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SCHOOL OF COMMERCE

DEPARTMENT OF LOGISTICS AND SUPPLY CHAIN MANAGEMENT

**ASSESSMENT OF FLEET TRANSPORT SERVICES
PERFORMANCE: EVIDENCES FROM WORLD VISION
ETHIOPIA**

By

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**ASSESSMENT OF FLEET TRANSPORT SERVICES
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BY: HENOK SISAY

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CANDIDATE'S DECLARATION

I hereby declare that this thesis, "Assessment of Fleet Transport Services Performance: Evidences from World Vision Ethiopia" is my own original work, has not been submitted for credit at another university, and that all information sources used in the research for the thesis have been properly acknowledged.

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STATEMENT OF CERTIFICATION

This is to approve that the study made by Henok Sisay, entitled: “*Assessment of Fleet Transport Services Performance: Evidences from World Vision Ethiopia*” submitted in partial fulfillment of the requirements for the Degree of Master of Arts in Business administration complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

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ABBREVIATIONS AND ACRONYMS

AT	Agency Theory
ELRP	Ethiopian Livelihood Reliance Project
HDM	Highway Design Manual
ILO	International Labour Organization
ILP	Internal Leasing Program
JEOP	Joint Emergency Operation program
KPMs	Key Performance Measures
LOS	Level of Service
MOEs	Measures of effectiveness
NDRMCC	National Disaster Risk Management Coordination Commission
NGOs	Non-Government Organizations
QOS	Quality of Service
RBV	Resource Based View
SMART:	Specific, Measurable, Agreed upon, Realistic, and Time-bound.
TCA	Transaction Cost Analysis
TCO	Total Cost of Ownership
UN	United Nations
UNHCR	United Nations Higher Commission for Refugees
USAID	United States Agency for International Development
USD	United State Dollar
WTO	World Trade Organization

ABSTRACT

Fleet management is the use of a fleet of vehicles to complete a task within an organization or to provide a service to a third party with a specific degree of service and cost. The main objective of this study was to evaluate the effectiveness of the fleet transport services provided by a few emergency food assistance programs running in World Vision Ethiopia. Descriptive statistics, such as means, percentages, and frequency tables, were used to characterize the data. This study's target population was 230 employees in leading aid organization in Ethiopia but only 146 sampled respondents responded completely. The answer to the central query was found using inferential statistics, such as the correlation analysis model. Accordingly, this study discovered that while flexibility, cost-reduction, and quality of service delivery all aided in the execution of strong fleet performance, service speed (responsiveness) lagged behind. Additionally, a positive and substantial relationship between service delivery, affordability, quality, flexibility, speed (responsiveness), and transport performance was found by this study. The investigation led to the conclusion that this organization lacked responsiveness even though it maintained good service delivery and was flexible in how it supplied transport services. This study also discovered that improving fleet transportation performance will improve service delivery, cost, quality, flexibility, and responsiveness. The study offers this as a baseline and suggests that other key humanitarian actors apply the fleet transport practice and evaluation performance result to enhance their logistical operations. World Vision in Ethiopia will consequently boost the efficacy with which its fleet transportation is used to deliver humanitarian supplies.

Keywords: Assessment, Fleet Transport Services, Performance, World Vision Ethiopia

CHAPTER ONE

INTRODUCTION

1.1. Background of the Study

Various systematic aid programs are used to provide humanitarian relief after emergencies or natural disasters; these programs focus on fixing local communities and repatriating refugees rather than addressing the root causes of global poverty or inequality. Due to an increase in both natural and man-made disasters, there are more people than ever who require humanitarian aid. According to a UN assessment from 2022, low- and lower-middle income countries suffer disproportionately from natural disasters globally. Such catastrophes have an impact on the number of individuals who live in poverty, sometimes increasing their numbers by more than 5%. Up to 325 million extremely poor people are anticipated to dwell in the nations with the highest risk of natural disasters, making the issue worse.

Consequently, Humanitarian logistics involves, from the point of origin to the point of consumption for the purpose of alleviating the suffering of vulnerable people (Clement and Daniel, 2019). At the UN for example, costs associated with vehicles are the largest expenditure after staff (UN, 2022). It was estimated that half the costs occur at control center level (procurement) and the other half at field office level (operations).

Vehicles are significant assets that have to be administrated prudently to confirm high availability at reasonable cost. Fleet transport management can be either spread out or consolidated. The field offices are accountable for procurement, operation and disposal of the vehicles in decentralized fleet transport management while the headquarters procure the vehicles and give guidelines for their deployment, repair and maintenance in centralized fleet management (Pedraza-Martinez and Van Wassenhove, 2012).

World Vision is a non-profit, non-denominational Christian humanitarian aid and development organization that is dedicated to helping children and their communities worldwide reach their full potential by tackling the causes of poverty. With its origins in the 1950's, World Vision is supported by more than 2.5 million supporters, 20,000 churches, hundreds of corporations, and governments in nearly 100 countries (World Vision, 2022). However, World Vision operates in

challenging and complex environments, and vehicles are critical to the delivery of its programs and operations particularly in Ethiopia. As Ethiopia is experiencing a widespread drought that severely impacting Ethiopia, leaving millions of people without enough to eat, efficient humanitarian transport system is necessary. This can be assured by underlying drive for performance measurement anchors around the needs to provide feedback from the fleet transport service functionality that is performed. However, managing a humanitarian fleet transport is no easy task, and entails a number of challenges that are not typically found in managing a commercial fleet transport. Fleet transport management is a major concern for World Vision because of the magnitude of transportation-related costs in humanitarian operations and fast delivery of humanitarian needs. Yet because of Ethiopian conditions in which humanitarians work (e.g., poor infrastructures, extreme operating conditions, security problems in conflict zones, and budget limitations), most existing models derived from commercial supply chains are inapplicable to humanitarian operations (Annual Report of World Vision, 2022).

To solve flaws in its previous decentralized fleet transport management strategy, the logistics unit was introduced. With this new organization, World Vision streamlines the purchasing of light vehicles that it then leases to country operations via an internal rental program. The field of humanitarian logistics, particularly fleet transport management, has recently received more attention due to its important role in humanitarian operations. This attention is intended to help humanitarian organizations better prepare for and respond to natural and man-made disasters (Poirier, 2020). Transporting workers and goods using managed and systematized heavy- and light-duty vehicles that are either owned or leased allows for continual behavior improvement in terms of customer happiness, flexibility, and productivity. Measures of effectiveness (MOEs) for transportation analysis refer to how well a transportation facility, service, program, system, scenario, or project performs in relation to policies, goals, and objectives. Performance indicators can be the outputs of models that estimate or forecast the performance of prospective future scenarios, programs, or alternative strategies, or they can be based on empirical observations and data measurements of the current conditions. This study evaluated the effectiveness of the fleet transport services provided by World Vision in Ethiopia.

1.2. Statement of the Problem

When people are in need, an effective and efficient fleet of humanitarian assistance vehicles can convey them, saving lives, easing suffering and preserving human dignity (UN, 2022). Any system for humanitarian help that operates depends greatly on how well it performs in order to be efficient and effective. World Vision Ethiopia is requesting that its fleet transport management systems, which are able to monitor the organization's overall fleet transport profile, performance, and costs, be evaluated in the context of Ethiopian humanitarian fleet transport management performance. World Vision Ethiopia acknowledged in its 2021 annual report that the real working conditions for humanitarians lacked consistency.

As a result, it is unable to lower failure costs, lower appraisal costs, increase the share of donations going to charity, and lack a productive workforce. For instance, World Vision Ethiopia uses 75% less fuel than it did a year ago, collaborates with its few partners, replaces vehicles on a time basis beyond its replacement policy, and is under intense pressure from the government and a joint consortium to improve its delivery system.

As per the researcher preliminary interview with logistics experts of this humanitarian organization in Ethiopia, the researcher found that World Vision has not conducted logistical or humanitarian performance measure regularly. According to the interviewees, the researcher understood that World Vision has been experiencing problems with the performance management of the fleet transport of vehicles for example monitoring fleet administration and costing, frequently observed disorganized maintenance scheduling, and unable to observe speed limits recurrently. Further, it has not maintained quality of vehicles for its own use that is well beyond what it would ever consider providing to IPs (implementing partners) and their frontline workers who are in daily contact with beneficiaries. There is no vehicle maintenance and repair control system in place to capture all aspects of this important function with regards to scheduling of repairs and maintenance and identification of a reputable garage for repairs. Further, World Vision could not able to improve responsiveness by creating visibility of the materials pipeline and increasing the effectiveness of people and processes.

The poor management of the fleet of vehicles in the 2022 saw the World Vision losing ten million Ethiopian Birr due to escalating cost of repairs as per the experts' estimation. This can be

reduced if proper fleet transport management is in place. Focusing on metrics and performance measurement will empower logisticians to demonstrate and improve the effectiveness of the humanitarian supply chains (Clement and Daniel, 2019). Poirier (2020) argued that performance measures typically have some type of established threshold or target value or rating which defines the acceptable conditions for a facility.

On other hand, best practices and researchable solutions could not be found as previous studies were interested in various factors affect performance of humanitarian operation in the country. For example, Graham; Gyöngyi and Haavisto, 2018; Girma (2020) and Falagara and Wakolbinger (2019) ignored persistent inefficiencies drive up the cost quality, flexibility and speed (responsiveness) of vehicle fleet transport management in many humanitarian organizations. Thus, Fleet Forum (2021) directed that aid organizations must strive to become more efficient to compete successfully for scarce resources as aid and development organizations are competing for donor funding. Fleet Forum worried about the most significant and commonly observed inefficiencies in humanitarian fleet transport management. This shows the root causes for these inefficiencies should be examined and analyzed, actions that can be taken by organizations to address these inefficiencies are then proposed. Further, to the best of the researcher knowledge, much focus has not been given to address fleet transport management performance. In the present study, the researcher assessed fleet transport services performance of selected Non- government emergency relief food aid organizations operating in World Vision Ethiopia.

1.3. Objectives of the Study

1.3.1. General Objective

The overall objective of the research study was to assess fleet transport services performance of World Vision Ethiopia.

1.3.2. Specific Objectives

This study had also specific objective to:

1. To assess the level of overall fleet transport services performance of emergency relief food projects operating in World Vision Ethiopia
2. To identify a better fleet transport services performance indicator among service delivery, cost, quality, flexibility and speed (responsiveness) of the World Vision

1.4. Research Questions

1. What is the level of overall fleet transport services performance of emergency relief food projects operating in World Vision Ethiopia?
2. On which key fleet transport services performance indicator the World Vision Ethiopia performs better in terms of the key performance indicators service delivery, cost, quality, flexibility and speed (responsiveness)?

1.5. Significance of the Study

This study looked at the performance gaps, issues, and potential strategic solutions in fleet transport services. In the beginning, it bounced humanitarian supply chain knowledge of strategic food aid preparedness to all stakeholders working with World Vision Ethiopia, including Joint Consortium, the federal, regional, and local governments, international and local NGOs, donors, and other international agencies.

Next, the study unswervingly contributes to reduce sufferings of disaster affected people by providing solutions and strategies which enable to improve considerate fleet transport service performance of humanitarian organizations. Government Institutions and humanitarian syndicates can find the information useful by identifying the weaknesses in fleet transport management in disaster administration and come up with possible solutions that enhances the effective fleet transport in the humanitarian food aid. Based on the commendations given in this study, authorities and experts of World Vision Ethiopia as well as its global team will have a change to improve humanitarian fleet transport services. In addition, this study provides clues to

solve central fleet transport service concern of government authorities, experts, policy makers and the donors acted on to reduce the suffering of disaster affected population .

It also helps logistician and experts to have deeper insights about the fleet transport service gap faced by humanitarian organizations and inform their key roles and responsibilities to promote humanitarian logistics. The managers in the humanitarian sector can benefit from insights into what it takes the humanitarian to thrive and how to leverage the fleet transport services performance practices in the country to their advantage.

The study stands to benefit researchers, scholars and academicians interested in the subject of supply chain management and indeed contribute to the body of knowledge in the subject. Furthermore, future researchers and academia can use results of this study for conducting further studies on the same issues. It gives humanitarian assistant aid guidelines for further researchers who want to focus on studying the challenges of humanitarian logistics in developing countries like Ethiopia.

1.6. Scope and Limitations of the Study

The study's scope was restricted to evaluating the effectiveness of the fleet transport services provided by a few emergency food assistance programs running in World Vision Ethiopia. Because it was more convenient and nearby, the research was done at the Addis Abeba headquarters. Out of a wide range of organizations, including Joint Operation (JEOP) and Ethiopian Livelihood Reliance Project (ELRP), just one humanitarian food relief organization was the subject of the study. It concentrated on a crucial performance indicator for fleet transport services, such as service delivery, price, quality, adaptability, and responsiveness. Given the limited time and resources available, this study's focus was primarily on the fleet transport performance of World Vision Ethiopia.

Due to the limited time and resources at the researcher's disposal, this particular study specifically focused on the fleet transport performance of World Vision Ethiopia. As a result, the study did not take into account organizations like donors, the host government, other humanitarian logistic actors, etc. Additionally, Addis Abeba and Adama were chosen for this study due to time and financial constraints, which prevented the researcher from collecting data across the country in order to conveniently and affordably meet the study's objectives. The study

also focuses on fleet transportation services provided by the study organization's Addis Ababa headquarters and Adama branch from February to May 2022. In order to get the necessary data, this study took a representative sample of workers from the target department's upper, medium, and lower levels of management. Additionally, utilizing qualitative data collection techniques, this study employed an exploratory case study research methodology to evaluate the fleet transport services performance of chosen emergency relief food initiatives running in World Vision Ethiopia.

1.7. Organization of Study

Five chapters are created for this study in order to meet the research topics. The problem statement, objectives, research challenges, significance of the study, and study scope are all presented in the introduction of Chapter One. The performance of fleet transport services is discussed in the next chapter along with relevant literature and theoretical underpinnings. The research methodology chapter, which comes after chapter three, provides an explanation of the research design and research techniques. Chapter four follows with the empirical data results, discussions and interpretation, and chapter five presents summary, conclusions and recommendations of the study.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1. Introduction

The purpose of this chapter is to provide a review of the pertinent literature in the form of studies that have already been conducted on the subject of fleet transport service performance for improved humanitarian logistic performance. A summary and synthesis of the literature review is included, along with the theoretical review, fleet transport service performance assessments and empirical research. It covers behavioral intentions referral concepts and models, effective fleet transport service performance concepts and models, and fleet transport service performance conceptions, theories, and models.

2.2. Review of Theoretical Literature

2.2.1 Concepts of Humanitarian Logistics and Fleet Transport Service

2.2.1.1. Humanitarian Logistics

A field of logistics known as humanitarian logistics is focused on planning the distribution and storage of supplies to the impacted area and people during natural disasters or other serious catastrophes. This description just considers the actual movement of commodities to their final locations; however, humanitarian logistics is far more intricate and involves resource forecasting and optimization, inventory management, and information sharing. Consequently, a more comprehensive definition of humanitarian logistics is the process of organizing, carrying out, and managing the efficient, affordable flow and storage of goods and materials, as well as related information, from the point of origin to the point of consumption with the aim of reducing the suffering of vulnerable people (Eftekhar, 2015).

For a number of reasons, humanitarian logistics exemplify a crucial role in disaster response. In the beginning, humanitarian logistics makes a significant contribution to reducing the negative effects of natural and man-made disasters in terms of loss of human life and monetary costs. These fatalities take place in a variety of ways, such as the destruction of buildings, roads, and

other infrastructure; losses in output, reductions in employment, and tax revenues as a result of the rise in the cost of construction and consumables; and the loss of millions of lives due to hunger and accidents. After that, it is thought that the store of data for post-event learning is found in humanitarian logistics.

Everything from the effectiveness of sources and transportation providers to the cost and appropriateness of responses, to the suitability of donated items and the administration of information, is redirected by logistics data. It poses a major risk to the effectiveness of both current and future operations and plans. Planning and, subsequently, mobilization during catastrophes will be supported by organizing emergency response strategies (Gupta, 2017). Therefore, humanitarian logistics is vital for the success of both ongoing and prospective humanitarian operations and programs since it enables charitable organizations to respond to disasters ingeniously and effectively while also supporting their unfavorable effects. Humanitarian logistics refers to the procedures and frameworks used to mobilize personnel, supplies, expertise, and knowledge to assist the most vulnerable victims of complex situations and natural disasters.

It comprises a variety of tasks like purchasing, shipping, tracking, clearing customs, local transportation, warehousing, and last-mile delivery. The presence of numerous actors in multiple regions complicates the logistical process for humanitarian aid. In more detail, the process links numerous participants, such as donors, local and international relief groups, local governments, and recipients. The movement of goods, the flow of cash, and the flow of knowledge are the three fundamental primary fluxes in this process. The movement of material includes both the flow of restarted food following disasters and the transfer of goods from donors to beneficiaries, including clothing, food, coverlets, blankets, soap, medical equipment, and medicines (Graham et al., 2018).

2.2.2 Fleet

Fleet management is the use of a fleet of vehicles to complete a task within an organization or to provide a service to a third party with a specific degree of service and cost. It is related to a group of motor vehicles owned or leased by a business or government agency. To realize the vision of intelligent transportation systems with fully automated vehicles, there is a need for high

level planning for single vehicles as well as fleets of vehicles (Gupta, 2017). Vehicle routing and scheduling might be a set of spatially distributed tasks to a fleet of vehicles working together to achieve a high-level goal, in domains where tasks may be related by precedence or synchronization constraints and might have a choice of locations at which they can be performed. It focuses on providing the company with a means to manage its assets through control of the different variables involved in the process. Monitoring has as its objective, the exact product location, tying in with other variables related to the performance of the assets and the professional staff involved.

Fleet vehicles are groups of motor vehicles comprising all transport vehicles owned by the company, government or agency or other business. Sometimes, the vehicles are leased to transport companies for the movement of goods to customers. The vehicles are also leased to get company employees to their client's locations. It is knowledge of a complex set of principles used to manage a fleet of vehicles efficiently and effectively. A fleet manager knows the difference between lease versus purchase decisions, asset utilization principles, cost versus benefit analyses, opportunity cost principles, present value of money, life cycle modeling and other complex financial theories (Eftekhari, 2015).

2.2.3 Fleet Management

Fleet management is related to all actions needed to maintain and operate pieces of equipment throughout its life from the beginning stages of equipment acquisition to the final stages of asset disposal. Its system includes maintain, control and monitor fuel consumption and stock in any type of industry that uses transport, including rail, road, water and air, as a means of business lifecycle. It plays a very significant role as it manages the flow of goods along the supply chain and therefore helps in controlling supply chain costs (Graham et al., 2018).

Fleet management systems describe the main characteristics of the various types of fleet management applications in use. Fleet management practices as a systemic approach to addressing the dynamic vehicle routing problem with time-dependent travel times. It is perceived in terms of how they are able to benefit companies by realizing efficiency and profitability. In the knowledge-based economy of today, the rapidly changing and uncertain environment means that transport firms are facing their biggest challenge in how to address the current situation and

capture a competitive advantage. The increasing competence in the market is an important factor that drives the adoption of new technologies and innovation, as companies search for new opportunities to cut costs by improving process efficiency or by developing new products (Girma, 2020). The main goals of any fleet management system are to provide information to improve efficiency, decrease downtime and in-service breakdowns, reduce inventory, lower ownership cost and avoid waste. According to him, the main goals of any fleet management system are to provide information to improve efficiency, decrease downtime and in-service breakdowns, reduce inventory, lower ownership cost and avoid waste (Clement and Daniel, 2019).

2.2.4 Fleet Transport Service

Transportation modes, infrastructure, location, kind of delivery, load planning, routing, and scheduling are all covered under transport management agreements. Transporting products from one place to another is its primary purpose. Because it is unavoidable, transportation plays a crucial role in the structure of today's urbanized nations. Understanding how the existing land transportation system, and particularly its fleet transportation system, has evolved through time is important (Heaslip and Barber 2016). According to Bitweded (2017), transportation enables aid to reach those in need or in cases of charity assistance. There are many options for transportation during a disaster or humanitarian crises.

It encompasses local transportation methods like mules and donkeys as well as drop shipping, global sourcing, military transport, commercial transport, non-commercial transport, third-party logistics companies, freight forwarders, charter planes, and so on. Damaged infrastructure, inaccessible infrastructure, and the absence of infrastructure required for large-scale assistance cause bottlenecks, delays, and congestion at entry points to the disaster region when it comes to relief efforts during disasters and complex humanitarian emergencies. It is crucial to include not only the resources and tools required to transfer the supplies, but also the actual options and possibilities for delivering assistance at the appropriate time while defining the transportation process. Supplies should not just be progressed in any way and at any time, nonetheless that the challenge is to do so safely and in a timely manner. It is the component in the logistics chain that makes it possible for assistance to arrive at the site where it is required (the arrival of goods from abroad, as the movement of them within the country) (Clement and Daniel, 2019).

2.2.5 Notions on Performance

Performance metrics typically include some sort of acknowledged threshold, target value, or rating that specifies the conditions that are acceptable for a facility. Any situation where those criteria are not met is considered to have a deficiency or requirement that needs to be evaluated. According to Heaslip and Barber (2016), "the term 'need' as used by transportation professionals has traditionally been defined as any instance where the current or future facility conditions fall below an agreed criterion. The bigger the demand, the better the eccentricity of the measured values from the performance threshold. Thresholds are a crucial component of the decision-making process for analyzing shortages and improving another possibility since they are designed to maximize system performance while limiting liability to the agency in charge of construction, operations and maintenance (Graham et.al, 2018).

Beginnings can be seen as objectives, targets, or standards. A jurisdiction may decide to implement thresholds as part of a strategy or policy. Most road authorities (state, county, or city) uphold performance standards that define precise performance limits and are implemented for operational efficiency. To provide a foundation for evaluating the outcomes of transportation analysis and to ascertain whether project goals and objectives are being met, it is crucial to identify all applicable performance standards, corresponding performance measures, and thresholds for study roadways (Clement and Daniel, 2019). Prescribed tools or calculating methods are another option. The project's aims and objectives are used to determine the performance measurements to be employed in a system plan, corridor study, development review, or project alternatives analysis during scoping and methodology development (Graham et.al, 2018).

Depending on several elements, including the project kind and tools employed, performance metrics may necessitate differing amounts of work. It's necessary to use some analysis performance metrics. In order to compare the performance of alternatives with ODOT Highway Design Manual (HDM) mobility thresholds, for instance, state highway project v/c ratios are required. Depending on the objectives of the project, additional analysis performance measures are frequently needed. By being specifically defined to the project, these chosen performance measurements become project evaluation criteria. Additionally, desirable confidence or significance levels and thresholds relevant to a given project may be established. The need for

SMART performance measures including specific, measurable, agreed-upon, realistic, and time-bound—is well known. Performance metrics must be sensitive enough to differentiate between analysis years and other potential, situational circumstances or choices (Heaslip and Barber 2016).

There isn't a single performance indicator that encompasses all the tactics or goals of a project or plan. Many performance measures merely address one aspect of a problem while ignoring other important reflections. Performance metrics may be applicable or urgent depending on the project's or plan's purpose, necessity, goals, and objectives in addition to the facility's and area's type. A decision process may not use performance metrics if there are too many of them for a specific region, which can lead to disagreements, confusion, and extra effort (Graham et al., 2018). Depending on the data and resources at hand, some measurements might not be practicable to create or easily understandable to the target audience. Sometimes the same performance measure can be used to address numerous goals. For instance, journey time can be used to evaluate freight, alternative modes, or emergency vehicle trips. Reduce the amount of performance measurements chosen for every given project component (Bitweded, 2017).

2.2.6 Fleet Transport Service Performance

Performance indicators for transportation analysis, also known as measures of effectiveness (MOEs), are quantitative assessments of how well a transportation facility, service, program, system, scenario, or project performs in relation to policies, goals, and objectives. Traffic engineering frequently uses performance indicators such as the v/c ratio, level of service (LOS), crashes, vehicle delays, journey times, mode shares, and capacity. The goals of mobility and safety are the main emphasis of the performance metrics in this chapter. The outputs of models that estimate or anticipate the performance of prospective future scenarios, programs, or alternative strategies can also be used as performance measures (Heaslip and Barber 2016). Performance measures can be based on empirical observations/data measurements of the current conditions. Measures of the performance of the fleet's transportation systems are grouped into categories based on their primary purposes, such as safety, accessibility and mobility. It can also be measured in terms of its impact or consequence, such as on the environment, and socio-economics.

Although each of the performance measures listed below is related to a single core category, it should be noted that certain metrics are related to numerous goals and categories (Clement and Daniel, 2019). Plans and initiatives employ these metrics to determine needs, contrast scenarios and options, and determine benefits and impacts. The chapter focuses on performance indicators at the facility level. At a higher level, system level performance measurements produced by APM tools are discussed. Mobility, dependability, level of service (los), accessibility, and safety, other multimodal performance measures, and infrastructure are among the performance metrics that are protected (Dowling, List, Yang, Witzke, and Flannery 2014). The most popular and useful performance metrics are the ones that are prioritized. Measures that have a strong chance of being applied to a variety of studies are also discussed

In order to choose the best analytical performance metrics for a particular project, TPAU can offer guidance. Only a small portion of all potential measures will be used in a particular project. Although factors can affect performance or make up it, they are typically not reported as separate performance metrics. Although not performance measures in and of themselves, in many cases these can offer extra helpful information on the factors that influence performance, which aids in comprehending or interpreting the results of the performance measure (Graham et al., 2018). This includes analysis results that are inputs into performance measure computations made using different techniques (Bitweded, 2017).

It is produced utilizing techniques or instruments other than the APM, performance metrics or evaluation criteria. For instance, metrics developed for ODOT TSMO program management, including the average time to clear an event. Right of way, building costs, funding, economics, design standards, and environmental effects are also included. Performance indicators covering broad, high-level policy areas other than transportation, such as economic vitality, land use, environmental stewardship, quality of life, safety, and health; equity; funding and finance; and (Girma, 2020). Agency key performance measures (KPMs) are benchmarks, goals, or objectives that are used for agency-wide, policy-, strategic-, investment-, or monitoring-related purposes, such as mandated performance measure reporting for ODOT Key Performance Measures. Because of this, the broader KPMs cannot be compared to analysis performance measurements.

The broader KPMs are not comparable to analysis performance measures due to their distinct purposes and levels of precision, as well as the likelihood that they are based on various

measurements, tools, networks, assumptions, definitions, variables, data sources, algorithms, and/or time periods. In contrast, analysis project alternatives often have a smaller scale and higher resolution and concentrate on the intersections and road segments in the study region. Smaller plans and initiatives, such local city TSPs, would not be likely to exhibit a significantly measurable change to make comparisons helpful, hence large scale performance metrics would not be as valuable for them (Guide for Implementation of ORS, 2015).

2.3 Theoretical Framework

2.3.1 Transaction Cost Analysis (TCA) Theory

Economics of transaction costs examines the expenses incurred during the exchange of commodities and services. This includes the price of gathering information, the price of negotiating and upholding contracts, the defining of property rights, and the cost of monitoring and altering institutional arrangements that specify the procedures by which business transactions between firms take place. Asset specificity is highlighted by transaction-cost economics. The underlying presumption is that the more particular an asset is, the greater the incentive to forge long-term alliances and connections that will allow the asset to contribute to profitability over the long run (Bonet, 2012).

2.3.2 Agency Theory (AT)

Agency theory includes providing the most appropriate types of contracts to safeguard the connections between chain members. The goal is to create a contract or agreement that strikes a balance between the chain members' varying levels of risk aversion, knowledge asymmetry, and uncertainty about the outcome. Its methodology fits with transaction-cost economics; its components concentrate on enhancing the economic effectiveness of conducting business between organizations (Girma, 2020; Bonet, 2012).

2.3.3 Resource Based View Theory (RBV)

According to this notion, a company's core competency is its capacity to adapt quickly to changing circumstances and develop new, more dynamic competencies. As a result, this idea supports a firm's competitiveness, which is linked to how resources and capabilities are

configured as markets develop. Based on the concept of concentrating on core competencies and outsourcing complementary competencies to external partners, logistics decisions are made (Bonet, 2012).

2.3.4 Aspects of this Study's Important Theories

The TCA theory is crucial to this study since it provides an answer to the question of "make or buy" and discusses how TCT should choose the governance structure (hierarchy, market, or hybrid form) according to the specifics of the transaction in order to coordinate it. Asset specificity, transaction uncertainty, relationship incidence, and the facility for service provider assessment are the major four problems in this situation. Because they can use it as a guide to make wise choices and because TCA offers significant insights when selecting outsourcing as a corporate governance structure, this theory is therefore highly relevant for as long as humanitarian actions are taken into consideration. The importance of AT theory for this study can be attributed to its ability to resolve a variety of agent and principal issues, including those related to competing aims, risk aversion, outcome uncertainty, self-interested behavior, and constrained rationality. The division of ownership and management of economic operations between the agent and the principal is complicated.

Therefore, humanitarian organizations can make use of this theory to lessen the risks associated with humanitarian logistics and achieve the best possible value from the logistical services. For the reason that it offers a useful tool to respond to transaction cost quandaries through contractual and non-contractual remedies in logistics, managers must comprehend and mitigate logistics challenges associated with behavior uncertainty, relationship management, collaboration, and uncertainty. According to transaction cost, businesses maintain their competitive advantage because they have access to strategic resources. TCA deals with the firm's resource diversity-related competitive advantages. Additionally, it has the ability to combine two or more resources. While the resource-based perspective explains how an organization's capabilities develop and influence its reasonable position and performance. According to TCA, decision-making between the firm and the market is influenced by transaction costs related to make or buy decisions. The transaction costs analysis aids in determining whether an activity should be carried out internally or by a third party. Transaction Cost Analysis (TCA) identifies

five factors as determining transaction costs: frequency of transactions, asset specificity, uncertainty, constrained rationality, and opportunistic behavior.

2.3.5 Key Performance Indicators for Fleet Transport Services

The process of calculating an operation's efficacy and efficiency is called performance measurement. The effectiveness of fleet transport in humanitarian logistics is its capacity to provide humanitarian requirements, hence reducing beneficiaries' suffering. Efficiency, which is based on both financial and non-financial elements, is the metric by which this performance is measured. The non-financial components include human resource, volunteer hours, and actual project time vs. planned, number of individuals participated, and number of people served. The financial elements are resources and departure from project budget (Graham et al., 2018). The fleet transport performance measurement system will be helpful in that it will give you the data you need to make any decisions. Additionally, it is crucial to measure the appropriate things at the appropriate times in a supply chain.

An organization will be able to assess the improvement in terms of effectiveness and efficiency with the aid of this. Adapting commercial performance measurements from three dimensions, namely resource metrics, output metrics, and flexibility metrics, recommended a performance assessment system for humanitarian aid. Organizations may use a variety of performance measuring methods, but they must use at least one or two metrics from each of the three dimensions, according to the authors. An efficient and successful supply chain for humanitarian aid depends on measuring and managing performance. Effective performance measurement systems, for instance, would enhance the performance of the relief chains (Girma, 2020). When a company measures its performance, it may create and retain knowledge and quickly show measurable, systematic improvements. Operational problems in humanitarian logistics are a sign of larger problems distressing humanitarian organizations (Poirier, 2020).

These concerns are further described and analyzed below from the standpoint of a wider body of literature. For a number of years, humanitarian logistics has not received the prominence it deserves, leading to unmet logistical needs. For instance, logisticians are not included in planning and budgetary processes. Moreover, logisticians are often not consulted in the decision

making process and hence some of the logistics bottlenecks are not anticipated and planned for, causing unnecessary delays in delivering relief (Graham et.al, 2018).

2.3.5.1. Service Delivery

Level of Service (LOS) and Quality of Service (QOS) are indicators that are based on a letter grade based on an underlying performance measure value but cannot be measured directly in the field. Motorized vehicle Level of Service is a frequently used performance metric that is calculated using the techniques outlined in the Highway Capacity Manual. It is a ranking from A to F of the degree of mobility of a facility, segment, intersection, or approach (usually as a consequence of delay or density). LOS A, B, and C represent situations where there are no noticeable delays in traffic during periods of peak hour demand. Operating circumstances get progressively worse for LOS D and E. LOS F denotes situations when demand has outpaced supply and average vehicle delays have grown excessive. Long lines and delays are common symptoms of this disease (Guidance for Implementation of ORS, 2015). Quality of Service (QOS) gauges how comfortable a user—who may be a transit passenger, a biker, or a pedestrian—perceives themselves to be. While the consequences of pedestrians on automotive mobility are taken into account in vehicular LOS, pedestrian/bicycle/transit LOS is seen from the perspective of the pedestrian, cyclist, or transit user. According to Dowling et al. (2014), the methodology generates a score that is equivalent to a Level of Service rating.

2.3.5.2. Cost

Demand estimation is impacted by decentralization and competing goals. For instance, equity-focused initiatives calculate their field-based transportation demand. When reporting to the logistics function, these programs may be subject to incentives that would cause their demand to be distorted and are not entirely responsible for the operational costs of the fleet transport (Fleet Forum, 2021). The logistics function is entirely responsible for the cost of the fleet, with a service level that strikes a balance between equity and efficiency. The fleet size that would reduce system costs is therefore smaller than the fleet size that would reduce program expenses. Monitoring ineffectively does not stop programs from producing skewed reports. This leads to a fleet excess that is expensive to the system. Different fleet configurations, such as dedicated fleets, pooled fleets, and mixed fleets (partially pooled), could be compared in terms of

performance using operation models. Cost and service level might be balanced to represent performance. According to Alfonso and Luk (2012), performance could be compared to a benchmark centralized solution.

2.3.5.3. Quality

A precise evaluation of the customer's true values should serve as the foundation for determining the level of performance in relation to both elements. By focusing on internally created metrics and using the evaluation of quality to infer customers' perceptions of the service given, logistics managers have traditionally tried to evaluate their performance through a "operational focus" by depending on internally generated metrics. The outward orientation toward customers that demands for competing on greater customer value delivery has frequently been disregarded by logistics managers. The only option for a business to achieve a competitive edge is to outsource its needs in order to compete with others. As a result, quality is an important consideration that may have a good or negative impact on outsourcing (Clement and Daniel, 2019). Keeping up with these developments is risky, especially when it takes a sizable investment, due to the market instability, fierce competition, bureaucratic government rules, constrictive financial conditions, and technology advancements. A corporation can distribute its risks among a variety of vendors via outsourcing (Alfonso and Luk, 2012).

2.3.5.4. Flexibility

Effective performance assessment systems can aid managers of nonprofit organizations in improving decisions, performance, and accountability. Performance measurements also offer feedback on agency performance and encourage managers and staff to work harder and smarter to enhance performance when they are well-designed and efficiently implemented. They can also aid in more efficient resource allocation, the assessment of alternative strategies' effectiveness, and enhanced operational control, even though they permit more operating flexibility. Additionally, decisions pertaining to each facility are crucial since they affect the supply chain's adaptability to shifting demand-satisfaction strategies. Clearly, the fleet transportation decisions made during strategic network design have a significant impact on the organization's long-term effectiveness and competitive position (Poirier, 2020). In order to deal with uncertainty and change, flexibility is necessary. According to Clement and Daniel (2019), there are four distinct

categories of market uncertainty: acceptance of specific product types, length of product life cycles, demand for particular product options, aggregate product demand, and two categories of process uncertainty: resource and material availability.

2.3.5.5. Speed (Responsiveness)

According to Girma (2020), when the recognized relief groups come together, they form two separate humanitarian systems that respond to man-made and natural disasters, which are often either random and huge or repetitive and tiny. Transport systems for relief has a short duration, higher urgency with highly stochastic demand, and short response time since food emergency aid is primarily concerned with delivery timeliness. Vehicle speed, driver dependability, frequency of delivery, and depot placement are just a few of the variables that might increase delivery speed. Inventory levels may drop as these locations experience more effectiveness. Lead-time is a crucial component of logistics service since it has very particular implications on the cooperation of supply chain participants. As a result, there is a noticeable reduction in lead time. Lead-time reduction can therefore be seen as a supply chain enabler of coordination. Lead time reduction has been seen as an investment strategy in several studies. Significant emphasis is placed on lead-time reduction in waste reduction, particularly with regard to excess inventory (Falagara and Wakolbinger, 2019).

2.4. Empirical Literature Review

2.4.1. Studies Across the Globe

The most prevalent fleet management inefficiencies in humanitarian organizations were investigated by Fleet Forum (2021) in terms of their characteristics and causes. The goal of the study was to identify areas where service performance might be enhanced and resources could be used more effectively. Humanitarian organizations (HOs) have continuously expanded their requests for funding since 2011, but more than 55% of the demands are still unmet. The financing shortage for humanitarian causes was anticipated to be over USD 10 billion. As a result, cost effectiveness must take center stage in order to maximize the limited resources available. It is impossible to disregard the financial burden of running a fleet of vehicles. Eight years later, we can only guess that the international humanitarian fleet's capital costs have

increased by a total of 1.6 billion USD and 8 years later, it is assumed this total to have full-grown in step with the funding in the sector. It has been established that "the asset-related and operating cost of IHO 4x4 light vehicle fleets is above USD 1 billion per year and its size is substantial; between 70,000 and 80,000 vehicles and that "The current centralized and hybrid fleet transport model designs allow a misalignment of incentives at different levels. As a result, it's possible that the fleet's cost is not optimized to its full potential to the tune of more than 50%. Given the magnitude of the costs incurred, humanitarian organizations should take advantage of every chance to improve fleet transport management efficiency and profit from the improvements. The project report was created by Fleet Forum in collaboration with two research organizations, the Humanitarian Research Group (HRG) at INSEAD and the HumOSCM Lab at ETH Zurich. It gives an assessment of the most prevalent inefficiencies that continue to persist and have a detrimental influence on fleet transport performance by drawing on the most recent research, industry best practices, and years of experience working with humanitarian fleet transport managers.

Lack of planning for vehicle disposal to maximize residual value is one of the most frequently found inefficiencies in aid and development organizations' fleet transport operations that raises the cost of fleet transport operations. Total Cost of Ownership (TCO) is increased by using older vehicles longer. Mariane, Esther, José, Csoban, and Pierre (2018) made the best assessment they could of how much a centralized GFM has enhanced the UNHCR's fleet transport management's cost effectiveness in comparison to the prior decentralized approach. These aspects of the GFM policy and strategy include the Global Fleet Transport Management Project, including the rental scheme and fleet transport management; insurance, including self-insurance and third-party insurance; and the VTS. The evaluation covers UNHCR light vehicles, including those used by UNHCR personnel and by partners. The evaluation team contrasted the current situation with what it would have been in the absence of GFM in order to assess the benefits of GFM. The most important conclusions from the comparison of the GFM program to local purchasing are obvious. When taking into account procurement costs, disposal revenue, insurance expenses, and the effort of staff time involved, the benefits of GFM are clearly more than its costs. A total GFM gain of USD 17,500,000 has been achieved thanks to insurance and procurement cost savings as well as disposal revenue. According to the evaluation, GFM's purchases of light vehicles saved UNHCR about USD 8.8 million in 2017 and about USD 9.5 million in 2018.

While data on profits from selling vehicles before GFM is scarce, GFM's utilization of an auction process resulted in profits of almost USD 6.3 million in 2017. The cost of all-risk insurance purchased locally is more expensive than insurance offered through GFM.

The anticipated cost of purchasing insurance locally is USD 4,635,626 as opposed to USD 2,178,500 for insurance provided by GFM. This translates as savings of \$2,457,126 USD. After researching the Internal Leasing Program (ILP) of the UNHCR, Kunz et al. (2015) concluded that "Fleet size is the first indicator." According to the 2011 Fleet Transport Management Review, UNHCR's fleet size was "oversized compared with operational needs," with an estimated 6500 vehicles. The right-sized fleet is one of the goals of the 2014-2018 ILP plan, despite the fact that no one knew the precise number of vehicles in the field. Between April 2013 and October 2015, the ILP decreased its fleet by 11%, from 4913 to 4389 cars, in order to accomplish this goal.

At UNHCR, fleet transport management was incredibly dispersed, resulting in low fleet transport standardization and high expenses. The purchase of vehicles was contingent on funds, and there were no centralized reporting methods for tracking expenses and performance of fleet transportation. These ineffective methods made it harder for UNHCR to carry out its mission, while also posing serious safety issues and having a detrimental effect on the environment as a whole. By centralizing the purchase and disposal of its cars under an Internal Leasing Program (ILP), UNHCR made these inefficiencies clear. Vehicles are purchased by the Headquarter directly from a supplier and leased to field offices in return for a monthly rental fee. On the basis of the following Key Performance Indicators, the ILP's impact was assessed: fleet size, average fleet age, average procurement cost, and level of fleet transport standardization. These KPIs demonstrated an 11% decrease in fleet size as compared to the pre-ILP baseline values. While the number of models fell from 35 to 23, the number of suppliers was cut in half, from 44 to 25, by 43%. The project's senior management's backing, as well as persistent communication and awareness-building inside the company, were key success elements.

Eftekhar (2015) looked into and examined how vehicles are distributed among humanitarian organizations. According to this analysis, the organization incurs increased costs due to the inefficiency of the current vehicle allocation processes, which favor long-term ownership and reduced use as overall mileage rises. The distribution of vehicles must also take into account the

unique safety requirements of humanitarian missions, such as the need to travel in convoys over dangerous terrain. In their 2015 study, Stauffer, Pedraza-Martinez, and Van Wassenhove looked at the characteristics of vehicle demand in fleet transport management for humanitarian purposes. They find that the primary demand for relief products is distinct from the secondary demand, which they refer to as the want for support items like vehicles. They demonstrate that shipping vehicles out of a centralized hub rather than prepositioning them in multiple hubs is the best readiness strategy in the context of managing the fleet transit for humanitarian purposes. In the event of major calamities, they encourage the use of an additional temporary hub. This result is consistent with other study that discovered prepositioning is not always the best option in humanitarian logistics.

In case the organization needs to handle catastrophe response and development programs, Besiou, Pedraza-Martinez, and Van Wassenhove (2014) examined fleet transport management. Disaster relief focuses on handling a catastrophe, whereas development initiatives work to strengthen vulnerable populations' capacity and resilience. In development initiatives, the centralized model produces better results because planning is simpler and future demands are known. Due to specialized knowledge and increased flexibility in local decision-making, using cars in both disaster response and development initiatives is advantageous.

Using information on the typical vehicle utilization over time, Pedraza-Martinez and Van Wassenhove (2013) of the ICRC's vehicle replacement program measured an excessive fleet size. They discovered that utilization (monthly kilometers driven) decreased as the vehicle got older. The fact that they did not notice a similar decline in the standard of the humanitarian assistance provided shows that not all of the fleet's cars were required at the same time. According to the 2017 Proof of Concept study undertaken by multiple UN agencies, including UNICEF, a fleet's number can be decreased by at least 10% by maximizing its use. Greater reduction might result from more proactive management. They stated that the worldwide humanitarian fleet's overall capital expenditures are anticipated to be \$1,6 billion. The cost of purchasing and bringing a vehicle into service, the direct and indirect operating costs of that vehicle throughout the course of its lifetime, less any revenue received when the vehicle is disposed of at the end of its existence, make up a vehicle's Total Cost of Ownership (TCO). Bringing the TCO down to an ideal level is the goal of a well-managed fleet. This analysis comes

to the general conclusion that GFM is more advantageous than costly. UNHCR made a wise choice by centralizing the purchase and disposal of its light vehicles. The review team's reconstruction of the GFM theory of change and its underlying presumptions are both accurate.

2.4.2. Studies in Ethiopia

Dessalegn (2018) assessed how the Ethiopian World Food Program's success was impacted by supply chain management concerns. According to the study's descriptive findings, coordination problems and a lack of transportation infrastructure came in second and third place, respectively, to the problem of the warehouse. Similar findings emerged from the key informant interviews, with most of the participants admitting that WFP Ethiopia's supply chain management faces a variety of interrelated challenges. It is suggested that focus be given to coordination, transportation, and warehousing management in order to improve the organization's supply chain management.

In the context of the AHADA humanitarian operation at Dollo Ado, Girma (2020) observed the logistical performance of the transport outsourced service provider. The study discovered that there is a positive and substantial association between coordination, fund availability, competency, and collaboration and performance. This was done using explanatory and descriptive research approaches. Performance of 3PL transport service providers is closely correlated with management of the warehouse, inventory, fleet, supply chain, and maintenance. A better control system should be adequately installed, and fuel management should be carefully monitored. Businesses that provide transportation services lack access to best practices, which would improve service quality, control logistics costs, increase speed, correctly manage resources, spread risks, and concentrate on problems that are extremely important to their continued existence and future development.

Bitweded (2017) evaluated Save the Children Ethiopia's performance as a transporter. This study specifically aimed to investigate and empirically test the potential relationships between supply chain management performance of organizations and humanitarian supply chain performance factors like: transporter performance with communication, coordination, transporters' efficiency and infrastructural issues, addressing of the resource to the intended beneficiaries in effectively and efficiently. In order to select variables and associated items and create a structured

questionnaire, the researcher conducted an organized examination of the literature. The analysis's findings indicate a strong and statistically significant association between the planning, coordination, and management of the humanitarian supply chain. On the other hand, there is a direct correlation between the effectiveness of the transportation system and infrastructure problems and the effectiveness of the organization's supply chain management.

2.5. Research Gap

The vast majority of research on humanitarian performance (Girna 2020, Bitweded 2017, Heaslip and Kovacs, 2019) examined the performance of the humanitarian supply chain or logistics and their main drivers. As a result, operating a vehicle fleet's core performance indicators—service delivery, cost, quality, flexibility, and speed (responsiveness)—are disregarded. The asset-related and operating costs of IHO 4x4 light vehicle fleets are over USD 1 billion annually, they are sizable—between 70,000 and 80,000 vehicles—and the current centralized and hybrid fleet model designs permit an incentive misalignment at various levels. This was confirmed in a later study by Fleet Forum (2021). As a result, it's possible that more than half of the whole cost of the fleet is not heightened.

Given the magnitude of the costs incurred, humanitarian organizations should take advantage of every chance to improve fleet transport management efficiency and profit from the improvements. According to the empirical research discovered, it is clear that the majority of attention has been paid to the impact of logistics on the performance of supply chains in the private, i.e., commercial supply chains, and public sector organizations, with only a few studies concentrating on the humanitarian relief sector. Humanitarian organizations measured fleet performance to quickly boost efficiency and cut expenditures. Strategic and transportation planning are being used by humanitarian organizations to refocus their operations, reduce risks, create lasting competitive advantages, and free up resources for their core operations. As a result, there is a substantial study vacuum on the performance of the humanitarian fleet transport in Ethiopian non-governmental organizations.

2.6. Conceptual Framework (Model) of the Study

The conceptual framework (model) of the study is depicted in the figure (Figure1) below and is based on results or findings from reviews of related literature.

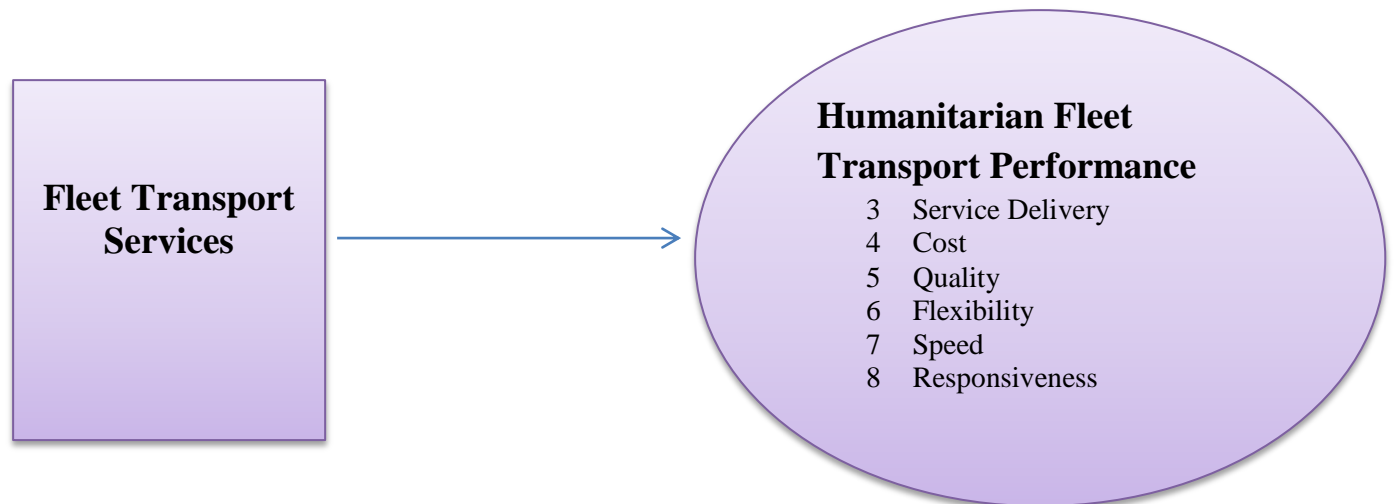


Figure 1: Conceptual Framework

Adapted from Graham et.al, 2018

The World Vision serves as the foundation for the technique for evaluating the performance of the humanitarian fleet transport. The evaluation strategy was based on a quick assessment carried out when aid distribution was necessary. This evaluation covered important issues such as the performance of the fleet used for humanitarian missions, the performance gap in such projects, institutional framework, and the accessibility of data and information. The evaluation was based on the major beneficiaries' responses to the study questions' requests for speed, flexibility, service delivery, quality, and cost effectiveness analysis. As a result, the evaluation included speed, flexibility, service delivery, quality, and cost-benefit analysis. The assessment is theoretically grounded particularly the theories of agency, transaction cost (ToC), and resource based view are outlined in theoretical literature review. The assumptions underlying the transport performance and its project gap, as well as how and why particular interventions are meant to contribute to anticipated results are illustrated in theoretical literature review and the resource-based view theories. The assessment matrix's evaluation questions and sub-questions were created to respond to the research questions.

CHAPTER THREE

METHODOLOGY OF THE STUDY

3.1. Introduction

The research approach suggested for this study is described in this chapter. It includes the research design, the target audience, the sample design, the means of data collecting, and the suggested procedures for data analysis.

3.2. Study Sites

The investigation was carried out in Ethiopia's capital city, Addis Abeba. It is situated in the geographic center of the nation on a well-watered plateau that is bordered by hills and mountains. Ethiopia's economic, educational, and administrative hub is Addis Ababa. It is a distinctive East African city. In addition, the second major study location was Adama, which is the busiest import and export hub in Ethiopia and a major transportation hub. The long railway connecting Djibouti and Addis Ababa is one of the key factors in the city's founding.

3.3. Research Approach

In order to analyze and comprehend the specific operation of humanitarian fleet transport services and its management application in Ethiopia, the study used a qualitative research approach. To better understand the findings of the quantitative study and perhaps make it possible for a better and more insightful interpretation, a qualitative method was adopted. Instead of theory testing, theory elaboration and theory formation are often viewed as the strengths of qualitative research (Kothari, 2019). This is especially helpful when exploring new or emerging ethical or humanitarian concerns for which there is little or no extant theory from which to derive testable research hypotheses.

Qualitative research examines areas and issues where quantitative research would find it difficult to establish hypotheses or locate sufficient data because it often moves inductively from evidence to theory. The framework for studying humanitarian ethics is rapidly changing due to the shifting roles of humanitarian organizations or fleet transport management in society.

Similarly, Bitweded (2017) used similar approach to assess humanitarian fleet transport performance in its study of Humanitarian Supply Chain Performance of Save the Children International Ethiopia Non-Governmental Organization Further, Christopher and Sandwell (2011) conducted a qualitative study exploring the fleet transport performance of humanitarian organizations Understanding the qualitative environment is a crucial stage in developing the simulation model because the goal of this study is to be as detailed as possible in considering the impact of these qualitative judgments. Qualitative occurrences involving or relating to quality or kind are the focus of qualitative research. Cross-sectional data gathering techniques can be used in a case study method in a specific organization.

3.4. Research Design

This study used a descriptive research strategy in an appropriate manner. As a result, the study gathered information that may be used to address queries about the current state of existence in the study region. In order to gather information for this study, the researcher primarily consulted primary sources of information from those who were actively involved in managing the humanitarian fleet of transportation. For this reason, the research carefully evaluated the effectiveness of the management of the humanitarian fleet transport. In line with study, Mahyar and Luk (2016) employed similar method to study fleet management policies for humanitarian organizations and Mahyar (2015) applied the same method to review fleet management in humanitarian sector. So, the study evaluated the chosen projects in the study region and gave a comprehensive picture of the performance of the management of the humanitarian fleet transport. It essentially described behavioral and other elements researched in the management of the humanitarian fleet transport. With the intention of learn more about the humanitarian fleet transport management to the social benefits and to address food for beneficiaries of people living in the study area, as well as to gain new insights into related significant humanitarian fleet transport management at project level, the exploratory research design was used in this study.

3.5. Population and Sampling

3.5.1 Target Population for Survey

All of the management, project, and program staffs for Ethiopia's humanitarian fleet transport in Addis Ababa and Adama comprised the study's population. According to World Vision HRM and yearly reports, there was 230 operating staff members (150 in Addis Ababa and 80 in Adama) involved in managing the humanitarian fleet transit in Ethiopia.

3.5.2 Sample Unit

Employee (individuals) who operate in Ethiopia in Adama and Addis Ababa connected to humanitarian aid made up the study's sample unit.

3.5.3 Sample Size

The investigator used a tried-and-true formula for calculating sample size that was created by Yamane Taro in 1967. The following formula, which assumes $P = 0.5$, was used to determine sample sizes at a 95% confidence level:-

230

$$\frac{N}{1 + N(e)^2}$$
$$\frac{230}{1 + 230(0.05)^2}$$

$n = 146$

Where:- n : sample size required N : number of people on the population=230 e : precision desired (estimated error) =5% n : 146 are the sample sized

Table 1: Sample Size Determination

Selected Project Sites	Staffs	Proportion	Sample taken
		146/230	
Addis Ababa Staffs	150	0.635	95
Adama	80	0.635	51
	230		146

Source: World Vision and Survey Result, 2023

3.5.1. Sampling Methods

Regarding the sample process, it was carried out in two phases (steps). In the first step, or phase, the study's location was specifically chosen for its accessibility, security, and availability of financial and human resources. Because of this, even though the case, World Vision Ethiopia, operates in all regions of Ethiopia and has a number of branch offices, Addis Ababa and Adama regional office was specifically chosen for this scholarly research based on the number of warehouses, transportation facility, accessibility/proximity, security, and availability of financial and time resources.

Respondents were purposefully chosen for the next stage (phase) from among all workers and management at World Vision Ethiopia's regional branch offices in Addis Abeba and Adama. The student investigator used non-probabilistic (purposive) sampling methods and approaches to find and choose pertinent respondents based on their background, skills, employment status, and readiness. Kothari (2019) demonstrated the importance of availability, eagerness to participate, and the capacity to articulately, expressively, and reflectively share experiences and viewpoints in addition to having the necessary knowledge and experience.

3.6. Data Collection

3.6.1. Questionnaire (Survey)

Primary data were gathered using a semi-structured questionnaire with performance questions for the humanitarian fleet transport service. The researcher sought management approval before distributing questionnaires. The questionnaires were sent to those who work outside Addis Abeba and Adama's offices as well as distributed to those who work there. The questionnaire was broken up into two parts: Part A collected data on the general information of the answering organizations, and Part B collected data in accordance with the study topics. Alfonso and Luk (2012), Poirier (2020), Falagara and Wakolbinger (2019), and Fleet Forum (2021) were all used as inspiration for the questionnaire. Respondents were asked to rate the effectiveness of the humanitarian fleet transport service using a five-point Likert scale based on the humanitarian logistic practices of their specific organization, department, team, or unit. As a result, 1 denotes "Strongly Disagree," 2 "Disagree," 3 "Neutral," 4 "Agree," and 5 "Strongly Agree." As a result, planned closed-ended and open-ended questions were included in the questionnaires. Three sections/parts made up the questionnaire that was created for the study.

3.6.2. Interview

Key informants, representatives of logistics leaders, active members, representatives, and individuals chosen from different working categories consisting of sex, ages, work, and program categories were interviewed regarding the performance of the humanitarian fleet transport service in selected areas. In order to deal with understating established threshold or goal value or rating which specifies the acceptable conditions for a facility, Ethiopian humanitarians were participated in this interview to gather data on the performance of the fleet transport service utilized thus far or to be employed in the future. As a result, 15 key informant interviews were conducted with participants from the three chosen initiatives based on minimum acceptable interview sample size (Girma, 2020).

The representatives of the chosen projects were chosen at random because of their substantial participation in food aid operations and approximately equal nominations for project management and logistics. On the basis of performance ideas for the humanitarian fleet transport

service, an interview checklist was created. Face-to-face discussions were held with these interviewees to understand their opinions regarding the humanitarian fleet transport service performance and logistics practices using questions derived from the literature review and research questions. The semi-structured interview method used for the in-depth interviews (attached Appendix II) was designed to provide participants the chance to assess humanitarian fleet transport service performance and other similar issues in relaxed environment as per the convenience of the informants.

3.7. Data collection and Data Processing

It had been applied in this study by the researcher to gather comprehensive data on the overall humanitarian logistic practices, the performance of the fleet transport service, and the operation of World Vision Ethiopia's regional offices. In order to provide relevant data and information, data gathering tools were created and distributed to the related program and logistician. The researcher provided the developed questionnaire for sample logistic employees to complete.

3.8. Data Analysis Method

To begin, descriptive analysis was used to comprehend the environments in which World Vision exists and functions. Additionally, this study made use of correlation matrices, which describe a connection between two or more things (ideas, variables, etc.). The association between two variables is referred to as correlation in statistics. The performance of the humanitarian fleet was compared to the key performance parameters of service delivery, cost, quality, flexibility, and speed (responsiveness). Then, it was utilized to record pertinent data and trends pertaining to the key performance metrics of service delivery, cost, quality, flexibility and speed (responsiveness), processes, and other factors. On the other hand, the qualitative analysis that came next combined these two methods: content analysis, which was applied to the various lines of inquiry and involved reviewing interview and document data in order to identify and analyze common themes, trends, and patterns in relation to the evaluation matrix questions. Divergent opinions and supporting data on particular subjects were further identified using content analysis. Additionally, it made use of comparison analysis, which was done to compare data across topics, organizations, geographies, and other criteria.

In this study, descriptive analysis using mean, percentage and standard deviation was used to score sample respondents' responses and identify demographic and socioeconomic features. Using mean values, percentiles, tables, graphs, and charts to depict the results, descriptive statistics was utilized to assess the consistency and dependability of the responses. In order to look at the relationship between responses and respondent category, cross tabulation was also used. The evaluation used both qualitative (i.e., content analysis) and quantitative methodologies using mean, percentage and standard deviation to analyze the different data sets.

3.9. Data Reliability and Validity Test

3.9.1. Validity Test

A measure's validity refers to how well it matches its intended purpose. It is concerned with how accurately the measure defines the concept. Validity is crucial for all types of research, testing, and measurements (Kothari, 2019). The best way to think about it is in terms of degrees: very valid, slightly valid, and usually invalid. Understanding the interpretation(s) to be drawn from the chosen tests or instruments is the first step in validating the results. The gathering of sources of evidence is therefore necessary to support the chosen interpretation (Geoffrey and Gay, 2019). Consequently, this study focused on leveraging specialists in humanitarian logistics and validity through a review of the literature and adaptation of tools created by renowned writers and also utilized in the former researches.

3.9.2. Pretesting Study

Prior to distributing the questionnaire to the chosen sample size, a pretesting survey of 10 CRS - Catholic Relief Services humanitarian logistics and experts was undertaken. These two organizations have the same organizational objectives, structures and management but differ in ownership. The purpose of the pretesting was to make sure that the respondents would have no trouble answering the questions and that the questionnaire was simple, clear, and easy to understand. Before distributing the questionnaire to the chosen sample size, the questionnaire underwent the necessary revisions based on input from the pretesting survey.

3.9.3. Reliability

By means of the Cronbach's Alpha (α) value, the researcher conducted a reliability test to assess the consistency of the study measurement for each item of constructs. The degree to which an instrument measures consistently each time it is used under the same circumstances with the same subjects is what is meant by the term "reliability," which also refers to the consistency of the measurement. Consistency is the key to reliability (Kothari, 2019).

Table 2: Reliability Statistics test result

Variables	Cronbach's Alpha	N of Items
Humanitarian Fleet Transport Performance	0.814	8
Service Delivery	0.874	4
Cost	0.777	5
Quality	0.931	5
Flexibility	0.904	5
Speed (Responsiveness)	0.924	4

Source: World Vision and Survey Result, 2023

That is, we can state that our measurement device is trustworthy if we measure something repeatedly and the outcome is the same. The most well-known and frequently used method for estimating the internal consistency or reliability of tests and surveys in the behavioral sciences is the Cronbach's alpha coefficient. As a result, this study came to the conclusion that the data collection instrument was outstanding or dependable because it found greater than .70 for all variables.

3.10. Ethical Considerations

To allow World Vision Ethiopia's logisticians to freely engage in the study, the student researcher first obtained a letter from Addis Ababa University (AAU) and sends it to the organization's regional offices in Addis Ababa and Adama. To further safeguard study participants, the investigator also maintained the confidentiality of all information. Before distributing the surveys, an informed agreement to participate in the study was obtained. Participants received enough information to allow them to exercise their full right to accept or reject the invitation to participate in the study. Additionally, they received a promise that the data collected through questionnaires and key informant interviews would only be utilized for academic purposes.

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION AND DISCUSSION

4.1. Introduction

The data presentation, analysis, and discussion for the study are presented in this chapter. They include the research methodology and the demographic profile of the respondents. According to the discussion in the methodology Chapter, the purpose of the study's data collection effort was to gather information from 10 managers and employees of the studied humanitarian organization explicitly World Vision Ethiopia in Addis Ababa, Ethiopia.

4.2. Response Rate

Below is a presentation and summary of the information regarding the data that was gathered and the corresponding response ratings.

Table 3: Response Rate by employee's position

Selected Project Sites	Sample size	Returned Questionnaire	Response Rate
Addis Ababa Staffs	95	85	91%
Adama	51	40	78%
	146	126	86%

Source: Survey result, 2023

To guarantee that the sample was representative of the population of Ethiopian active humanitarian organization, it was crucial to include respondents from a variety of fleet transport services users. Ten managers and staff members of this humanitarian organization were also interviewed in addition to the 146 questionnaires that were issued, 126 of which were correctly completed and returned. In this survey, 14 % of the returned questionnaires were disregarded

owing to incompleteness and because they came from the two branches of the fleet transport services performance that didn't respond. This produced a useful sample of 126 full and usable surveys, which represented a larger number of distributed questions. In reality, the response rate was 86% which was higher than Bitweded (2017)'s suggested minimum of 50%. The demographic profile of respondents—based on gender, age, income, and other factors—is shown in the sections that follow.

4.3. Respondents Profile

At order to understand the potential and cooperative competency of the respondents to reply to fleet transport services performance at the examined humanitarian organization in Addis Ababa, this section provides a profile of the respondents, including information on their education, gender, age, marital status, and other factors.

Table 4: Respondents Demography Characteristics

Variables (Category)		Frequency	Percentage
Gender	Female	41	32.5%
	Male	85	67.5%
Age (in years)	18-29	50	39.7%
	30-40	35	27.8%
	41-50	25	19.8%
	above 51	16	12.7%
	Education	High school	0
	Diploma	11	8.7%
	Degree	92	73.0%
	Masters Above	23	18.3%
How long did you know in the humanitarian organizations tasks?	1 – 3 years	14	11.1%
	4 – 7 years	69	54.8%
	8-10 years	27	21.4%
	11– 15years	16	12.7%
	above 16 years	0	0.0%
Length of working in Malt Production, monitoring research etc	Below 1 year	24	19.0%
	1-5 years	33	26.2%
	6-10 years	44	34.9%
	11-20 years	25	19.8%
	Above 20 years	0	0.0%

Source: Survey result, 2023

As can be understood, there were more men (85, or 67.5%) than women (41, or 32.5%) in the final sample, giving women a 3:1 advantage over men. This means that men are probably two thirds more likely than women to work in humanitarian groups or use fleet transportation services. This is in line with the general trend of more men than women using fleet transportation services. The majority of responders so represented genders, the active age group, and a range of income groups. Additionally, the modal age range for respondents was between the ages of 18 and 29, which comprised 39.7% of the sample, and 30 to 40, which included 27.8% of the sample. Because of this, the majority of people using fleet transportation services are quite young, which is in line with their average age (Falagara and Wakolbinger, 2019).

In terms of the respondents' educational background, Table 6 shows that the lowest percentage (i.e., no respondents with a secondary school education) was 8.7%, followed by graduates with an undergraduate degree at 73.0% and postgraduate degrees at 18.3%. The fact that the bulk of them had extensive knowledge of fleet transport services made it easier to gather information from them. According to the above-mentioned table, the vast majority of respondents have frequently worked in fleet transportation services. 54.8% of respondents said they would love to work in the fleet transport services for 4 to 7 years, while 12.7% said they would prefer to work there for 11 to years. This suggests that the study can gather relevant fleet transport service performance data from knowledgeable sources and related data from relevant transport users

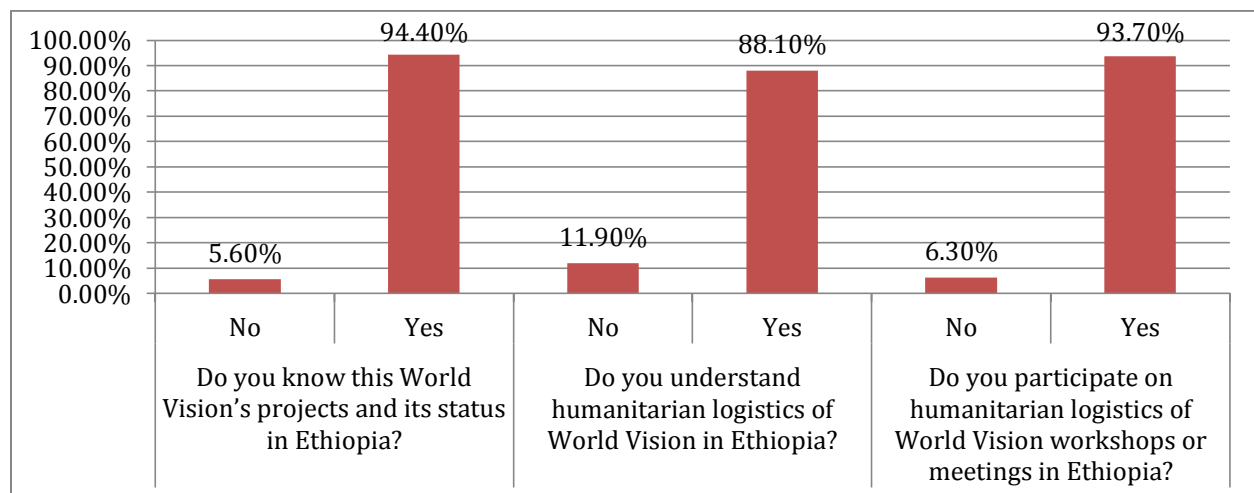


Figure 2: Experience with World Vision

Source: Survey result, 2023

The aforementioned graph demonstrates that most respondents are familiar with World Vision Ethiopia as a humanitarian organization and its projects; majority of are aware of the Ethiopian branch's humanitarian logistics; and they have attended Ethiopian branches' humanitarian logistics workshops or meetings. The majority of responses, along with the results of the interviews, demonstrate that not only are the fleet transport services sampled users, but they also actively contribute to and shape the strategy and operations of the fleet transport services. One of the most notable and well-known fleet transport services and humanitarian logistical operations in the nation are also provided by it.

4.4. Response Analysis

This fleet transport performance assessment analysis shows respondents' opinions about the degree of agreement they have with 12 questions and four different performance measures. According to the measuring scale intervals or range used to interpret the data (Poirier, 2020). The results fell into the following categories: 4.51–5.00 excellent or very good, 3.51-4.50 good, 2.51-3.50 ordinary or moderate, 1.51-2.50 fair, and 1.00–1.50 poor.

4.4.1. Responses on Overall Fleet Performance

A suitable performance measurement system (PMS) must be created in order to accomplish this goal. A PMS consists of structured procedures for establishing corporate objectives and recurring feedback reports that show how those objectives are progressing. Successful supply networks have critical competencies in measurement. It is important to take into account a variety of factors, dimensions, and viewpoints while evaluating performance. This is especially true when financial and non-financial indicators are combined (Bitweded, 2017).

Performance indicators for transportation analysis, also known as measures of effectiveness (MOEs), are quantitative assessments of how well a transportation facility, service, program, system, scenario, or project performs in relation to policies, goals, and objectives. Traffic engineering frequently uses performance indicators such as the v/c ratio, level of service (LOS), crashes, vehicle delays, journey times, mode shares, and capacity. The goals of fleet transport performance assessment are the main emphasis of the performance metrics in this chapter. The

results of a poll in which 126 sampled respondents were questioned whether they agreed with the fleet transportation performance of this organization are shown in the table below.

Table 5: Respondents Responses on Overall Performance

Item	Mean	SD
World Vision fleet transport service has been improved frequently.	3.926	0.9184
World Vision fleet transport service has been efficient.	3.947	0.963
World Vision fleet transport service has been effective.	3.863	0.847
World Vision fleet transport service has satisfied beneficiaries need.	3.866	0.944
Humanitarian aid efficiency has been improved by World Vision fleet transport Management	3.882	0.828
Efficient resource utilization has been improved by World Vision fleet transport Management	3.811	0.967
Minimizing product lateness has been observed by World Vision fleet transport Management	3.863	0.947
Project response time has been improved by World Vision fleet transport Management	3.938	0.963
Grand Mean = 3.88 SD= .9214		

Source: Survey result, 2023

The respondents' opinions on fleet transport performance are shown in the table above, and the results show that most of them agreed that fleet transport performance is good at managing all the fleet transport services that result from all of its activities in supplying and distributing material to where it is needed. They also agreed that World Vision recognizes fleet management and optimization as important issues in its operation. The grand mean had a very good rating (3.88), and there was less variability (0.9214 sd).

In the table above, the respondents' perspectives on fleet transport performance are depicted, and vast of them indicated that World Vision fleet transport service has been enhanced regularly. The way of optimizing World Vision's fleet, including its vehicles, trailers, containers, drivers, and even office workers, is known as fleet efficiency. One of the interview respondents indicated that (IR 1)

Everyone in the industry talks about raising fleet profitability by enhancing fleet efficiency. It may appear to World Vision as a long-term approach without any discernible phases that can aid World Vision in getting the greatest outcome.

This demonstrates that World Vision is constantly aware of the functionality of all of its assets, including its drivers, vehicles, containers, and trailers. Utilize its (current) gasoline network and offer World Vision's drivers advice and support on how to modify their driving habits to reduce fuel consumption as much as feasible. It gets feedback on driver behavior, which aids it in evaluating that behavior and giving drivers feedback and advice to help them drive more safely. One of the interviewees mentioned that (IR 2)

It uses travel control, which, when utilized in the appropriate situations, can be quite advantageous for the effectiveness and simplicity of driving. To reward its drivers for their driving style, it assesses their behavior and performance as drivers.

Other respondents said that (IR 3)

This organization manages regular maintenance on all of its assets to maximize their performance and prevent needless failures on the side of the fleet transport. By keeping its vehicles in top shape, it will avoid expensive repairs and give its driver the ideal working environment. World Vision will benefit financially, and employee wellbeing will increase. For instance, monitoring tire pressure will reduce wear and tear, lower fuel costs, and promote safety compliance.

The data shows that regular maintenance and monitoring helps to maximize fleet performance and prevent needless failures on the side of the road. Particularly in the commercial sector, the technical solutions and best practices for fleet management are clear and supported by management research. Applying the Professional Fleet Management Model, for example, can lead to the best results (Fleet Forum, 2021). This calls for ongoing data collection and monitoring of key performance indicators (KPI) in each of the model's four quadrants. The analysis of the results from each particular quadrant is then used as an input for additional planning and case-specific fine-tuning. It shows that this organization has revised timely its key performance indicators or KPI these are indicators that need to be tracked to distinguish if the mission is being attained.

To provide the foundation for efficient vehicle fleet management, professional fleet management eventually incorporates vehicles, people, data, processes, and business systems. Professional fleet management is an adaptable strategy created to maximize the fleet's efficiency in accomplishing the organization's objectives. However, Dagmawit (2018) argued that information management systems and related technologies have developed at a more rapid pace and have had a more significant impact on job design and skill requirements than process and production technology, which has seen more significant change. The most frequent uses of technology are in inventory and warehousing management. Employers are thinking about using technology for transportation as well as customer and supplier relationship management in the future. It should come as no surprise that larger companies have used more supply chain-related information systems than smaller companies.

Additionally, the opinions of the respondents regarding the performance of the fleet transport are presented in the table above, and the vast of them claimed that the fleet transport service provided by World Vision has been effective. The fleet transport service provided by World Vision has worked well. Beneficiaries' needs have been met through World Vision's fleet transportation service. World Vision Fleet Transport Management has increased the effectiveness of humanitarian contributions. World Vision Fleet Transport Management has enhanced effective resource usage. World Vision Fleet Transport Management has shown a reduction in product lateness. Fleet transport management for World Vision has sped up project response times.

The cost of operating a vehicle fleet is increased in many humanitarian organizations due to persistent inefficiencies. Aid and development organizations must work to increase their efficiency in order to successfully fight for limited resources while simultaneously competing for donor support. As said by Fleet Forum (2021), Fleet Forum analyzes some of the most significant and frequently seen inefficiencies in humanitarian fleet management, working with key informants from the industry and two academic institutes, ETH Zurich's HumOSCM Lab and INSEAD's Humanitarian academic Group (HRG). Actions that organizations can take to alleviate these inefficiencies are then suggested after the main causes of these inefficiencies have been studied and analyzed. Finally, a strategy for carrying out the necessary corrective steps is offered.

The cost of operating these vehicles has a substantial impact on the reach of humanitarian budgets because they account for a sizeable amount of the value of assets listed on the books of operational relief and development organizations. According to the 2013 study by Alfonso and Luk (2012), "the international humanitarian fleet's total capital cost is estimated at 1.6 billion USD." The cost of purchasing and bringing a vehicle into service, the direct and indirect operating costs of that vehicle throughout the course of its lifetime, less any revenue received when the vehicle is disposed of at the end of its existence, make up a vehicle's Total Cost of Ownership (TCO). The goal of a well-managed fleet is to bring the TCO down to an ideal level. Meseker (2018) remained that vehicle performance and fuel consumption are also impacted by maintenance standards, even though safety regulations dominate rules governing vehicle maintenance. The factors that affect fuel consumption include turbochargers, fuel injection systems, tires, axle alignment, oil and lubricants, to name a few, and they should always be kept in excellent condition. Drivers must be reminded of their obligation to perform daily walk-around inspections of their cars. This not only helps to keep cars in drivable condition legally, but it also makes it easier to spot frequent issues like water and oil leaks and insufficient tire pressure. Additionally, there is room for improvement in the way maintenance facilities now function.

In this study, the overall fleet transport performance was rated as high. In addition, Mesker (2018) exhibits an average level of operational efficiency within the company, indicating that the study's findings about the fleet efficiency of the company are accurate. Fleet efficiency and

repair and maintenance have a favorable and important relationship. Additionally, the business needs to focus more on controlling the usage of authentic spare parts, hiring a qualified fleet manager, and controlling maintenance. These issues are also crucial. Mahyar and Luk (2016) intended that by adopting different rules than the ones now in place, humanitarian organizations could overcome the utilization-residual value trade-off. Dessalegn (2018) assessed how the Ethiopian World Food Program's success was impacted by supply chain management concerns. It is suggested that focus be given to coordination, unpredictability, and it concluded that transport services should be modified in order to improve the organization's supply chain management.

4.4.2. Responses on Service Delivery

Using a dedicated internal team and a private fleet of vehicles to transport all goods or services to consumers is referred to as operating a delivery service independently. A development that manages a number of vehicles that transport people, goods, or services and where such vehicles are not offered for sale or long-term leasing is referred to as a fleet service. Storage and maintenance of managed vehicles are examples of fleet services. The table below displays the findings of a survey in which 126 sampled respondents were asked questions about four aspects of service delivery.

Table 6: Respondents Responses on Service Delivery

Item	Mean	SD
World Vision Fleet transport provides its Service as quality as promised initially.	4.158	0.911
World Vision Fleet transport has a consistency of performance right the first time.	4.081	0.879
It has a consistency of performance right the first time.	4.217	0.898
It promises to do something, it should do so.	4.19	0.891
Grand Mean = 4.16 SD= .8947		

Source: Survey result, 2023

The aforementioned table demonstrates that most sampled respondents at least concur that there is harmonization, mutual trust, and accomplishment of cross-cutting activities that improve World Visions' performance. It is thought to have better processes, and fleet managers closely monitor fleet activities and make judgments regarding effective asset management, dispatch and routing, and the purchase and disposal of vehicles. Fleet management makes sure that a fleet is operating efficiently, lowering expenses, and satisfying compliance standards. Grand means of the service delivery variable, such as 4.16, were assessed as being very good. This demonstrates improved collaboration, competency, and coordination between the provider and this organization. This means that this organization adapted its own service-delivery models and it helps to address the specific transport related barriers or bottlenecks of a subgroup of individuals to enable them to know its humanitarian status.

In relation to this study's findings, majority of respondents said that World Vision Fleet transport delivers its service with the same level of quality that was previously promised. This demonstrates how a business can cut operational costs by planning the best routes for its drivers, which saves money on gasoline and overtime. In order to save time and lessen downtime, fleet managers can alter routes in real-time for their drivers to avoid construction zones, accidents, and traffic. Other respondents said that (IR 4)

Cost, average travel time, transit time unpredictability, loss and damage, and other criteria that are common to all services can be used to help solve the challenge of choosing a transportation service.

With regard to this study's outcomes, majority of respondents supposed that World Vision Fleet transport has a consistency of performance right the first time and it promises to do something, it should do so. It indicates that this organization reviews the transport log and vehicle performance daily. This can only be valuable when it appropriately and consistently documents all the transport status, vehicle history and drivers behaviour. This also means that its passenger as well as the cargo is handled using technical devices during relocation, and other forms of supplementary services, such as logistics, forwarding, customs, and control services, etc., are needed to get the items to their final site. The idea of relocation of commodities includes actions taken at transport locations as well as shipment. In connection with this study's results, majority of respondents said that it has a consistency of performance right the first time. This means that

user satisfaction is maintained and as a result, the customer's satisfaction level is crucial in determining the quality of services and always plays a critical part in doing so. Therefore, the degree of matching customers' expectations is mentioned in the generally accepted definition of service quality. If the performance meets or surpasses the customers' expectations, the service is of appropriate quality (Fleet Forum, 2021). The aforementioned description states that the most crucial factor in determining the caliber of services is the expectations of customers.

4.4.3. Responses on Cost

We require information on the total cost of ownership for each vehicle in organizations' fleet in order to do a fleet management cost study. The table below shows the findings of a survey in which 126 sampled respondents were asked questions about five cost aspects of fleet transport.

Table 7: Respondents Responses on Cost

Item	Mean	SD
World Vision Fleet transport management can able to minimize fleet transport costs regularly.	3.723	0.9387
World Vision Fleet transport management monitors its fleet cost regularly.	3.859	0.9251
World Vision Fleet management effectively manages fuel cost periodically.	3.735	0.9375
World Vision Fleet transport management informs users about their transport expenses progress regularly.	3.834	0.9276
World Vision Fleet transport management effectively manages maintenance cost occasionally.	3.822	0.9495
Grand Mean = 3.79 SD= .9354		

Source: Survey result, 2023

The above-mentioned table demonstrates that most sampled respondents at least coincide that this firm reduces capital costs, which include interest or opportunity costs, and the physical costs, which include storage, insurance, and spoiling, are the two main expenses associated with maintaining inventory. The impact of an inventory strategy on a company should primarily be on the return on investment, which should increase as a result of the decreased inventory and any associated costs. Products should only be manufactured when a company receives an order for them. Grand means of the service delivery variable, such as 3.78, were assessed as being very good. This demonstrates lowering the number of vehicles in the fleet in order to increase production, efficiency, and competitiveness.

With regard to this study's outcomes, majority of of respondents supposed that World Vision Fleet transport management has the ability to regularly reduce fleet transport costs. The foundation from which the best vehicles for the fleet are chosen should be the total cost of ownership. One of the interviewees mentioned that (IR 4)

Many fleet managers continue to choose their vehicles based on the purchase price. This doesn't give a true picture of a vehicle's cost over the course of its fleet life. To account for factors like fuel, fleet, taxes, maintenance, and insurance, I guess we need financial modeling software.

Regarding this study's results, the majority of respondents thought that World Vision Fleet transport management constantly assesses fleet costs and it regularly updates users on the status of their transportation costs. Occasionally, majority of of respondents thought that fleet transport management efficiently controls maintenance costs. A thorough, integrated approach to problem solving will lead to effective fleet management and enable managers to make fact-based decisions. Concerning this study's results, majority of of respondents assumed that World Vision Fuel expense is successfully managed through fleet management on a regular basis. This means that the need of training drivers is essential in firms' fleet who fall short in any necessary areas is just as important as hiring the right drivers with the right skills. Drivers with relevant operational knowledge will help to cut costs for unnecessary repairs and reduce fuel usage and CO2 emissions by driving economically. Cost management is essential when it comes to fleet management. It is impossible to identify strengths and weaknesses in your operation without awareness of operating and life-cycle expenses, from the original acquisition of an asset to its

selling. Fleet management and financial management are similar in many ways. Firms may decide wisely and economically if they adopt an efficient strategy for purchasing vehicles and equipment and for keeping them maintained (Meseker, 2018).

4.4.4. Responses on Quality

As a result, the customer's satisfaction level is crucial in determining the quality of services and always plays a critical part in doing so. Therefore, the degree of matching customers' expectations is mentioned in the generally accepted definition of service quality. If the performance meets or surpasses the customers' expectations, the service is of appropriate quality. The aforementioned definition states that the most crucial factor in determining the caliber of services is the expectations of customers. The survey's findings on five quality characteristics of fleet transportation were presented in the table below to 126 sampled respondents.

Table 8: Respondents Responses on Quality

Item	Mean	SD
World Vision Fleet transport management keeps their records accurately.	3.686	0.9421
World Vision Fleet transport management has modern fleet transport management equipment.	3.675	0.9432
Its fleet transport physical facilities are visually appealing.	3.643	0.9461
Its employees (Drivers) are well dressed and appear neat.	3.627	0.9483
When an employee has a problem, logisticians show a sincere interest in solving it.	3.531	0.9559
Grand Mean = 3.63 SD= .9471		

Source: Survey result, 2023

The mean score of 3.63 was deemed to be very good according to the findings in the above table. This suggests that World Vision frequently provides information on delivery schedule with its

most crucial employees, managers, partners and stakeholders. It demonstrates that this company uses effective techniques for fleet transport evaluation. It means that transporters or transport experts and managers have reviewed facility and transport record data through daily inspection (including fuel and others) and periodic audit to discuss how vehicle maintenance can be improved using techniques already established or identifying new methods.

According to the vast majority of interview participants, it might be connected to the caliber of the delivered good or service, adherence to contract terms and conditions, ability to meet delivery deadlines, effectiveness in handling requests, observance of warranty terms, and speed and cooperation in handling issues or claims. The vast majority of the respondents stated that World Vision Fleet transport management accurately maintains their records. The equipment used for fleet transport management by this firm is current. Its fleet's physical transportation facilities have a nice aesthetic. The company's drivers are well-dressed and have a tidy appearance. Whenever an employee has an issue, logisticians genuinely want to find a solution.

By contrasting user or client expectations with impressions of the services provided, quality is established. Functional features like timeliness and ordering procedures as well as technical aspects like order accuracy and order condition are all part of the delivery of high-quality logistics services (Poirier, 2020). A precise evaluation of the customer's true values should serve as the foundation for determining the level of performance in relation to both elements. In the past, logistics managers have tried to evaluate their performance using a "operational focus" by relying on internally developed metrics and using the measurement of quality to infer consumers' perceptions of the services offered. The outward orientation toward customers that demands for competing on greater customer value delivery has frequently been disregarded by logistics managers. The only option for a business to achieve a competitive edge is to outsource its needs in order to compete with others. As a result, quality is an important consideration that can have a good or negative impact on outsourcing (Heaslip and Barber, 2016).

Quality is also viewed as a collection of features that determines a product's capacity to satisfy customer expectations. Today, a firm must continuously improve the quality of its goods and services in order to stay in business. Consumers judge and assess the quality of interaction, service, and communication in addition to the services itself. The quality of the relationship between the service provider and the recipient demands the presumption that the evaluation of

consumer satisfaction cannot be confined to the final product but rather must take into account the ongoing strengthening of reliance across the full service scope. An individual approach to the client, which is interpreted as keeping in touch with the client, is the sign of excellence in relationships (Falagara and Wakolbinger, 2019).

4.4.5. Responses on Flexibility

A system's flexibility is its capacity to accept, withstand, or manage changes. The survey's findings on five flexibility characteristics of fleet transportation were presented in the table below to 126 sampled respondents.

Table 9: Respondents Responses on Flexibility

Item	Mean	SD
World Vision Fleet transport management has flexible management.	3.272	0.9878
World Vision Fleet transport management empowers and engages me.	3.404	0.9558
World Vision encourages some input into decisions that affect my work.	3.349	1.0108
World Vision Fleet transport management continually invests in the development of its employees' skills.	3.46	1.0121
World Vision Fleet transport management places much value on employees working cooperatively towards the common goals.	3.508	0.9298
Grand Mean = 3.39 SD= .9793		

Source: Survey result, 2023

The mean score of 3.39 was considered to be good based on the data in the aforementioned table. This suggests that in the event of such issues, this humanitarian organization also needs to be

adaptable enough. This suggests that when performing relief efforts, the state of a particular infrastructure must be taken into account. It suggests that the respondents agreed with the numerous claims made about how this organization is more adaptable and effective. Similarly, the standard deviation numbers were under two, which is a low standard deviation and indicates that respondents had similar ideas.

The study demonstrates that World Vision accurately exchanges information with partners. World Vision transport flexible management is available for fleet transport. The administration of the World Vision Fleet engages and empowers me. Its fleet transport management promotes participation in decisions that have an impact on my work. World Vision Transport management for fleets makes ongoing investments in the training of its personnel. Employee cooperation in achieving the joint objectives of the company is highly valued by World Vision Fleet management. Additionally, it is discovered that World Vision communicates with partners on time. However, the lowest mean indicated that World Vision's technological resources are not adequately stocked. Even if there are a lot of resources available, like equipment and software, training opportunities, human capital, and others, the humanitarian operations do not effectively utilize these resources owing to a lack of skills and opposition to change.

All transport vehicles owned by the firm, the government, an agency, or another business are included in fleet vehicles, which are collections of motor vehicles. In order to convey items to clients, transportation businesses will occasionally lease the cars. Additionally, the vehicles are rented to transport company personnel to client locations (Heaslip and Barber, 2016). Any company with assets that need to be managed, coordinated, and safeguarded must have a fleet manager on staff. When used in conjunction with an efficient telemetry solution, fleet managers can be a valuable asset in helping to run the company's more profitably, safely, and efficiently (Falagara and Wakolbinger, 2019). Generally speaking, long-term initiatives that incorporate expert fleet management cannot be planned or carried out because of the short-term funding of programs. Running cost-effective programs has little incentive as long as program success is determined by the fund depletion, or the entire expenditure of the budgeted amount. This could be changed by allowing for a more flexible redistribution of cost savings to meet other legitimate organizational needs. For instance, the ability to book profits from the timely disposal of automobiles to nations that do so within the designated standard period would significantly

improve the use of limited resources. By effectively generating a financial reward for prompt disposal, this successfully reverses the skewed incentive that is already in existence (Fleet Forum, 2021).

4.4.6. Responses on Speed

A system's flexibility is its capacity to accept, withstand, or manage changes. The capacity to handle or absorb changes is thus described by the transportation system's flexibility. It establishes the amount of change the system can handle. The survey's findings on five flexibility characteristics of fleet transportation were presented in the table below to 126 sampled respondents.

Table 10: Respondents Responses on Speed

Item	Mean	SD
World Vision Fleet transport management is fast.	3.152	0.9858
World Vision Fleet transport management responses quickly.	2.977	1.0418
World Vision Fleet transport management follows open management system.	3.074	0.9638
World Vision Fleet transport management aware employees' challenges.	3.038	0.9998
Grand Mean = 3.06 SD= .9978		

Source: Survey result, 2023

In this survey, the lowest mean score was found as 3.06 which was rated as good. Word Vision has implemented technology solutions to speed up their operations recently. It works through its local implementing partners. Provide immediate solutions for issues encountered in vehicle tracking, allocate sufficient budget for fuel costs, install vehicle tracking system, assign a person to monitor and manage the GPS tracking, supervise speed limit by GPS tracking system, and the tracking system to manage fuel consumption and maintenance scheduling were other dimensions that the organization neglected.

The vast majority of the respondents indicated that this firm has been rated low as its fleet transport management is not that much fast. Response times from World Vision fleet transport management are relatively swift. Transport management for the World Vision fleet does not use an open management system effectively. Management of World Vision fleet is aware of the difficulties faced by the staff.

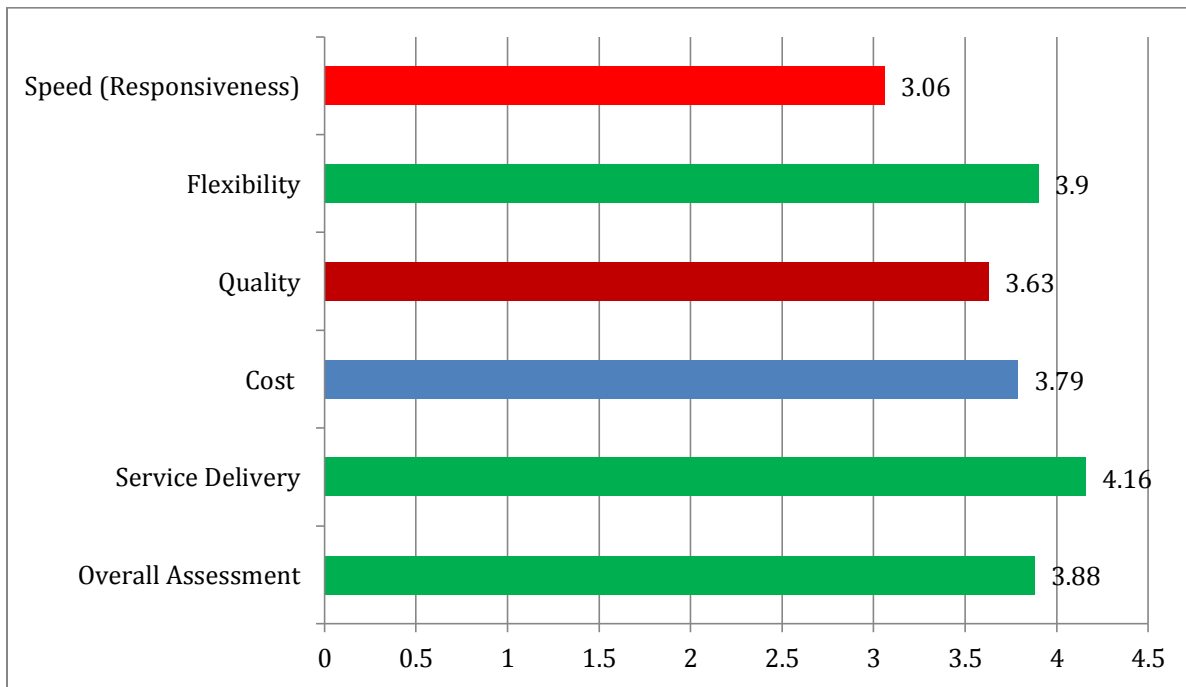


Figure 3: Grand Mean

Source: Survey result, 2023

The survey's grand mean ratings were 3.88 for overall evaluation, 4.16 for service delivery, 3.79 for cost, 3.63 for quality, 3.9 for flexibility, and 3.06 for speed (responsiveness). The graph above demonstrates how inefficiently this humanitarian organization uses its speed and greater performance execution when providing operative services delivery and flexibility. Additionally, it demonstrates that the World Vision Fleet's transport system lacks responsiveness or has speed-related problems. However, it has good service delivery and flexibility, which indicated that its service part of performance focused on service delivery flexibility and timeliness.

The total evaluation received a grand mean score of 3.88, while service delivery received a score of 4.16, cost was rated at 3.79, quality was rated at 3.63, flexibility was rated at 3.90, and speed

(responsiveness) was rated at 3.06. The aforementioned data shows how ineffectively this humanitarian organization exploits its speed and higher performance execution when offering effective services delivery and flexibility. Additionally, it shows that the transport mechanism of the World Vision Fleet is unresponsive or has issues with speed. The fact that it has good service delivery and flexibility, however, shows that its service portion of performance placed a strong emphasis on timeliness and flexibility in service delivery. But Mahyar (2015) revealed that fleet management is a major problem for international humanitarian organizations due to the size of transportation-related expenditures in humanitarian operations, which are second only to people costs, and the crucial role that transportation plays in the order fulfillment process. Humanitarian groups must operate under a unique set of restrictions, including working in remote locations with inadequate infrastructure, harsh environmental circumstances, and financial restraints. In such a situation, the majority of the current models that were derived from commercial supply chains are useless. As a result, new methodologies and theories are needed. Cost effectiveness must be prioritized in order to make the most of budget cuts, according to Fleet Forum (2021). As a result, it's possible that the fleet's cost is not optimized to its full potential to the tune of more than 50%. Given the magnitude of the costs incurred, humanitarian organizations should take advantage of every chance to improve fleet transport management efficiency and profit from the improvements. Lack of planning for vehicle disposal to maximize residual value is one of the most frequently found inefficiencies in aid and development organizations' fleet transport operations that raises the cost of fleet transport operations. Total Cost of Ownership (TCO) is increased by using older vehicles longer and greater fleet sizes than necessary to meet operational transportation needs.

CHAPTER FIVE

SUMMARY OF MAJOR FINDINGS, CONCLUSION AND RECOMMENDATIONS

The study's summary results are presented in this chapter. The presentation was meticulously created, and the summary and key conclusions from the research were expanded upon. The researcher offers potential recommendations and conclusions after summarizing and bringing the investigation to a close.

5.1 Summary of Major Findings

- This study found that the level of overall fleet transport services performance of emergency relief food projects operating in World Vision Ethiopia was rated as very good (Mean = 3.88).
- This study discovered that key fleet transport services performance indicator the World Vision Ethiopia such as service delivery received (Mean = 4.16), Flexibility (Mean = 3.90), , cost (Mean = 3.79) and quality (Mean = 4.16) were performed superior but speed (responsiveness) was rated as moderate (Mean = 3.06).

5.2 Conclusions

In order to ensure effective and efficient execution of humanitarian logistics management, humanitarian organizations deal with logistics solutions. For them to perform at their best, their activities must be well-coordinated within the constraints of available resources, competence, and cooperation. The study comes to conclude that the fleet transport services performance of emergency relief food projects operating in World Vision Ethiopia was eccentric.

Field fleet management must be improved by comprehending and quantifying the precise effects of operational choices on fleet expenses and performance. As a result, this poll also came to the conclusion that the fleet's overall transport performance was recorded exceedingly service delivery received, flexibility, cost and quality.

Humanitarian organization exploits its speed (responsiveness) and higher performance execution when transport services are offered with services delivery and flexibility. Consequently, this study comes to conclude that fleet management of the World Vision was behind schedule due to lack of speed (unresponsiveness).

5.3 Recommendations

The study suggests the following step to assure continual improvement in overall fleet logistics, distribution, and planning since it would boost the effectiveness of the organization and its humanitarian aid operations. This study would also advise other significant humanitarian actors to use this as a benchmark and to use the fleet transport practice and evaluation performance result as a means to enhance their logistical operations. Therefore, World Vision in Ethiopia will improve its responsiveness (speed) for humanitarian aid through the efficient use of fleet transportation in order to achieve financial break-even and boost overall company performance.

- This study also recommends that this firm (World vision) adjust to the ongoing changes in both client preferences and humanitarian help. Businesses that can handle disruption and regularly satisfy client expectations are better positioned to adapt to change. Additionally, this corporation needs a responsive strategy to bring about positive change by influencing the audience, employees, or competitors (a perceiver) to modify their perceptions in a way that is strategically advantageous to the company and allows it to implement its policy with ease.
- This study makes the suggestion that World Vision might increase operational performance by utilizing key work process outputs from the companies, which aids in the improvement of important competitive success criteria and internal company indicators.
- World Vision has continuing to host workshops with the goal of enhancing participants' capacity to give training particular to their industry.
- World Vision should implement policies to improve vehicle utilization during their operational life cycles while concomitantly limiting the loss of residual value (i.e., minimizing their physical depreciation) and operational costs in order to optimize fleet performance and maximize demand coverage.

- The findings of this investigation also indicate that World Vision should revise its fleet transport strategies and it must align its fleet transport strategies with the organization's overall strategy, therefore its fleet transport system will be planned and carried out in accordance with its guiding principles, distinctive features, and organizational objectives.
- This study leads to the conclusion that fleet management for World Vision needs to be well-coordinated and can include activities like vehicle financing, maintenance, and telemetry, as well as driver, speed, fuel, and health and safety management. Its fleet management should eliminate or reduce the risks associated with vehicle investment, increase productivity, and lower overall staff and transportation expenses.

5.4 Implications for Future Research Formed

For a company, and especially for World Vision, it is important to operate the service globally, so evaluating the consequences of fleet management is of utmost importance. The study is anticipated to help the organization enhance its fleet management system by addressing issues that were found, and it may inspire other researchers to do additional fleet management research. In general, World Vision's decision-making may benefit from the study's findings and recommendations by better understanding the issues with current fleet management.

5.5 Areas for Further Research

To determine if additional factors, such as communication, information sharing, information flow, and similar variables, affect fleet transport performance, comparable studies should be carried out using different variables. Future studies should include other organizations and diverse industries, including service, manufacturing, and agriculture such as agribusiness, shipping, building and real estate businesses, pharmaceutical and manufacturing, equipment supplies and exports, and hotel and hospitality industries. This study suggests that comparable research be carried out with the help of numerous humanitarian organizations, outsourced service providers, and partner informant groups to produce a range of results.

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ANNEX

Appendix I– Questionnaire in English



ADDIS ABABA UNIVERSITY

SCHOOL OF COMMERCE

DEPARTMENT OF LOGISTICS AND SUPPLY CHAIN MANAGEMENT

Dear Respondents:

My name is Henok Sisay, and I am a postgraduate student at Addis Abeba University's School of Commerce. I want to offer my sincere gratitude for your generous time and your prompt, accurate response. The performance of the fleet transport services was assessed in this research, using data from World Vision Ethiopia. The goal of the study is to complete a thesis requirement for the partial fulfillments of the Master of Arts in Logistics and Supply Chain Management at Addis Ababa University in Addis Abeba.

This questionnaire is intended to collect primary data on this research project. Your sincere answers to the questions are crucial to the completion of this study.

All data gathered through the questionnaire will be kept private and used exclusively for the investigation. I appreciate your cooperation in advance, so please accept my sincere gratitude. Please be aware that taking part in this study is completely optional.

Please call Henok at +251910 14 0644 for more information.

Sincere regards,

Henok Sisay

Part-I: Questions Related to Demographic Factors (General information)

Direction: Your personal information is requested in this section of the questionnaire. Please mark each question with a check (✓) to indicate your personal profile in response.

1. Gender: Female Male
2. Age: 18-29 30-40 40-50 above 50
3. Educational level High school Diploma Degree Masters Above
4. How long did you know in the humanitarian organizations tasks?
1 – 3 years [] 4 – 7 years [] 8-10 years []
11 – 15years [] above 16 years []
5. Length of working in humanitarian logistics and similar activities
 Below 1 year 1-5 years 6-10 years 11-20 years Above 20
years
6. Do you know this World Vision’s projects and its status in Ethiopia?
a) Yes ()
b) No ()
7. Do you understand humanitarian logistics of World Vision in Ethiopia?
a) Yes ()
b) No ()
8. Do you participate on humanitarian logistics of World Vision workshops or meetings in Ethiopia?
a) Yes ()
b) No ()

Part-II: Main Questions Related to the Study

Direction: The purpose of this section of the questionnaire is to determine how you feel about the performance of the fleet transport services using data from World Vision Ethiopia. Please mark the number in the box that best represents your opinion. Please check the boxes next to the following statements and grade them from "Strongly Disagree" to "Strongly Agree." Please regard 1 as strongly disagree, 2 as disagree, 3 as neutral, 4 as agree, and 5 as strongly agree while responding to the questions below. Put a check mark () in each box that applies.

Constructs		Corresponding Items	Measuring Scale				
			1	2	3	4	5
Overall Assessment	OA1	World Vision fleet transport service has been improved frequently.					
	OA2	World Vision fleet transport service has been efficient.					
	OA3	World Vision fleet transport service has been effective.					
	OA4	World Vision fleet transport service has satisfied beneficiaries need.					
	OA5	Humanitarian aid efficiency has been improved by World Vision fleet transport Management					
	OA6	Efficient resource utilization has been improved by World Vision fleet transport Management					
	OA7	Minimizing product lateness has been observed by World Vision fleet transport Management					
	OA8	Project response time has been improved by World Vision fleet transport Management					
Key fleet transport services performance indicator the World Vision Ethiopia in terms of the key performance indicators service delivery, cost, quality, flexibility and speed (responsiveness)							
Service Delivery	SAV1	World Vision Fleet transport provides its Service as quality as promised initially.					
	SAV2	World Vision Fleet transport has a consistency of performance right the first time.					
	SAV3	It has a consistency of performance right the first time.					
	SAV4	It promises to do something, it should do so.					
Cost	PROD 1	World Vision Fleet transport management can able to minimize fleet transport costs regularly.					
	PROD 2	World Vision Fleet transport management monitors its fleet cost regularly.					
	PROD 3	World Vision Fleet management effectively manages fuel cost periodically.					

	PROD 4	World Vision Fleet transport management informs users about their transport expenses progress regularly.					
	PROD 5	World Vision Fleet transport management effectively manages maintenance cost occasionally.					
Qual ity	Q1	World Vision Fleet transport management keeps their records accurately.					
	Q2	World Vision Fleet transport management has modern fleet transport management equipment.					
	Q3	Its fleet transport physical facilities are visually appealing.					
	Q4	Its employees (Drivers) are well dressed and appear Neat.					
	Q5	When an employee has a problem, logisticians show a sincere interest in solving it.					
Flexi bility	F1	World Vision Fleet transport management has flexible management.					
	F2	World Vision Fleet transport management empowers and engages me.					
	F3	World Vision Fleet transport management encourages some input into decisions that affect my work.					
	F4	World Vision Fleet transport management continually invests in the development of its employees' fleet skills.					
	F5	World Vision Fleet transport management places much value on employees working cooperatively towards the common goals of the organization.					
Spee d (Res pons ive ness)	SR1	World Vision Fleet transport management is fast.					
	SR2	World Vision Fleet transport management responses quickly.					
	SR3	World Vision Fleet transport management follows open management system.					
	Sr4	World Vision Fleet transport management aware employees' challenges.					

Once more, many thanks for your assistance in completing the survey.

Thank You!

Annex II – Interview Checklist

Greetings!

I am undertaking a research project on "Assessment of Fleet Transport Services Performance: Evidences from World Vision Ethiopia," therefore please be aware of that. I have a few inquiries about this study.

Should I continue?

Thank you!

- 1- How would you characterize or evaluate the performance of the entire fleet transport services of the emergency food programs carried out in World Vision Ethiopia?

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- 2- What is the performance difference in fleet transport services between the emergency food assistance operations run by World Vision Ethiopia, Joint Operation (JEOP) and Ethiopian Livelihood Reliance Project (ELRP)?

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.....
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- 3- What are the important performance factors for the World Vision fleet transport services? Which country performs better in terms of service delivery, cost, quality, flexibility, and speed (responsiveness)?

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.....
.....

Thank You!