. Findings indicated that the majority of the respondents were acknowledging the practice of vehicle disposal conducted by DVAS. Disposal of vehicles without techniques, directive and scientific method However, there were challenges and limitations. Inadequate training for employees, insufficient store, and lack of knowledge to dispose unused vehicles were some of the major problems of disposing vehicles. The study concluded that the organization should using techniques Therefore, it has been recommended that vehicle administration service shall be use techniques to dispose unused vehicles shall be planned and designed systematically in order to address these constraints. It is also important the courses shall be delivered based on the managers and employees educational level. Thus, it has been recommended that the training and development need assessment need to be properly conducted and training policy, guide line, manuals, producers and structures shall be developed in order to conduct effective unused vehicles disposal. Generally, the study suggested that the method of disposing unused vehicles have to be strategic and systematic in order to achieve the desired objectives.*

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## TABLE CONTENT

<b>Title</b>	<b>page</b>
Abstract-----	V
Table of content-----	ix
Abbreviation/acronyms/-----	x
<b>Chapter One: Introduction</b>	
1.1 Background-----	1
1.2 Statement of the problem -----	2
1.3 Objective of the study. -----	3
1.3.1 General objective. -----	3
1.3.2 Specific objective-----	3
1.4 Significant of the study-----	3
1.5 Scope of the study-----	3
1.6 Limitation of the study-----	4
1.7 Definition of terms -----	4
1.8 organization of the paper-----	5
<b>Chapter Two: Related literature Review</b>	
2. Theoretical literature review-----	6
2.1 End of life vehicle global problem-----	6
2.2.1 Physical inventory-----	7
2.2.2. The importance of physical inventory -----	7
2.2.3. Inventory period-----	8

2.2.4. Types of inventory-----	8
2.3. Disposal of fixed asset-----	9
2.4. Definition of disposal-----	9
2.5. Reason to dispose fixed assets-----	10
2.6. Criteria of vehicle disposal-----	11
2.7. Disposal method -----	12
2.8. Method of disposal in Ethiopian context -----	13
2.9. Directive of vehicle administrative -----	13
2.10. System of dispose vehicle-----	14
2.11. The use of disposing fixed asset-----	14
2.12. Defense supply manual-----	15
2.13. Empirical literature review-----	16
2.13.1. The disposal of junk (unused) vehicle-----	16
2.13.2. Disposal of university vehicle-----	16
2.13.3. The end life of vehicles directive-----	16
2.13.4. Disposal vehicles regulation-----	17
2.13.5. Popular method car disposal-----	18

**Chapter 3 Research Design Methodology**

3.1. Research design -----	20
3.2. Population of the study -----	20
3.3 Sample size and sampling technique -----	20
3.4. Data source-----	21

3.5. Data gathering tools -----	21
3.5.1. Questionnaire -----	21
3.5.2. focus group dissection-----	22
3.5.3. Document analysis-----	22
3.6. Method of data analysis-----	22
3.7. Procedures of data collection-----	22

**Chapter 4 Presentation, Analysis and Interpretation of Data**

4.1. Characteristics of respondents-----	23
4.2 Respondents' response on the techniques of disposing unused vehicles-----	25
4.3 Research participants' response on the impact of unused vehicle-----	30
4.4 Research participants' response on the use of disposing unused vehicle-----	33

**Chapter five Summary, Conclusions and Recommendations**

5.1 Summary of Major Findings-----	35
5.2 conclusions-----	36
5.3. Recommendation-----	37
<b>Reference-----</b>	<b>39</b>
<b>Appendixes-----</b>	<b>40</b>
<b>Questionnaire-----</b>	<b>42</b>

## List of Tables

### Tables Contents page

Table 1.Description of Respondents by Sex, Age and Educational level -----	23
Table 2.Techniques of disposing unused vehicles by Respondent -----	25
Table 3.The impact of unused vehicle by Respondents-----	30
Table 4.the use of disposing unused vehicle by Respondents -----	33
Table -5 Amount of unused vehicle in warehouse of vehicle administration service-----	41

## **ACRONYMS AND ABBRIVATIONS**

FAMUPB – Fixed asset management unit of public body

VOSA – Vehicle operator and service agency

ETS – Engineer technical sub-committee

DVLA –Driver and vehicle licensing agency

PVS- Pre-accident value

FAMS-Fixed asset management system

MOND- Ministry of national defense

PDMO- Property disposal management office

DFAC-Department fixed asset coordinator

ELV- End of life vehicle

MS- Most member state

ASR- Automotive shredder residue

VAT-Value add tax

PB-Public body

F and A- Finance and Administration

ATF- Authorized treatment facilities

V.A.S –Vehicle administrative service

40720 – Project Name In Ethiopia National Defense

## CHAPTER ONE

### Introduction

This chapter includes background of the study, statement of the problem, objectives of the study, significance of the study, delimitation of the study, limitation of the study, organization of the study and definition of key terms.

#### 1.1 background of the study

Ministry of national defense has mission to protect the sovereignty of Ethiopia from any internal and external invasions. To accomplish this mission Ministry of National Defense has organized a variety of operations. Among there unit Department of Vehicle Transport is taking the major part. These mission needs to have different military type's vehicle and other types of vehicles to provide service for military operations. Defense vehicle administration service department take over this mission to store, receive, distributed, and dispose the vehicles. The department was first nominated as supply and delivery main department (1983-1995E.C) it was subunit of maintenance and transport department. At that time, the aim of establishment was to receive, store, maintain, supply, and dispose different vehicles in different part of military unit which were thrown at the Durge regime due to war. In 1996 E.C the department was re-established as vehicle administration service. the main objective of the department is to administer different vehicles which received from purchase, captured from enemy, and donated vehicles to collect and supply the vehicle based on administrative order and operational requirement of defense force to secure and to use them which full capacity (personnel document, 2004 E.C).The department disposed unused and damage vehicles 18 round, 17 round sold by open bid and 1 round transferred to metal Engineering corporation as a raw materials. The department makes these all effort; there is still 1500 unused vehicle at DeiberZit warehouse. The vehicle administration department administer different vehicle both those which are giving service and out of service for so many years. In addition, unused vehicle also have protection and security costs. This cost also transfer as social problems, on the one hand, the vehicle take high space which is used for other service on the other. It is real cost as depreciations for ministry of National Defense in general and Defense vehicle administration service in particular.

## 1.2 Statement of the problem

Final placement or riddance of waste, excess, scraps, etc. under proper process and authority with (unlike in storage) no intention to retrieve

(<http://www.businessdictionary.com>)

Disposal may be accomplished by abandonment, destruction, internment, incineration, donation, sale, and etc. (according to Ethiopia federal negaritgazeta proclamation no.649/2009) and

In addition, according to council of ministers financial regulation no 17/1997 disposal of public property shall be done in accordance with directives of the ministry of finance.

Vehicles system takes the major part to accomplish any military operations. The system has different phases and activities. Among them military vehicle disposal is one. Disposing need specialized skill, knowledge and plan to increase the performance of the department in general. Employees' and the employer in particular when the management uses the techniques strategically to Control material management functions properly handling vehicles in all units. The transport unit is responsible for the procuring vehicles to supply on-time, thus preventing costly disruption in operations. The V.A.S department is also responsible for controlling thousands of vehicles and manage optimum and minimum inventory levels of vehicles while maintaining fully supplied company operations. Material lead time might be shortened with good communication among material sub-functions. Greater control of vehicle will be reducing obsolescence (D.W Dabbler, 1984 PP: 283).

Currently, there are about 1500 unused or depreciated vehicles in V.A.S department. This leading to increases inventory cost. The V.A.S department need to reduce the administrative and depreciation cost and the paper intend to study the current practices of vehicle disposing mechanisms of Ethiopian defense force vehicle administration service department. Therefore, the study intended to answer the following research questions.

1. What are the techniques the department using to dispose vehicles?
2. To what extent does the vehicle limit the efficiency and effectiveness of the department?
3. Does the department identify the use of disposing unused vehicles?
4. What is the impact of unused and depreciated vehicles reveal in department?
5. What experience does the department have in disposing vehicles?

### **1.3. Objective of the study**

The general and specific objectives of the study are intended as follows

#### **1.3.1. General objective**

The general objective of the study is to investigate vehicle disposal system and techniques for Ethiopian Defense force in vehicle administration service department.

#### **1.3.2. Specific objectives**

The specific objective of the study will be:

- To investigate the impact of unused and depreciated vehicles of the department:
- To assess method of disposing vehicles:
- To analyze the efficient and effective use of vehicles at Ethiopian defense force vehicle administration service department :
- To investigate the objectivity and competence of managers' require how to dispose vehicles:
- To know the experience of the department disposing method and requirement the vehicles.

### **1.4 significance of the study**

The researcher believes that the research would have the following significances:

- 1) It can serve as literature feedback the policy formulators to redesign or revise the current disposal system of department to take necessary remedial action.
- 2) It will help the manager and top executive of Ethiopian defense force vehicle administration service department in Ministry of Defense for their awareness implementing and disposal system.
- 3) The research will be used stepping stone for further study.

### **1.5. Scope of the study**

The study will be confined only Ethiopian defense force department of vehicle administration service. The researcher believes that the problem would have been studied thoroughly but the researcher is compelled to be confined to Defense logistics main department vehicle administrative service. The study focuses only on one of the prominent activities of vehicle disposal method that is disposal of vehicle which has high impact on achievement of the department goals and objectives. Furthermore this study tried to assess only the method of disposal method since 2009 E.C.

## 1.6. Limitation of the study

The study would have the following limitation

- Lack of organize document.
- The entire staff are not considered as sample size
- Unavailability of research paper on the topic area

## 1.7. Definition of terms

1. Vehicle is self-propelled that travels on land. It usually has four wheels. An engine provides the power to move the vehicle. The automobile or car carries people primarily for their personal transportation (Willaim H.Donad Anglin,2005)

2. Unused vehicle is according our context by different reasons completely out of its service. It may to reach its end of life, heavy damage, obsolescence and etc.

3. Cannibalize is

A) To take salvageable part from (as disabled machine) for use in building or repairing another machine

B) To make use of (a part taken from one thing) in building, repairing, or creating something else (<http://www.merriam-webster.com/dictionary/canniblize> May 2017)

4. Scrap is found to be damage, destroyed, or in any other way having no recoverable value will be accumulated and disposed of (Ethiopian federal government procurement and property administration proclamation).

5. Disposal is more often than not the purchasing and supply operation is assigned the responsibility of handling the disposal of scrap and surplus materials (D.W. Dobler,1998)

6. Manager is cumulative body of information that furnishes visions on how to manage. The term management can also refer to the individuals who guide and direct department or the correct devoted to the task of guiding and directing department (Samuel C.carto and Roy.E. Crummer gradute,2000)

7. An employee is a person who works in the service of another person under an express or implied contract of hire, under which the employer has the right to control the details of work performance (Black's law Dictionary). An employee is hired for a specific job or to provide labor and who works in the service of someone else

(<http://biztaxlaw.about.com/od/glossarye/g/employeedef.htm> May.2017).

### **1.8. Organization of the paper**

The study was presented in five chapters. The first chapter highlights the background of the study; the statement of the problem, objectives, and scope, significant of the study and definition of key terms. Chapter two presents the review of related literatures while chapter three deals with research design and methodology. Chapter four treats major findings. Finally, chapter five treated summery of the findings, conclusions, and recommendations.

## CHAPTER TWO

### Related Literature Review

#### 2. Theoretical Literature Review

##### 2.1 End of life vehicle global problem

End life of vehicle has a problem for years in the world although there is many 'talks ' on the subject in various countries and their respective government not many proactive measures have been taken. Poor recycling practice took place in North America; currently no legislation to govern the end of life vehicle, despite the following:

a) What exactly is an end-of-life vehicle

An end of life vehicle is a specified which is discarded or to be discarded by its registered owner as waste. A vehicle normally reaches to the end of their useful lives, either due to age (typically around 12-14 year) or because of heavy damage of an accident so that there is no fixed age of end-of-life-vehicle.

(<http://www.greenvehicledisposal.com/enviroment/global-egislation> , (May 2017)

b) Where an end-of- life vehicle will dispose?

An end-of-life-vehicle must be dispose with an authorized treatment facility. Each vehicle manufacturer and importers will require having a national collection system in place made up of at least one such treatment facility in every city and council area. These facilities provide a free take-back service for vehicle of the producer's brand. There may be an independent facility that will accept your end-of life vehicle. If an end-of-life vehicle is deposited with an unauthorized facility.

c) Will the authorized treatment facility collect the vehicle, if the registered owner is unable to transport it to the facility?

This is a matter for the owner of the vehicle. An authorized treatment facility that forms part of a producer's network will be bound to accept any specified vehicle of that producer's brand and may not charge. An independent authorized treatment facility may refuse to accept any vehicle, but if it is accepted no charge can made. In both cases this is subject to the vehicle being largely

intact. If the vehicle will be transported to the treatment facility (for example by tow truck), it is the responsibility of the owner to meet this cost. There is no single list of authorized treatment facility for end-life- of vehicles. For detail of your local permitted treatment facility, make contact with local authority or the vehicle importer.

d) What services is an authorized treatment facility obliged to do?

- Issue the registered owner with a certificate of destruction
- Ensure the facility is operating under an appropriate waste license or permit
- Meet the minimum technical requirement for the storage, treatment and recovery of end-life-vehicles.
- Keep records of end-life-vehicles materials for reuse, recycling, recovery and disposal report disposal records to local authorities annually.

(<http://www.greenvehicledisposal.com/enviroment/global-egislation> , (May 2017)

## **2.2 Physical inventory**

Federal Democratic Republic of Ethiopia Ministry Of National Defense supply management operation manual according to physical inventory form, from the total budget allocated to the ministry of defense almost half or even more will be allocate to fixed asset and consumable items. Items those are stocked, on operating and salvage. Therefore, the institute needs to have planned physical inventory and reporting system in order to recognize at any time that the actual value of assets to be reconcile with the record.

### **2.2.2. The importance of physical inventory**

- A. To ensure that the stock records are accurate and reliable
- B. To countercheck the accuracy of the information on stock control cards and take proper counter measure if there are any deviation
- C. To take appropriate corrective measure cognizant of the lost, damaged and scrapped items which are encountered.
- D. To serve as source document for the next fiscal year budget computation and preparation

E. To avoid unnecessary (overstocked) items, etc

### **2.2.3. Inventory period**

Though the inventory can be taken at any time, as deemed necessary, the regular inventory that is taken twice a year on December 30 and June 30 this means it is an inventory which is carried out to know and notify the physical stock that is available in all the store of the institution on December 30 and June 30 of the fiscal year.

### **2.2.4. Types of inventory**

A. Regular inventory (which is taken on annual base or less)

B. Irregular inventory (when inventory is needed by the department)

Inventory can take with or without interrupting the work depending on the prevailing situation. It means that when inventory is carried out in an exclusive situation. From the beginning until getting to finalized; any issue or receiving activities will be interrupted. But the contrary the inventory is carried out without interpreting the regular tasks (Receiving and issue tasks) will be an activity handled without hampering the regular tasks.

The physical inventory that needs to be taken without interrupting the regular task will be carried out on the following way:

- A. Until counting of the received and issued voucher finalized, it will not be recorded on the card. Properly organizing temporary file for the receiving and issue voucher until the inventory end and the stock card closed, it will be record and distribute.
- B. If limited time is allocated, during the physical inventory for those item which either need to be issued users or received from outside, beside its importance to continue the regular task that began when inventory started, it will lessen the possible mistake that might happen while the inventory proceeds
- C. In order to accomplish, without any difficulty, the above task described in point “B”, the committee has to decide the receiving and issue time to notify the program to concerned party ahead of time

D. When items are issued during the physical inventory that is carried out without interruption to the regular receiving and issue tasks, the voucher through which the issue made has to be add to the physical balance and record under the column “Available stock on hand”. On the other hand, it should be known that when items are received during inventory, the amount that is available on the voucher has to be deducted from “Available stock on hand”

Notice here that the reason behind for the amount that is available on the voucher to be adding to the physical balance is just because the inventory is believed to be started after the budget year ends.

### **2.3. Disposal of fixed asset**

When companies want to hand over an asset the company will sell the asset. The transaction will either have a positive or negative effect on the company's balance sheet. The calculation is the price of the asset minus what the asset is currently valued at.

### **2.4 Definition of disposal**

Final placement or riddance of waste, excess, scraps, etc. under proper process and authority with (unlike in storage) no intention to retrieve

<http://www.businessdictinory.com>

Disposal may be accomplished by abandonment, destruction, internment, incineration, donation, sale, and etc. (according to Ethiopia federal negaritgazeta proclamation no.649/2009) and

In addition, according to council of ministers financial regulation no 17/1997 disposal of public property shall be done in accordance with directives of the ministry of finance. It also demands deletion of public property where the property is considered to be no use in the public body or elsewhere. The why, when, and how to deal with disposal of government owned Fixed Asset are explained. Currently, government owned fixed assets are disposed in accordance with the provisions in the government property guideline No6/1998. The guideline provides a three methods of disposal for government owned fixed assets. These methods have been used by public body so far, it is felt that there is a need to revise the guideline to incorporate other methods of disposal and to include procedures that would expedite the process of disposal.

However, providing those new procedures in the form of manual before the guideline is revised could be putting “the cart before the horse”. It might also open up dangerous loopholes in the process and might jeopardize the existing procedures of disposal. For this reason, this manual is limited to explaining the procedures in the existing guidelines. Nevertheless, the existing procedures explained in earlier sections.

## **2.5. Reason to dispose fixed assets**

The government owned fixed asset management cycle is complete only, if disposal of assets is possible. A public body acquires fixed asset to use it and when it is more needed or when it is no more needed or no more functional. The public body must be able to dispose it in an economic, legal and transparent manner. Otherwise, the management of assets becomes complicated, uneconomic and inefficient. There are four commonly known reasons to start the fixed asset disposal process these are unserviceable, obsolete, and surplus and abandoned asset.

**Unserviceable** –because of many factors including normal usage of assets, old age or accident, the cost of repairing the asset might become much more expensive than the use. The public body can drive out it in such case it become a rational decision to dispose the asset instead of incurring additional repair cost.

**Obsolete**- obsolescence could happen due to several factors. An asset could be rendered obsolete due to technological change. It may not fit with other asset in use. The output of the asset might not be accepted by the end user. Similarly using the asset might not be economical in term of cost and time. Hence, the assets need to be disposed.

**Surplus**-Even if the asset is in a good condition, and is not obsolete, the public body might not use it currently and in the near future for some reason. Other public bodies might need such assets. In such cases it is generally economical to dispose the asset rather than keeping it and making it obsolete or unserviceable.

**Abandoned assets**-these are assets held under police or legal institute custody or assets the owners of which are not known or are unable to satisfy some legal requirement to be become the final owner of asset. These include assets kept by custom and police. The public bodies that keep this asset are not using the item as fixed assets. Rather the assets are held due to the normal

course of operation of those public bodies. Hence the assets can be considered as stock and should be dealt with under consumable stock management system (Regulation no 17/1997)

## **2.6. Disposal criteria**

Departments will minimize stock of surplus property. Fixed assets and controlled items in the following categories will be retried or disposed of in the fixed asset management system.

1. Excess: - fixed asset or controlled item that is no longer needed (in excess of the department's requirements) but are still serviceable or useable
2. Obsolete :- fixed assets or controlled items that no longer meet department specification or requirements but are still serviceable or useable
3. Worn :- fixed asset or controlled item that may still be operable but require excessive maintenance or repair
4. Damage or destroyed :- fixed asset or controlled item that are no operable due to damage or accident and would require excessive maintenance or repair
5. Scrap :- fixed asset or controlled item that no longer function are unserviceable and have no market value except for their basic material content ([www.housfontx.com](http://www.housfontx.com), (May 2017))

### **Criteria of disposal vehicle**

According to Ethiopian Federal Government Ministry of Finance And Development governmental body during execution of disposing vehicle and instrument at least should take one of the following forms:

1. In case of heavy damage has cannot maintain
2. Lack of spare parts in the market
3. If a maintenance cost is higher than replacement cost
4. When it become less productive because of old technology
5. According the department when it is surplus
6. If maintenance cost is higher than is serviceable
7. When the vehicle finally stops service

## 2.7. Disposal method

Fixed assets or controlled item will be retired or disposed of in the fixed asset management system

Using one of the following methods:

**a. Departmental, interdepartmental, or intra-fund transfer** – excess or obsolete fixed assets or controlled items that are no longer required by one city department (sending department) will be transferred either to another group within the same department in need (receiving department).in accordance with section II (transfer of fixed asset),if a department in need can be immediately identified by the sending department.

**b. Transfer to the property disposal management office-** excess or obsolete fixed assets or controlled item items that are no longer required by one city department will be transferred to the PDMO/property disposal management office /if another city department in need is not immediately identifiable.

**c. Sale-**fixed assets or controlled item will be sold whenever reasonable proceeds from such a process are anticipated. Sale and pricing methods will be subject to the approval of the director of Finance and administration and may include direct negotiation sealed bid invitation, spot bidding, fixed-price sale, public auction, or out –of-cycle sale. Sales will be conducted by the property disposal management office except where departments obtain specific approval from the director of Finance and Administration.

**d. Trade-in-**fixed assets or controlled items that are traded in or exchanged for a similar asset will be recorded as a sale (original asset) and acquisition through purchase (new asset) by the department in the fixed asset management system (FAMS).

**e. Return to supplier for credit-**excess or obsolete fixed asset or controlled item may be returned, if possible, to the vendor from whom they were originally purchased.

**f. Lost or stolen-**fixed assets or controlled items that have been lost or stolen and the property recorded and deemed unrecoverable.

**g. Scrap-** fixed assets or controlled items that have been transferred to PDMO, and are found to be damaged, destroyed or in any other way having no recoverable value will be accumulated and disposed of in accordance with existing scrap metal/refuse contracts or directed by the director of finance and administration.

**h. Donation** – surplus property items that have been transferred to PDMO, with an estimated market value \$25 or less as determined by the director of finance and administration, may be donated to nonprofit corporation or government entity. (Fixed asset accounting procedures manual section 13 retirement and disposal revision 4, February 3, 2005 e.c p 125)

## **2.8. Method of disposal in Ethiopian context**

According to Ethiopian federal government administrative of properties directive No (9)2003, the following method of disposal is forwarded:

### ➤ **Precondition of disposal**

- A. If the material is not available for the department plan
- B. If the cost of holding or keeping increase
- C. Due to different reason the material might not give enough service
- D. When the material is surplus for the department medium and long term plan, so the public body should be dispose unnecessary property on time based on the above reason.

### ➤ **Disposal method**

- A. By transferring to other governmental firm
- B. By bidding and sale
- C. By dismantling and sale to other department
- D. By disposing as useless
- E. By giving as a gift
- F. By damping or burning

## **2.9. Directive of vehicle administrative and use the process of discharging vehicle from service**

1. When the vehicle become out of service the user department might be take the action by establishing technique committees in the level of army.
2. When the cost of maintaining vehicle is greater than its service, it should be avoided
3. If it is impossible to maintain the vehicle
4. If the user department request to reduce from number and approved by techniques committee, it has to be developed request to the department of maintenance?
5. If the Maintenance department accepted the request, they put their opinion and refer to logistics main department to confirm avoid it
6. Logistics main department also should share its opinion or suggestion and sent to finance stand committee to decide and reduce the vehicle from number
7. The logistics main department also takes an action to reduce the vehicle from the user department from its total amount and report to the responsible body

## **2.10. System of dispose vehicle**

1. Decision will be provided on the requested vehicles
2. If the vehicle require maintain it should be directed to 40720
3. If the maintained vehicle could not give important service, it should be use for other purpose decided by responsible body
4. If the vehicle is decided to dispose (avoid )by selling, the directness of the government will be applied
5. After approved by financial section the vehicle will be prepare for sale through formal process
6. After completing all process the vehicles will be collected to one place and the Defense financial section establishing committee and finally provide to sale  
(1<sup>st</sup> Edition august 2000E.C)

## **2.11. The use of disposing fixed asset**

- **Current benefits of the end life of vehicle directive**

There are significant environmental benefits already being realized from the directive. These are due to the standard set for authorized treatment facilities for the de-pollution, dismantling and treatment of ELVs and, generally, either the environmental or economic benefit are fully realized, because the lack of full implementation and enforcement of directive's 75% recycling target does not bring any additional environmental benefit in most member states (MS). Because recycling would take place at this level due to the economic incentives currently provided by market force, in particular the market prices for scrap metal. The estimates of current benefits are based on data available from MS where there has been compliance, unless otherwise stated of compliance.

A. Direct economic benefits

Direct economic benefits from the directive are non-trivial. The promotion of resource efficiency by providing incentives for innovation in both vehicles design and the treatment of ELVs there is limited evidence of any significant change in vehicle design as a result of the directive.

B. Current environmental benefits

The varying level of compliance also affects level of environmental benefit achieved to-date. A detailed analysis linked to the de-pollution requirements of the directive has been under taken, which attempts to take into account the considerable overlap with other policy measure influencing for example, the treatment of tires and batteries.

([www.ghkint.com](http://www.ghkint.com), April 2017)

## **2.12. According to Ethiopian ministry of national defense supply manual**

- ✓ The need /important/ of disposal
  - A. To avoid unnecessary stock
  - B. To protect those unutilized item from losing their functional value if maintained stocked unnecessarily longer
  - C. To minimize the unnecessary cost that arises from those unutilized item

- D. To avoid the cross contamination of the valuable items by those which are already spoiled and prevent the environment from potential danger as well
- E. To minimize the unnecessary work force which means for guarding the salvage items

## **2.8 Empirical Literature Review**

### **2.8.1. The Disposal of junk (unused) Cars**

The disposal of junked cars has, to some extent, always been a public concern. Police and fire officials, health officials, planners, tax assessors, vehicle licensing officials, and other public authorities have had a continuing interest in the locations and procedures of automobile disposal. With the number of cars junked increasing and the number processed declining, it is important to take a fresh look at the problems of car disposal. (American Society of Planning Officials, 1965)

### **2.8.2 Disposal of University Vehicles**

Requests to dispose of a vehicle must be sent to the Transportation/Fleet Manager in writing. The Transportation/Fleet Manager will first determine if the vehicle may be eligible to be transferred to another department. If the vehicle is not eligible to be transferred to another department or school, the Transportation/Fleet Manager will work with the Purchasing Office to dispose of the University vehicle in accordance with established property management and inventory control procedures. Any funds received through the sale of a vehicle will be returned to the department. Funds received for the disposal of a vehicle will be returned to the Transportation/Fleet office. These funds are used to help fund the vehicle registration/titling process for all university vehicles. (Tufts University Boston 19 85)

### **2.8.3. The End of Life Vehicles Directive:**

1. The need for international code of conduct with respect to End of Life Vehicles for the automotive industry.
2. The certification and accreditation of all bodies involved in the dismantling of End of Life Vehicles, whether natural or premature, that meets all environmental standards and regulations.

3. The consideration of the End of Life Vehicle Directive model as a self-regulatory model and used to accredit and monitor the activities of the industry.
4. The development of mandatory targets must be developed for the appropriate reuse and recycling of End of Life Vehicles.
5. The development of a task force by auto producers, importers, governments, auto recyclers and shredding operations must come up with a task force to adequately assess and address the issue of Automotive Shredder Residue (ASR) at a global scale.

These major recommendations as well as countless minor ones were taken into consideration and greatly aided in the development of the end of life vehicle directive

The central aim of this directive is to reduce the amount of waste created by End of Life Vehicles. The directive is broad-ranging in that it:

1. Inhibits the use of specific heavy metals in newly produced vehicles
2. Implements a Certificate of Destruction (COD) for scrapped vehicles, stating the vehicle had been disposed of in a correct manner.
3. Makes it of utmost importance that producers make vehicle components that aid with identifying what the part is compiled of, that will facilitate with the potential and foreseeable increases in recycling.
4. Makes it mandatory that vehicle producers must provide a “free take-back” for all End Of Life Vehicles produced after used even if such vehicles have a zero or negative value at the end of its life.
5. Makes it mandatory that all vehicle producers allow the availability of dismantling information of new vehicles to assist in the appropriate breaking down of End Of Life vehicles.
6. Stipulates that Authorized Treatment Facilities, all of which abide by environmental standards and all applicable legislation, can treat End of Life Vehicles only.

(North America Green Vehicle Disposal 2003)

#### **2.8.4. Disposal vehicle regulations**

1. Waste disposal vehicles are restricted to using public roads to reach the site,
2. Waste disposal vehicles are strictly prohibited from entering the complex next to the former Youth Center
3. Tailgates are not to be unlatched at the scale area. Tailgates are to be opened and closed only at the designated disposal area unless otherwise instructed.
4. All waste disposal vehicles entering the Landfill Complex must have a tow hook or bar so that in the event a vehicle breaks down in a high traffic area, it may be temporarily removed.
5. All waste disposal vehicles with materials that could blow out of the vehicle must be covered during transport. This includes empty open-body type vehicles that have finished disposal and may contain loose refuse. The cover may only be removed at the disposal area.
6. Drivers must remain with their vehicle. Vehicles may not be repaired or abandoned at the Landfill Complex. Any abandoned vehicle will be towed at the owner's expense.
7. The County of Fairfax assumes no liability for the towing of any vehicle.
8. Vehicles entering the facility may be subject to passing through radiation detectors. Should an alert occur, the driver must follow the instructions of County personnel who will assess the risk and determine what happens to the load?
9. All solid waste collection vehicles using the Landfill Complex must have operating back-up alarms. (I-95 Landfill Complex Rules and Regulations 9850 Furnace Road, Lorton, Virginia 22079 January 2016)

#### **2.8.5. Popular Methods of Car Disposal**

**Car disposal** is a popular option for many people who have vehicles that are extremely old. You may have no use for the car anymore, but you can't just leave it on the side of the road. There are various ways that you can dispose of a car properly. Not only that, but some of the options are

"green" options and will be good for the environment. Here are some of the most popular methods of scrap car disposal. ( Fernholz, Fernando January 27, 2012)

### **1. Car Donation**

This may be the most widely used option of the group. Car donation has some great benefits. You will be helping a charity by donating the car. The charity will then sell the car, and the proceeds will go to their charity. Since charities are nonprofits, any money that they can generate will be extremely helpful. Another benefit is that you can get a tax deduction for your donation. Considering that the car is pretty much worthless, to get anything off of your taxes is a huge plus. If your car does not run, that is okay because it can still be donated. It still can have some value, whether it is in scraps, metal or parts. Be aware that there are car donation scams out there, so research the organizations before you donate the car. ( Fernholz, Fernando January 27, 2012)

### **2. Auto Recycling**

Recycling your car is a great green method to disposing of it. If your car is in bad shape or does not run, it is pretty much a donation to a car salvage yard or junk yard. If it still runs and has some good parts, you can sell it to them for a price where they can part out the car. Either way, your car will be recycled in the best energy saving method. Millions of barrels of oil can be saved by recycling cars and their parts. Many of the parts of the car like the engine, windows, steel and other parts can be saved and reused as well. Make sure you find a good yard to do this in if you care about being environmentally friendly. Although you had the right idea by recycling the car, some plants cut corners and don't remove some of the items correctly that can be toxic, such as brake fluid, and this can harm the environment. ( Fernholz, Fernando January 27, 2012)

### **3. Trade In**

If your car still runs and has some value, you can always use it as a trade in for your next vehicle. Even if it is worth less than a thousand dollars, it still is like a coupon to be used for your next car. The car dealership will either resell the car, or part it out and do the recycling for you. Even though the "Cash for Clunkers" government rebate event has gone away, there are still some dealerships that are offering similar type deals (but without the government incentives). Instead, they give you a guaranteed dollar amount for the car, even if it isn't worth that amount.

( Fernholz, Fernando January 27, 2012)

## CHAPTER THREE

### Research Design and Methodology

#### 3.1. Research Design

The main objective of this study was assessing method of dispose unused vehicles given by the selected department. This research employed both quantitative and qualitative design because using mixed research method could neutralize /cancel the bias of any single quantitative data (Creswell, 2009). Particularly, Descriptive survey design was employed since it is appropriate method which enhances the research to assess the method of disposal unused vehicle in DVAS. The researcher felt that the selected method was appropriate.

#### 3.2. Population of the Study

The description of participants should identify the number source and characteristics of the sample. It should also define the population from the sample is being selected. Thus the major sources of primary information for the study were managers and employee. So as to perform this study, the first step was getting the total number of target population. The preliminary survey undertaken by the researcher indicates that there are 221 total populations i.e. 201 employees, and 20 managers found in DVAS as May2017.

#### 3.3. Sample Size and Sampling Techniques

The researcher was keenly engrossed on getting relevant data concerning disposal of unused vehicles in DVAS. Since obtaining a representative sample was a critical issue in order to draw valid inferences about the population. The respondents were selected using simple random sampling technique because the simple random sampling is useful for selecting participant with different characteristics and the researcher would select randomly using lottery system from the list to ensure that an adequate number of subject are selected from the groups because sampling technique allows the researcher to obtain a greater of representativeness; it reduces the probable sampling error to ensure that all groups in a population were adequately represented in the sample, by randomly choosing subjects from each stratum. Thus, the populations were in two homogeneous groups“ that is managers and employees. Concerning the determination of the sample size the researcher tried to consider some important factors and theoretical truths such as the larger the sample size, the more precise the estimation will be the variance in the characteristics of the population. From among different methods, the one which is developed by

Taro Yamane (1967) cited by Chidi Rafel (2014) was used considering and took on 10%-90% are confidence. based of the formula  $n = \frac{N}{1 + N(e)^2}$

$$n = \frac{221}{1 + 221(0.05)^2}$$

$$n = \frac{221}{1 + 221(0.0025)}$$

$$n = \frac{221}{1.5525}$$

$$n = \frac{142}{1} = 64.25\%$$

Based on this fact the sample became 142 the sample size of the population 221. The total population as respondents that is 142 among which 122 employees, 20 managers were included from each stratum.

### 3.4 Data Source

Data was collected both by primary and secondary data collection method. Primary data was gathered from Ethiopian Defense Force vehicle administrative service both at Addis Ababa and Debrezeit through questionnaire, focus group discussion and visual observation. Employees and managers of DVAS were requested to fill the designed close ended questionnaire. Staffs were considered as the best representative of the study because it is believed that they are highly responsible in performing the day to day activities and also they are the active participants of unused vehicles disposal. In addition to questionnaire was held with managers and also focus group discussion was conducted with the selected support staff. The reason why the researcher had a discussion with support staff and managers is to create an opportunity for them to discuss about the issue briefly and to have concrete information about disposal of unused vehicles. These methods of data collection helped the researcher to triangulate the data gathered from questionnaire with the data collected from focus group discussion. On the other hand, various published and unpublished related literatures, method of disposal unused vehicle and system

policy and procedure of defense supply manual and organizational booklet were reviewed to get different data about the study and it is used as a secondary data sources.

### **3.5. Data Gathering Tools**

#### **3.5.1. Questionnaire**

Data were obtained through personally administered questionnaires that were prepared based on literature review to address the research questions. The reason why self administered questionnaire used was it helped as a prompt and relatively low cost strategy for obtaining information in the context that was likely to establish a good rapport with respondents and easier to answer for the respondents. The questionnaires were distributed after checkup the experts of defense logistics main department after that expected participants had been selected and informed about the purpose of the research by researcher. The items were subsequently edited. The questionnaires have two parts. section 1, of the questionnaire contains instruction and respondents' personal information, and section two contains statements designed to assess method of unused vehicle disposal using five point likert scales ranging from „strongly agree“(5) through „strongly disagree“(1). Section three, is reserved for respondents to choose the appropriate answer based on their feeling and write on the space provided. The survey questionnaires were administered to 10 managers and 87 employees in the department from the total 142 distributed questionnaires 97 useable questionnaires were returned with the response rate 68%. (Visser, Krosnick, Marquette and Curtin (1996) who showed that surveys with lower response rates (near 20%) yielded more accurate measurements than did surveys with higher response rates (near 60 or 70%).

#### **3.5.2 Focus Group Discussion**

In every organization the mission, vision and strategy is expected to be shared and understood by all members of the organization. In order to assess this focus group discussion was made with mechanics and security guards by using the basic questions mentioned in the statement of the problem as a guideline. This will help the researcher to get information from those who are unable to fill the questionnaire. The researcher used this method with the aim of checking whether the methods and techniques is understood by all staff members.

#### **3.5.3. Document Analysis**

With this data gathering tools, relevant documents were reviewed and gathered from defense supply manuals. This data gathering tools was also used to enrich the data obtained through questionnaire and interviews and to capture information that cannot be obtained through questionnaire and interview methods.

### **3.6 Method of Data Analysis**

The data gathered from questionnaire was summarized and analyzed by using descriptive statistics like frequency, percentage and mean. Then the data was described using tables for more clarification and the data was coded using scientific statistical data analysis software such as SPSS version 20. The data gained from focus group discussion and document review was analyzed contextually as per the research basic questions.

### **3.7. Procedures of Data Collection**

To get full support in administrating and collecting the instruments of data collection, first contact was made with the commandant of Defense logistics main department. Following this, respondents who filled out the questionnaire; managers and employees of the department were indentified. Then, the respondents were informed about the purpose of the study and how to complete the questionnaire. In addition, during the administration of the questionnaire, clarifications for some questions and interpretation were also given to the respondents so as to avoid confusions. Then the questionnaire was distributed to the respondents. Finally the filled out questionnaire were collected. In addition to this, relevant document like plan and disposal reports of the department was reviewed.

## CHAPTER FOUR

### 4. Presentation, Analysis and Interpretation of Data

In this chapter of the research results from data collected in both quantitative and qualitative techniques are presented. This chapter has three sections. In the first section of the chapter demographic profile (characteristics) of the respondents are presented. In the second section, quantitative results from close-ended survey items are presented using frequency and descriptive statistics techniques. The last sections of this chapter used to present qualitative results from document analysis are presented in support of the quantitative results. Presentation of findings in each section is according to the order of basic research questions of the thesis. Among the distributed questionnaire 142 have been collected 97 this makes the response rate to be 68%.

#### 4.1. Characteristics of respondents

In this section, the general background the respondents of the study is summarized by focusing their gender, age group, educational status, years of service and category of position classification.

**Table 4.1: Description of Respondents by Sex, Age and Educational level**

<b>GENDER</b>			
male	<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>
	83	85.6	85.6
female	14	14.4	14.4
	97	100.0	100
<b>Age Group</b>			
Less than 25 years	14	14.4	14.4
25-35 years	39	40.2	40.2
36-50 years	40	41.2	41.2
above 50 years	4	4.1	4.1
total	97	100.0	100.0
<b>Year of Service in DVAS</b>			
Less than 3 years	19	19.6	19.6
3-8 years	29	29.9	29.9
9-14 years	15	15.5	15.5
above 14 years	34	35.1	35.1
Total	97	100.0	100.0

<b>Educational Status</b>			
	<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>
Below certificate	14	14.4	14.4
Certificate	23	23.7	23.7
Diploma	55	56.7	56.7
degree	5	5.2	5.2
Total	97	100.0	100.0
<b>status in the organization</b>			
employees	87	89.7	89.7
manager	10	10.3	10.3
Total	97	100.0	100.0

Among the total respondents that are 85.6% respondents are male and the rest 14.4% of them were females. This shows that the number of female staff is less by more than half from the number of male staff which means there is gender imbalance in the department.

Regarding the age group of the respondents, the larger portion of the respondents that is 40 (41.4%) falls within the age group of 25 to 35. Age group from below 25 and 25 to 35 hold 14 (14.4%) and 39 (40.2%) number of respondents respectively. Respondents of age group 50 and above contain the least number of respondents, which are 4 (4.1%). From this I can say that Defense vehicle administrative service with more younger, energetic and productive manpower that can be able to transform the mission and vision of the organization.

Based on the data collected through questionnaire, the large portion of respondents 34(35%) more than fourteen years of service in DVSA, the second highest percent 28 (29.9%) of the respondents within the range of 3-8 years of experience, 20 (19.6%) respondents have joined DVAS with less than three years and the rest 15 (15.5%) have 9-14 years work experience. The researcher believe that these combination of the respondents were good enough in finding the accurate information because the majority of respondents have more than three years work experience , which is more than two years from which vehicle disposal method was fully executed and this gives them an opportunity to reflect their opinion and clearly understand method of vehicles disposal and practice of DVAS to identify the weaknesses and strengths of the system by comparing the previous and the current method of vehicle disposal defense vehicle administrative service.

Different educational backgrounds of the respondents were treated .As can be seen from educational back ground the majority 23(23.7) of the respondent and 14(14.4%) of the respondent were certificated and under certificated respectively. While 55 (56.7%) of the respondent are Diploma holders. Having

BA/BSC accounted for 5(5.2%). This may indicate that staffs have required educational preparation to deliver the service effectively.

In general the above table which is characteristics of the respondents shows that the study is represented by those who are qualified in understanding the questionnaire as well as the subject matter; most of them are respond their true feeling without fear of losing their job and those who have an experience of more than two years in DVAS. As a result it is the researcher belief that the study is well represented by the respondents which helps to get the opinion of all which assures the accurate data have been secured from the respondents of the sample size.

#### 4.2. Techniques disposing unused vehicles

**Table 4.2: Respondents' response on the techniques of disposing unused vehicles**

No	Item	Level of response	Employees (N= 87)			Manager (N=10)		
			Freq.	%	Mean	Freq.	%	Mean
1	Does your organization use techniques to dispose unused vehicles?	Yes	27	31.0	1.69	3	30.0	1.70
		No	60	69.0		7	70.0	
		Total	87	100		10	100.0	
2	If your answer is “yes” for question number 1, what are the techniques used to dispose un used vehicles?	Transfer other government organization as resource	7	8.0	1.65	2	20.0	1.33
		Selling unused vehicles as open bid for the public	13	14.9		1	10.0	
		Total	20	23.0		3	30.0	
		Missing	67	77.0		7	70.0	
		Total	87	100.0		10	100.0	
3	How could you measure the technical efficiency of vehicles to transfer as unused vehicle?	Frequency of vehicle for maintenance	11	12.6	3.32			3.80
		At selvage value	53	60.9		6	60.0	
		Rate of obsolescence	7	8.0				
		Vehicle that require high technological skill to maintain	16	18.4		4	40.0	
		Total	87	100.0		10	100.0	
4	Defense vehicle administration service is efficient in	Agree	9	10.3	2.92	3	30.0	2.70
		Disagree	76	87.4		7	70.0	

	<b>disposing unused vehicles</b>	strongly disagree	2	2.3				
		Total	87	100.0		10	100.0	
<b>No</b>	<b>Item</b>	<b>Level of response</b>	<b>Employees (N= 87)</b>			<b>Manager (N=10)</b>		
			<b>Freq.</b>	<b>%</b>	<b>Mean</b>	<b>Freq.</b>	<b>%</b>	<b>Mean</b>
5	<b>If your answer is “disagree or strongly disagree “for question number 4. What are the reasons not use all the method to dispose unused vehicle?</b>	Problem of the system to use the method	71	81.6	1.22	4	40.0	1.43
Centralization of disposing unused vehicle		2	2.3	3		30.0		
All		5	5.7	-		-		
Total		78	89.7	7		70.0		
Missing		9	10.3	3		30.0		
Total		87	100.0	10		100.0		
6	<b>When did you propose for disposal of vehicle?</b>	After coming to garage	20	23.0	3.51	4	40.0	3.20
At application of user department		3	3.4	-		-		
When the vehicles stop their services		64	73.6	6		60.0		
Total		87	100.0	10		100.0		
7	<b>Defense vehicle administrative service control the administrative of unused vehicles</b>	Agree	20	23.0	3.06	1	10.0	2.90
Disagree		42	48.3	9		90.0		
strongly disagree		25	28.7	-		-		
Total		87	100.0	10		100.0		
8	<b>The organization gives awareness for vehicle user to evacuate unused vehicles</b>	Agree	16	18.4	2.82	1	10.0	2.90
Disagree		71	81.6	9		90.0		
Total		87	100.0	10		100.0		
9	<b>There is clear system on how to dispose unused vehicles in defense vehicle administration service</b>	Agree	16	18.4	2.84	3	30.0	2.70
Disagree		69	79.3	7		70.0		
strongly disagree		2	2.3	-		-		
Total		87	100.0	10		100.0		
			Mean mean		2.53	Average mean		2.51

N.B. Mean value >3 high, mean=3 moderate and mean <3 low, significance (P<.05),

As it indicated in the above table 3.2 the response of the managers and the employees about the techniques used to dispose unused vehicle is analyzed as follows. 30% and 31% managers and employees respectively responded vehicle administration service used techniques to dispose unused vehicle. Whereas 70% of managers and 69% of employees responded that vehicle administrative service

didn't use any techniques to dispose unused vehicles. The respondent's responses show that vehicle administration service didn't use any techniques to dispose unused vehicles. In addition researcher observation also confirm with the above views because there are 1500 unused vehicles which were deposited for a long period of time.

This finding show in logistics managers manual indicates as literature review large amount of inventory create high cost.

As indicated in the same table question number two 20% and 8% of managers and employees respectively responded that vehicle administration service is disposing unused vehicle in the form of transfer to other organization where as 10% of the managers and 23% of the employees responded that the organization used open bid techniques for disposing unused vehicles. But, 70% and 69% of managers didn't give the response. This shows that in vehicle administration service department, there is no awareness and common understanding about the techniques of disposing unused vehicles. This failures cause not to organize on their super ordinate goals. As the finding realize that Ethiopian Ministry of National Defense supply manual indicates that disposing unused vehicles by using techniques is important.

For questionnaire number 3, 12.6% of employees responded that the techniques to measure the efficiency of vehicle to transfer unused vehicle was on their frequency for maintenance. 60% of managers and 60.5% of employees responded that the techniques to measure the efficiency of vehicles to transfer unused vehicles were at salvage value. But 8% of the employees responded that the technique to measure rate of obsolescence. On the other hand 40% and 18.4% managers and employees respectively responded that the technique to measure the efficiency of vehicle to transfer unused vehicles were rate of fuel consumption, frequency for maintenance , at salvage value, obsolete of vehicles and the need for high technology to maintain unused vehicles. Most of the research participants agreed that vehicle administration service department were use salvages value to dispose unused vehicle. And, the group discussion and observation of the document for recording unused vehicles also help the above view because most of vehicles are depreciated at service without evacuating from operation, this finding indicates in directive of vehicles Administration and use as the process of discharging vehicle from service.

As to questionnaire number 4, 30%of managers and 10.3% of employees agreed that Defense Vehicle Administrative service efficient in dispose unused vehicles where as 70% of managers and 87.4% employees disagreed for the efficiency of Defense vehicle administrative service in dispose unused vehicle . 2.3% of employees strongly disagreed on the efficient disposing of unused vehicles. The

efficiency of disposing unused vehicle for vehicle Administration service is very low and it needs organized managers in Administer unused vehicles. It is clear that disposing of unused vehicles has examined the cost and benefit of the end life of vehicles directive as it is explored from internet.

(<http://WWW.greenvehicledisposal.com/environment/global-egislation>)

40% of the managers and 81.6% of the employees in table 3.2 questionnaire 5 responded that the reason not to use all the methods to dispose unused vehicles is the problem of system and 30% of the managers and 2.3% of employees responded that the reason vehicle administration service not to use all the methods to dispose unused vehicle is centralization of managers. The remaining 5.7% of the employees responded that the cause not use all the methods to dispose unused vehicle is due all of the above problems. But, 30% of the managers and 10.3% of employees did not give responses. The organization didn't design clear system how to dispose unused vehicles.

In questionnaires 6, 40% of managers and 23% of employees responded that the department proposes disposal of vehicle when the vehicles come to garage for maintenance. And 3.4% employees responded that proposing disposal of vehicle is conducted, when the user department applies the vehicle to be unused vehicles.

On the other hand, 60% of the managers and 73.6% of employees responded that the department propose disposal of vehicles when the vehicle out of service. Vehicle administration service department should also use other methods to use the vehicles efficiently. The above finding is indicated in the literature that in Ethiopian Federal Government Ministry of Finance and Economic Development directive about the criteria of disposal vehicles.

With reference to unused vehicles questionnaires 7, 10% of the managers and 23% of employees agreed and 90% of the managers and 73.6% of the employees disagreed on defense vehicle administrative service control on the administration of unused vehicle. In the same taken 28.7% of employee strongly disagreed. The vehicle administration service is poor in administration unused vehicle. This can be shown by using physical evidence in the following photograph.

At question number 8, 10% of the managers and 18.4% of the employees agreed that defense vehicle administrative service have given an awareness for vehicles users to evacuate unused vehicle and 90% of the managers and 81.6% of employees disagreed. Therefore the department didn't give awareness in evacuating unused as in waste managers indicated in the literature.

At question number 9, 30% of the managers and 18.4% of the employees were agreed that defense vehicle administrative service has clear system to dispose unused vehicles and 70% of the managers and 79.3% of the employees were disagreed. And also 2.3% of the employees strongly disagreed. The

vehicle administrative service has no clear system to dispose unused vehicles. The system of disposal for vehicle administrative and use provides a clear system as it is indicated as the literature.

In conclusion, the average mean and frequency statistics result indicted vehicle administrative service is poor in using techniques of disposing unused vehicles because most of the respondent conclude not to administer effectively and efficiently for unused vehicles.

In addition to the above views group discussion and visual observation the researcher observed the following limitation

- There was no uniform and centralized vehicle recorded system
- Lack of hungry it was exposed for rain and sun light
- There was no enough security as it is indicated as physical evidence and there is no record for each component of vehicle.

#### 4.3. Impacts of unused vehicles on the organization?

**Table 4.3 Research participants' response on the impact of unused vehicle**

No	Item	Level of response	Employees (N= 87)			Manager (N=10)		
			Freq.	%	Mean	Freq.	%	Mean
1	Do you think that unused vehicles limit the efficiency and effectiveness of the organization?	Yes	80	92.0	1.08	10	100.0	1.00
		No	7	8.0		-	-	
		Total	87	100.0		10	100.0	
2	If your answer is "yes" for question number 1, what are the consequences of unused vehicles?	To increase security cost	2	2.3	4.73	1	10.0	4.70
		It exposed to theft	16	18.4		-	-	
		All of the above	62	71.3		9	90.0	
		Total	80	92.0		10	100.0	
		Missing	7	8.0		-	-	
		Total	87	100.0		-	-	
3	Storing unused vehicles for a long time creates	strongly agree	48	55.2	1.51	8	80.0	1.20
		Agree	34	39.1		2	20.0	
		Disagree	5	5.7				

	additional cost for the organization?	Total	87	100.0		10	100.0	
4	Most of the organization members are aware of impact of storing unused vehicles?	Agree	23	26.4	2.78	3	30.0	2.70
		Disagree	60	69.0		7	70.0	
		strongly disagree	4	4.6				
		Total	87	100.0		10	100.0	
5	The managers know the maximum store to decrease the impact of storing unused vehicles?	strongly agree	11	12.6	2.78	1	10.0	2.90
		Agree	-	-		3	30.0	
		Disagree	71	81.6		2	20.0	
		strongly disagree	3	3.4		4	40.0	
		Total	85	97.7		10	100.0	
		Missing	2	2.3		-	-	
		Total	87	100.0		-	-	
			Mean mean		2.57	Average mean		2.50

As it is indicated in table 4.3 question number 1, 100% of the managers and 92% of the employees responded that unused vehicles limit the efficiency and effectiveness of the organization. Whereas 8% of employees responded that unused vehicles didn't limit the efficiency and effectiveness of the organization. As the respondents point of view unused vehicles limit the efficiency and effectiveness of the organization.

Question number 2, 10% and 90% of the managers responded that the consequence of unused vehicle is increasing security cost and all other cost respectively. 2.3% and 18.4% of the employees responded that the consequence of unused vehicle is increasing inventory and exposed to theft respectively. 71.3% of the employees responded that all reason consequence. But, 8% of the employees didn't give response. Even though, the respondent gave their own conclusion each choice unused vehicle has the consequence of inventory, security, storage cost and exposition of theft.

At question number 3, 80% of the managers and 55.2% of the employees strongly agreed that storing unused vehicles for a long period of time creates additional cost for the organization and 20% of the

managers and 39.1% of the employees were agree. But 5.7% of the employees disagreed. Storing unused vehicle for long period create additional cost for the organization.

At question number 4, 30% of the managers and 26% of employees agreed that managers of the vehicle administrative service have know how to the impact of storing unused vehicle, whereas 70% and 69% of managers and employees respectively disagreed, and 4.6% of employees strongly disagreed. This shows that the managers is not have enough knowledge about the impact of storing unused vehicle.

At question number 5, 10% of the managers and 12.6% of the employees strongly agreed on the managers knows the maximum store to decrease the impact of storing of storing unused vehicles but 30% of the managers agreed. On the other hand, 20% of managers and 81.6% of employees disagreed , 40% of managers and 3.4% of the employees strongly disagreed on knowledge of the managers for maximum store to decrease the impact of storing unused vehicle. 2.3% of employees didn't give response. The majority of the respondent didn't accept the knowledge of the managers for storing unused vehicle at maximum level.

The averages mean indicate employees 2.57 and managers 2.50 of the impact of unused vehicle indicated that majority managers and employees responded that an unused vehicle has impact on different costs and it limits the organization function.

#### 4.4. The use of disposing unused vehicle

**Table 4.4 Research participants' response on the use of disposing unused vehicle**

No	Item	Level of response	Employees (N= 87)			Manager (N=10)		
			Freq.	%	Mean	Freq.	%	Mean
1	<b>Disposing unused vehicle is important?</b>	Strongly agree	35	40.2	1.69	6	60.0	1.40
		Agree	44	50.6		4	40.0	
		Disagree	8	9.2				
		Total	87	100.0		10	100.0	
2	<b>If your answer is “Strongly agree or agree “for question number 1, what are the advantage of disposing unused vehicles?</b>	Increase the income of the organization	4	4.6	4.79			5.00
		All of the above	71	81.6		10	100.0	
		Total	75	86.2				
		missing	12	13.8				
		Total	87	100.0		10	100.0	
3	<b>Does a disposing unused vehicle decrease over all</b>	yes	73	83.9	1.14	8	80.0	1.11
		No	12	13.8		1	10.0	

	<b>cost?</b>	Total	85	97.7		9	90.0	
		missing	2	2.3		1	10.0	
		Total	87	100.0		10	100.0	
4	<b>Do you have a technique to receive unused vehicles?</b>	yes	65	74.7	1.24	5	50.0	1.50
		No	20	23.0		5	50.0	
		Total	85	97.7		10	100.0	
		missing	2	2.3				
		Total	87	100.0				
5	<b>If your "yes" for question number 4, what are the answer what are the technique to receive unused vehicles?</b>	By recording archive record	65	74.7	1.51			-
		All of the above	22	25.3				
		Total	87	100.0				
		missing				10	100.0	
			Mean mean		2.27			1.80

As it is indicated in table 4.4 question number one 60% of managers and 40% of employees strongly agreed on the importance of disposing unused vehicles and 40% of managers and 51% of employees agreed on it. But 9% of employees were disagreed on the importance of disposing unused vehicle. Both respondents aware disposing unused vehicle is important. The importance of disposing unused vehicle has benefit of the end life of directive indicated as possible as to give active service for the organization indicated in literature.

In question number 2, 4.6% of employees responded that increasing the income of the organization as an advantage of disposing unused vehicle .100% of managers and 86.2% employees responded disposing unused vehicle has all the given reasons but 13.8% of employees failed to decide. This indicates that disposing unused vehicle has different advantage to the organization.

In question number 3,90% of the managers and 83.9% of employees responded disposing unused vehicle decrease the overall organizational cost but 10% of managers and 13.8% of employees responded disposing unused vehicle didn't decrease over all cost .2.3% employees don't gave the response. This shows that disposing unused vehicle decrease over all cost. Based on the above findings storing unused vehicle increase cost but decrease costs in deprecation rate on the directive of Ethiopian Managers institute marking and distribution managers Atenafe segede(2003)

Question number 4 50% of managers and74.7% of employees responded that the organization has techniques to receive unused vehicle but 50% of the managers and 23% of employees didn't use

techniques to received unused vehicle 2.3% of the employees didn't give response. The employees agreed on how the organization receives unused vehicles where as the managers didn't accept this idea.

Question number 5, 74.7% of employees responded that the organization used formal letter to receive unused vehicle and 25.3% of employees responded that the organization used all techniques to receive unused vehicle. But, 100% of the managers are not responded. This indicated that the organization has no uniform method to receive unused vehicles. In the literature review, the directive of vehicles administrative and use clearly defined the procedure to accept unused vehicles.

## CHAPTER FIVE

### Summary, Conclusions and Recommendations

This final chapter deals with the summary of the findings, conclusions and recommendations forwarded.

#### 5.1 Summary of Major Findings

The major purpose of this study was to assess the current practices of vehicle disposing mechanisms of Ethiopian defense force vehicle administration service department. The study forwards viable recommendations that help to mitigate the problems of the issue under study.

Therefore, in order to address the research problem the study focused on answering the following basic questions

1. What are the techniques the department using to dispose vehicles?
2. To what extent does the vehicle limit the efficiency and effectiveness of the department?
3. Does the department identify the use of disposing unused vehicles?
4. What is the impact of unused and depreciated vehicles reveal in department?
5. What experience does the department have in disposing vehicles?

Descriptive survey design was employed to conduct the research. Simple random sampling method was used to select sample respondents. From the total target population 221 about 10 managers and 87 employees responded the questionnaire. Questionnaire, document analysis, focus group dissection and visual observations were used as data gathering tools. Based on this, 142 Questionnaire distributed to respondents of which 97(68%) questionnaires were filled and returned. Accordingly, 87 employees, 10 managers, were used as a data source. Data obtained through questionnaire, mean and frequency supported by SPSS software version 20.00 used. Whereas data obtained using Questionnaire and document analysis were analyzed, interpreted and major findings are summarized below.

1. As most respondent state, both managers and employee have indicated that vehicle administration service department didn't use techniques frequently as it is needed.
2. Both the managers and employees respondent accepted that the organization has no enough knowledge and common understanding in the disposing of unused vehicle.
3. The current administration and efficiency of unused vehicle in vehicle administration service department is poor. Because most of the respondents of either managers or employees argue that the

department organization and managers system of unused vehicle is not considered as a task of the organization.

4. As the respondents indicated in their response vehicle administration service should design a clear system in disposing unused vehicles.
5. Vehicle administration service department made the vehicles as unused vehicles, when the service of the vehicle ends its service this makes the vehicles not to use as efficiency as possible.
6. Most of the respondents agreed on vehicle administration service department don't administered unused vehicles as required and it didn't focus on making awareness in vehicle administration of unused vehicles. In addition vehicle administration service is not using techniques of disposing unused vehicles.
7. Both the managers and employees agreed on unused vehicle limit the efficiency and effectiveness of the organization and it has also consequence of inventory, security and storage cost.
8. The awareness the impact of storing unused vehicles has a major problems of managers
9. Most of the respondents are aware that disposing unused vehicles are important and have advantage.
10. Vehicle administration service department has no uniform method to receive unused vehicles

### **5.3. Recommendation**

In the view of finding and conclusion, the following recommendations have been forwarded. According to the examination researcher conducted, the existing disposal system of vehicle administration service department, from the finding of the study disposing of unused vehicle has limitation in using techniques and frequency of using methods to dispose unused vehicles. If the disposing of unused vehicle is to be efficiently and effectively used, first and for most vehicle administration service need to addressed the following issues.

1. Vehicle administration service should design clear objective focus organizational structure. As it is stated in many literatures, the organizational structure is design based of the objectives of the organization. (D.W. Dobler, 1998).
2. Vehicle administration service should use technique to dispose unused vehicles. Even though, the department disposes unused vehicles 18round there are 1500 unused vehicles at store. The government design different directives and Ministry of national Defense also enact manuals. Defense vehicle administration service should apply the directive in frequently manner.
3. To bring suitable environment in disposing unused vehicles, Vehicle administration service creates awareness vehicles users on how to dispose unused vehicles. This knowhow for the users in advance

attention for safety of vehicles is help full in the administration of vehicles, in addition, the department must give awareness for vehicles user.

4. Vehicles administration design should administer clear- cut way of transferring vehicles to unused vehicles. Because, this creates the vehicles is not be used efficiently as required.
5. The department should introduce effective managers for disposing unused vehicle because designing clear system in disposing unused vehicles increase the efficiency of the department and vehicle administration service.
6. The greater amount of storing unused vehicles limit the efficiency and effectiveness of the organization .so, vehicle administration service department should work on mechanism that could avoid storage high amount of unused vehicles in the warehouse by making the managers suitable to store unused vehicles because almost all unused vehicle are exposed to sun light, rust and fire.
7. The management of vehicle administration should critically think about the impact of unused vehicles such as depreciation cost, security costs and costs.
8. Vehicle administration service should work on the use of disposing unused vehicles because unused vehicle could be used to increase institutional income, to upgrade other vehicles and to exploit the remnants as input for other materials.
9. Finally, as the study was limited in some respect, the researcher would like to call up on who has the resources and the capabilities, to further carryout in-depth investigations based on the insight this paper provides.

In general, it is advisable for Vehicle Administrative Service to sustain all its current strengths, and improve its limitations mentioned above to challenge future uncertainties.

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# Appendixes

Appendix-1 Amount of unused vehicle

Appendix-2 Questionnaire

**Table -5 Amount of unused vehicle in warehouse of vehicle administration service**

No	Types of vehicles	Model	Quantity	Place of warehouse
1	Gaze	66	353	Debre-Zeit
2	Gaze	53	13	>> >>
3	Gaze	52	11	>> >>
4	Zile	131	372	>> >>
5	Zile	130	40	>> >>
6	Zile	157	17	>> >>
7	Kamaze	431067	69	>> >>
8	Maze	-	03	>> >>
9	IFA	L60	01	>> >>
10	Scania	1134	01	>> >>
11	Craz	-	02	>> >>
12	UD-Nissan	CA18	01	>> >>
13	Ural	375	72	>> >>
14	Ural	236	159	>> >>
15	Ural old model	432006	06	>> >>
16	Hino	240	01	>> >>
17	RIO-jemso	-	02	>> >>
18	Fiat-Crane 12 ton	490	01	>> >>
19	Waz china jeep	2020	120	>> >>
20	Waz Russia jeep	31512	296	>> >>
21	Waz Russia	31512	15	Addis Abeba
22	Automobiles	-	41	>> >>
Total			1596	

## **Addis Ababa University school of Commerce**

### **Department of logistic and supply chain to be filled by: managers and Employees of Ethiopian Defense Force Logistics main Department vehicle Administration Service**

#### **Questionnaires for assessment of unused vehicle disposal**

The research for which you are picked as participant focus on studying the administration of out of the use or worn out vehicles and their effective utilization, Hence the purpose of this questionnaire is to collect data that will give enough clues on how to increase the efficiency of an organization disposing unused vehicle and the partial fulfillment of my MA program in logistics and supply chain management in Addis abeba university school of commerce. Your input has a significant contribution in making the study holistic and complete. There for, I kindly request you to take time and complete the questionnaire. Furthermore, your answers are expected to be direct and correct so that the conclusion of the study will serve their intended purpose. The data you give us here is going to be used only the purpose of the study. I would like to extend my gratitude for filling in this questionnaire.

#### **General Direction**

1. You are not required to write your name
2. Indicate your opinion by making a tick mark for each response you give
3. The category that I have made for the questionnaires is only for the purpose of generalization

## Category I

### I. Respondents background information

1. Sex            a. Male -----                      b. Female -----
2. Age
  - a. <25-----
  - b. 25-35-----
  - c. 36-50-----
  - d. >50-----
3. How long have you been employed in the organization in year
  - a. <3-----
  - b. 3-8-----
  - c. 9-14-----
  - d. >14-----
4. Qualification
  - a. Below certificate -----
  - b. Certificate-----
  - c. Diploma-----
  - d. Degree-----
  - e. Above degree-----

## Category II

### II. Techniques of disposing unused vehicle

1. Does your organization use techniques to dispose unused vehicles
  - a. Yes-----
  - b. No -----
2. If your answer is “yes” for question number 1, what are the techniques used to dispose unused vehicles?
  - a. Transfer other government organization as resource
  - b. Selling unused vehicles as open bid for the public
  - c. Cannibalization

- d. To give others as a gift
  - e. All of the above
3. How could you measure the technical efficiency of vehicles to transfer as unused vehicle?
    - a. Increasing consumption of fuel
    - b. Frequency of vehicle for maintenance
    - c. At salvage value
    - d. Rate of obsolescence
    - e. Vehicle that require high technological skill to maintain
  4. Defense vehicle administration service is efficient in disposing unused vehicles
    - a. Strongly agree
    - b. agree
    - c. disagree
    - d. strongly disagree
  5. If your answer is “disagree or strongly disagree “for question number 4. What are the reasons not use all the method to dispose unused vehicle?
    - a. Problem of the system to use the method
    - b. Centralization of disposing unused vehicle
    - c. Shortage of market for military vehicle
    - d. All
  6. When did you propose for disposal of vehicle?
    - a. During service of their department
    - b. After coming to garage
    - c. At application of user department
    - d. When the vehicles stop their services
    - e. All of the above
    - f. If other please state-----
  7. Defense vehicle administrative service control the administrative of unused vehicles
    - a. Strongly agree
    - b. agree
    - c. disagree

- d. Strongly disagree
- 8. The organization gives awareness for vehicle user to evacuate unused vehicles
  - a. Strongly agree
  - b. agree
  - c. disagree
  - d. Strongly agree
- 9. There is clear system on how to dispose unused vehicles in defense vehicle administration service
  - a. Strongly agree
  - b. agree
  - c. disagree
  - d. Strongly disagree

### **Category III**

#### **III. The impact of unused vehicles on the organization**

- 1. Do you think that unused vehicles limit the efficiency and effectiveness of the organization?
  - a. Yes
  - b. No
- 2. If your answer is "yes" for question number 1, what are the consequences of unused vehicles?
  - a. In increase inventory cost
  - b. To increase security cost
  - c. It increase storage cost
  - d. It exposed to theft
  - e. All of the above
- 3. Storing unused vehicles for a long time creates additional cost for the organization?
  - a. Strongly agree
  - b. agree
  - c. disagree
  - d. Strongly disagree

4. Most of the organization members are aware of impact of storing unused vehicles?
  - a. Strongly agree
  - b. agree
  - c. disagree
  - d. Strongly disagree
5. The management knows the maximum store to decrease the impact of storing unused vehicles?
  - a. Strongly agree
  - b. agree
  - c. disagree
  - d. Strongly disagree

#### **Category IV**

##### **IV. The use of disposing unused vehicle**

1. Disposing unused vehicle is important?
  - a. Strongly agree
  - b. Agree
  - c. Disagree
  - d. Strongly disagree
2. If your answer is "yes" for question number 1, what are the advantage of disposing unused vehicles?
  - a. Increase the income of the organization
  - b. Increase efficient use of the vehicles
  - c. Save time to deliver materials
  - d. Increase the motivation of drivers
  - e. All of the above
  - f. If other please specify-----
3. Does a disposing unused vehicle decrease over all cost?
  - a. Yes
  - b. No
4. Do you have a technique to receive unused vehicles?

- a. Yes
  - b. No
5. If your "yes" for question number 4, what are the answer what are the technique to receive unused vehicles?
- a. By formal letters
  - b. By recording archive record
  - c. By formal depreciation rate
  - d. All of the above
  - e. If other please specify-----