



**UNIVERSITY of
RWANDA**

COLLEGE OF BUSINESS AND ECONOMICS

MASTER OF BUSINESS ADMINISTRATION

**RENTAL VEHICLE LOGISTICS AND FIELDWORK PERFORMANCE IN PUBLIC
INSTITUTIONS: A CASE OF NATIONAL INSTITUTE OF STATISTICS OF RWANDA
(NISR)**

**A THESIS SUBMITTED TO THE POST GRADUATE STUDIES OF UNIVERSITY OF
RWANDA IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE
MASTER'S LEVEL IN BUSINESS ADMINISTRATION, PROJECT MANAGEMENT**

By: NZAYISENGA Cyrille

Reg no: 218015587

Supervisor: Dr. RUSAGARA Jean Bosco

March, 2021

DECLARATION

This research project is my original work and it has never been submitted in any institution for the award of Master Level

Name of the student: NZAYISENGA Cyrille

Signature Data

This research project has been examined with my approval as a University Supervisor.

Supervisor Name: Dr. RUSAGARA Jean Bosco

Signature Data

DEDICATION

This research project is dedicate to my lovely family, my wife, my daughter and my son for the kind and love showered me during my study at University of Rwanda and during compilation of the findings of the study.

ACKNOWLEDGEMENT

First of all, I want to thank Almighty God for his love and protection during this study and throughout my studies at university of Rwanda. I can never forget to appreciate the contribution of my research supervisor Dr. RUSAGARA Jean Bosco during this study. Many thanks should go to my family for their financial and moral support made to me during my studies. I am also appreciative to National Institute of Statistics of Rwanda for providing me with the whole needed information regarding rental vehicle logistics and fieldwork performance in Rwanda.

ABSTRACT

This study intended to conduct a study to examine the problem associated with rental vehicles logistic and field performance in NISR. The specific objectives to investigate the effect of quality assurance of the rental vehicles on the field work performance of NISR, to determine the impact of on-time delivery of rental vehicles on field work performance of NISR, to identify problems associated with rental vehicles logistics and field work performance in NISR, to examine the relationship between rental vehicle logistics and fieldwork performance of NISR. Descriptive research design with data was applied to a sample of 180 respondents extracted from 381 employees of National Institute of Statistics. The researcher used purposive sampling technique to selected 180 respondents, the researcher has used both questionnaire and interview data from the field. Thus, the findings have shown that there is a relationship between maintenance and repair and productivity ($p = .903$ and $sig = .000$), between driver behavior and skills and productivity ($p = .822$ and $sig = .000$) between driver behavior and skills and value efficiency ($p = .801$ and $sig = .000$) between driver skills and skills and on time delivery ($p = .757$ and $sig = .000$) between fuel management and productivity ($p = .934$ and $sig = .000$) between fuel management and quality assurance ($p = .910$ and $sig = .000$) between fuel management and on time delivery ($p = .862$ and $sig = .000$) because all calculated p-values are a lot much less than 0.01 levels of significance. Therefore, it implies that there is a relationship between rental vehicle logistics and fieldwork performance in NISR, Rwanda

Key word: rental vehicle logistics and fieldwork performance in NISR, Rwanda

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CHAPTER ONE:

1.0. Introduction

This introductory chapter consists of the background of the study, the research problem, the objectives and questions of the research, the significance of the study, the limitation of the study, the scope of the research and the scheme of the chapters.

1.1. Background of the Study

Logistics is described through the logistics management board as the system for planning, implementation and control of efficient ecological storage of goods, services and services information related to the environment from the beginning point consumption component to conform to the needs of the consumer. The integration of two or more logistics inside a community to create value, improve efficiency and satisfy customers, which is recognized as supply chain management (Debela, 2013).

Basically, these organizations which are maintained by the authorities to provide preferential services to residents are viewed public institutions and the give they provide to residents are public services. In most developed countries, utilities consist of health services, emergency services, education, postal service, security, and infrastructure in many fields such as transportation, water supply, or energy. Transportation is the motion of people, animals and objects from one regional to another. There are a range of modes of transportation that consist of air, rail, road, water, cable, pipeline, and space. The field can be divided into infrastructure, vehicles and operations (Han & Trienekens, 2009).

Transportation management can be described as the strategy to planning, implementing and controlling techniques and problems to be finished for environment friendly and incredibly awesome transport (Saroaha, 2014). In public institutions work, time and place utility is the major expectation from logistics because it affects the life of human beings. Transportation is the main function of logistics that creates time and place utility. It is the leading activity to move material, people and other tangible items between different facilities in supply chain. Therefore, Transportation decisions have to be managed to meet customers 'due dates and different delivery wants at a realistic cost, time and place (Frazelle, 2002).

Public institutions have to work hard to accomplish the task in order to be successful. National Institute of Statistics of Rwanda's effort is to collect and archive dependable data, analyse, record and disseminate statistics inside an integrated and sustainable framework. Fieldwork is any work executed by means of the personnel or students for research functions, instruction, or exclusive matters to do whilst the team is being represented off-site (UCEA, 2015). NISR conducts many fields works that need vehicles to transport staff and other Employee to the fields whose facilitation is got from vehicle rental companies but due to poor servicing and mechanic problems these rental vehicles fail to reach some places in remove areas mainly in rainy seasons and in places with unpaved roads.

Porter (2009) asserts that having update national statistics enhances research and innovation that results in a nation's competitiveness. Therefore, measuring fieldwork performance through logistic availability is currently becoming a high priority (Griffis, Golds & Cooper, 2007), thus poor performance of logistics affects and bringing a challenge to the organizational performance (Forslund, 2007). From the perspective of logistics performance, rental vehicle logistic performance is a bit challenging because the owners of the vehicle they care less about the status of the vehicle as longer it is bringing money (Nyinawumuntu, 2011). Hence, the need to conduct a study to find out the problem associated with rental vehicle logistics on fieldwork performance in public institutions with specific consideration of National Institute of Statistics of Rwanda.

1.2. Statement of the Problem

Logistics delays and failures made an impact on organizational performance (Kinyua, 2013). The service of transport companies has affected the performance of many institutions because most of their employees depend on public means of transport when they are going to work. Meantime, Rwanda Transport Review and Action Plan reported that the density and transport infrastructure in Rwanda is very low, whereby 70% of the rural population is not linked to all climate roads and freight vehicles are not adequate in number and age to meet the transportation demand of Rwanda (ADBG, 2013).

The previous researchers in transport logistics and organizational performance, have given less attention the problems associated with rental vehicles and field work performance (Mohamed, 2006; Kinyua, 2000 and Serem, 2003). Logistics performance is affected by rental vehicle

services including delay in providing vehicle, number of days' vehicle is needed, peak season when there is a high demand of vehicles by other agencies, tourist or visitors in the country, behavior of drivers, mechanical and technical fitness of vehicle, lack of information sharing and on – time payment (NISR, 2017).

It was also reported that the number of rental vehicle delivery days vary from one month to two months which affect the fieldwork performance (NISR, 2018). The same report confirmed that NISR has had issues with the management of rental vehicles, for example, auto maintenance, so that there is no vehicles maintenance and repair that takes gain of all the factors of this attribute imperative; the vehicles were supposed to do all the maintenance and repair system before they hired to National Institute of Statistics of Rwanda, hence the issues of maintenance and repair challenges when the rental vehicles get problem while at the field work.

The literatures have shown that rental transport services are conducted by travel agencies, visitors and government institutions like NISR which uses 4WD vehicles and trucks to satisfy the transport demands of the travellers, staffs and visitors. Though, there is a knowledge gap on rental vehicles logistics and fieldwork performance since there is no empirical literatures that have been conducted to assess the role of rental vehicles logistics on enhancing field work performance. Thus, it is against this regards the research wants to conduct a study to find out the problem associated with rental vehicle logistics on fieldwork performance in public institutions with specific consideration of National Institute of Statistics of Rwanda.

1.3 Objectives of the study

1.3.1 General objective

The general objective is to examine the problem associated with rental vehicles logistic and field performance in NISR.

1.3.2 Specific Objectives

- (i) To assess the effect of quality assurance of rental vehicles on field work performance of NISR

- (ii) To determine the impact of on-time delivery of rental vehicles on field work performance of NISR
- (iii) To identify problems associated with rental vehicles logistics and field work performance in NISR
- (iv) To examine the relationship between rental vehicle logistics and fieldwork performance of NISR.

1.4. Research Question

- (i) What is the effect of quality assurance of rental vehicles on field work performance of NISR?
- (ii) What is the impact of on-time delivery of rental vehicles on field work performance of NISR?
- (iii) What are the problems associated with rental vehicles logistics and field work performance in NISR?
- (iv) What is the relationship between rental vehicle logistics and fieldwork performance of NISR?

1.5. Significance of the Study

This study was useful in creating a clear understanding of the problem of the use of rental vehicles on institution logistics fieldwork performance, then the logistics department can able to give better service to achieve the institution goal. Therefore, the community indirectly benefited as the result of the implementation of the recommendation in this study. Moreover, it creates awareness among institutions working with contract vehicle transport for the fulfillment of vehicle need. It also enables other researchers to use it as an additional source for further investigation in the area.

1.6. Limitation and Delimitation of the study

This research faced limitations, as it used a descriptive research design that made it possible to make observational information and formulate problems for large investigations. Therefore, the lookup of this research was once absolutely based totally on the given population and on the development of the hypothesis from the factor of view of the operational component. However,

the researcher has certainly described what have to be measured and what how he had flexibility built-in in the design of research questions to obtain a greater precise meaning, what performance to accumulate the relevant data

1.7. Scope of the study

This research took NISR as a case study; therefore, the effects of the study cannot be fully accepted as being completely relevant and applicable to all institutions, governmental and private companies in Rwanda which uses rental vehicle service. Because the study sample size and sampling procedure are limited. However, some micro-level of generalization for similar institutions in the same service requirement might be possible (Krauth, 2005). The researcher only focused on the group respondents who use the rental vehicles, staff who are not using rental vehicles excluded (clerks and support officers).

1.8 Scheme of chapters

The research is divided into 5 chapters

This first chapter deals with the introductory part that entailed problem stamen, study objectives, study research questions, justification of the study.

This second chapter evaluates the literature relevant to the concern of study.

Chapter three analyzes the research methodology used, such as research designs, target population, sampling strategies and methods for accumulating data and sources of information.

The fourth chapter mentioned results and empirical findings.

The fifth chapter summarized the findings; conclusion and recommendations.

CHAPTER TWO:

LITERRATURE REVIEW

2.0 Introduction

This chapter is associated with literature that has a theoretical review, an empirical review, a critical review, and an identification of research gaps and a conceptual framework.

2.1. Theoretical Review

2.1.1. Rental Vehicles

Rental vehicles are the vehicles that are rented or being hired by hiring corporation which is a company that rental vehicle for brief durations of time for a cost. It is regularly organized with several regional offices, and is close to airports or busy areas of the metropolis and is frequently complemented by way of the use of online booking reservations (Saroaha, 2014). The main vehicle rental organizations operate nationwide. However, logistics management is frequently split down according to subsidiaries throughout the country. These corporations manipulate a network of rental areas (stations), the location the place clients can select up (leave) and return (check in) vehicles.

Typically, a national rental network proves through the capability to team stations into districts (pools) and districts into regions to facilitate customers. The vehicle rental company is affiliated with one-of-a-kind types of stations. An organization station operates thru the ability of body of workers and vehicles that are each segment of the vehicles rental company. An agent with an autonomous team of workers is recognized as an agent of the company however barring for a separate vehicles fleet. In addition, franchise-associated (licensed) stations as appropriate as remote area stations typically have a separate fleet of engines and, for the most part, are impartial related with logistics management (Martinez, Stapleton, & Wassenhove, 2011).

2.1.2. Logistics

Rwanda's logistics sector consists of logistics carrier providers, carriers, warehousing management organizations and distribution region and any different transport company that contributes to making it significant that suppliers of items and offers are on hand to the patron when be indispensable and at the right time. This expertise must act as an opener for these

logistics vehicles with the aid of the usage of them to show them empirically the significance of logistics constructions and the blessings of well-managed logistics, as it can additionally be created from environment friendly way in the technique of sending commercial and transport-related infrastructures, set up to arrange shipments at aggressive costs, quality of logistics services, ability to cancel and alter shipments, and the frequency with which shipments reach the recipient on time (World Bank, 2012).

The logistics management had received excellent activity over the remaining ten years from the governments and authorities (Huang, Smilowitz, & Balcik 2012). Realizing the significance of sustainability in logistics management was a key to achieving aggressive benefits, as hiking ordinary general performance had a significant effect on financial performance. Since logistics management consisted of many issues to do, alongside with sample service, packaging, order processing, purchase and procurement, transportation, management of stock, demand and forecasting, warehousing, manufacturing, vicinity and distribution services which have been supported by means of the use of generalized data of each and each one of the favoured agencies to provide efficiency in their training. This needs to only be completed when the important basic general performance of logistics is managed in order to make sure some sustainability of the company (Bask, Tinnilä & Rajahonka, 2010).

Order processing is the long-time used to pick out the collective responsibilities related with the satisfactions of an order of objects or objects located by a purchaser and to ensure the groundwork for planning of documents in a logistics apparatus (Christopher, 2010). It had three essential characteristics: growing a disk slide that preceded the products, accompanied them, and accompanies them (Christopher, 2010). Historically, the significance of the right information had been underestimated to surely reap useful ordinary logistics performance. Although many factors have in reality been par excellence for logistics operations, order processing was of predominant importance (Bask, Tinnilä & Rajahonka, 2010).

If this significance is now not entirely appreciated, it is absolutely misunderstood how distortion and operational problems in order processing have an influence on logistics operations (Bask, Tinnilä & Rajahonka, 2010). Order processing is the duration of time used to choose associated collective duties to a captivating order of units or services located through the use of a purchaser.

Logistics management and performance Transportation is described as the matters that are chosen with the transport of goods or completed items from suppliers to a facility or to warehouses and shops (Kenyon & Meixell, 2011). It was covered so quickly, as it was a predominant segment of the gear chain due to its electrical energy to add cost to some gadgets with the assist of transferring them from the pinnacle to the bottom to a place (Laird, 2012). According to Kenyon (2011), transport was an integral issue in logistics techniques, as it was linked to separate activities. It was as soon as the most indispensable economic company among the factors of logistics buildings of commercial corporations (Tsen, Yue, & Taylor, 2005).

Transportation management is the planning, manage and dedication of the subsequent to logistics operations that modified and geographically positioned the actions (Bask, Tinnilä & Rajahonka, 2010). Due to its integral significance and its viewed cost, the transport had traditionally obtained an awesome liking and almost all the companies, big and small, had managers accountable for the transport (Bask, Tinnilä & Rajahonka, 2010).

In today's competitive environment, they have significant, well-timed responses to the altering tastes and preferences of entrepreneurs that emerged as essential factors for the common general reward overall performance of industrial companies (Han & Trienekens, 2009). When it comes to performance, log derivation is really useful for records derived from logistics, as it allowed chains to reply in actual time and with suitable facts (Harisson & Van Hoell, 2002).

Companies, then, it arose when data had been planned as an asset, thinking in the past that earlier than it was no longer feasible to have dependable substances and even the environment, besides this one (Mattsson, 2002). Stevenson and Spring (2007) agreed that right and real-time fact planning in logistics was considered very complete for substances drift. This explosion of statistics had allowed logistics to end up a key weapon in the company's arsenal to add cost to the new line (Closs, 2005).

2.1.3. Fieldwork Performance

Fieldwork performance refers to the way a man or woman performs the functions, tasks, and duties associated to fieldwork that they consist of to prevail in profits acquisition, commitment to transportation, purchaser satisfaction, excessive satisfactory communication, crew work, creativity, selection, and problem solving and risk management.

Fieldwork performance refers to the way employees behave and characteristic in field work and the way work is done correctly and the way work duties are carried out. For an employed person, performance can refer to work efficiency, large and advantageous at the commercial enterprise level. On the other hand, a manufacturing worker may also have normal performance requirements for an hourly, top notch manufacturing of the product and highly involves.

2.2. Empirical Review

Soltun (2007) performed a report on fleet management optimization, which was based on fleet management thinking, focusing on the plan and implementation of a response for this purpose. Learning was approached as an aggregate between bibliographic statistics (theory and advent of mannequins of business companies) and a computer application format (design and implementation). The facts on the thought to impose the GIS features had to be accomplished as soon as the proposed equipment was completed and the implementation of the last performance in cooperation with a conceivable person was once as soon as a particular approach to discover out vital functionalities that no longer had detected in the work process. How to control and extend the agencies tasked with running the vehicles in the fleet. This may additionally also consist of coordinating employee schedules, managing verbal exchanges between drivers and headquarters, planning the use of alternative routes or routes, as it should be as referring or resolving issues that may additionally arise in addition at some stage of the day, such as accidents, absenteeism, and vehicles malfunction.

Zeimpekis (2009) evaluated a real-time fleet management system for the dynamic management of incidents distributions of the National Statistics Institute of Rwanda. The intention of the data was once again to decorate the execution of the sending of the National Institute of Statistics to Rwanda through the modelling of the dynamic incident management approach through the shape and implementation of real-time fleet management. Constructions have the opportunity of analysing time deviations from the preliminary form that occur. Therefore, the study proposed a method to estimate the travel time totally frequently entirely on the historic data of preceding deliveries. The study mounted that this strategy has consequences when the conditions of web page traffic are no longer very exquisite than the historic ones.

However, in the National Institute of Statistics in Rwanda configuration there are cases where tour times differ drastically at some factor in the day. For these cases, information on the inspiration of a second route prediction method that makes use of real-time information to calculate journey instances dynamically. To enhance performance, the gadget included a clever mechanism that selects the strategy that offers an elevated correct prediction based totally in precise on the traveler patterns and the country of the vehicle. A second complete state of affairs for these structures is the strategy of choosing whether or not a detected deviation is detected between the scheduled sending device and the modern-day day time forecast is considerable. Learn about two proposed and evaluated alternative techniques that can be used to inform the selection of redirection machines. The outcomes validated that each method can be used in accordance to the patterns of web site traffic on the avenue line traversed through a vehicle.

Bask, Tinnilä, & Rajahonka (2010) cited that logistics and transportation preferences in developing global areas have been altered and diverged into limitless provider segments. A couple of presents so a ways provided with the assist of transport agencies and vans have deteriorated into exceedingly specialized donations to reduce expenses (reduced trucks) or supply value-added services (storage, packaging, ticket income ultimate assembly) to third parties and third celebration preparations and alliances (Bask, Tinnilä & Rajahonka, 2010).

Pressure to provide quicker and less expensive has made vehicle use a necessary thing of fleet management (Jonsson 2008; Waters, 2009). Better vehicles use reduces trip cost thanks to higher planning. Transportation planning requires a data machine with the use of transportation management systems. The reason is to decide which routes furnish a best ordinary use of the potential of the vehicle, with so many clients served and the greatest variety of units delivered, whilst minimizing transport times. In addition, superior planning takes into account precise elements, such as visitors and web site visitors' stipulations, in order to furnish an extra route appropriately. Technological enhancements in verbal desire round the enterprise entrepreneur have allowed for broader planning thru the use of digital file sharing (EDI), radio frequency identification (RFID), and satellite television. PC TV for computer browsing (Waters, 2009). In addition, there have been technical enhancements in the structure of the vehicles in order to fulfill the surroundings desires.

2.3 Research Gap Identification and Analysis

Most previous researches such as (Mohamed, 2006; Kinyua, 2000 and Serem, 2003) associated with transport in humanitarian logistics have taken a central role view on the section of the planner, in addition to examining the problem related with vehicles rental logistics and job overall performance in the region . There is little literature on the management of present day discipline vehicle fleets (Field VFM) in humanitarian operations and on how contemporary management structures, strategic interactions, and incentives form one-on-one fleet management applications. Hence, the relevancy of conducting this research because most of the above-mentioned researchers have given less attention the problem associated with rental vehicles logistics and fieldwork performance.

Therefore, it is very essential to conclude that optimization methods improves rental vehicles logistics performance may improve fieldwork performance (Balcik, Beamon and Smilowitz, 2008). It was relevant to conduct a study on assessing the problem associated to rental vehicles logistics and fieldwork performance.

2.4. Theoretical Framework

A theory is a set of statements or thoughts designed to provide clarification to a set of statistics or phenomena, in one special way that has been examined over and over again or that is large and can be used to make predictions about natural phenomena (Popper, 1963). Theories are analytical tools for understanding, explaining, and making predictions about a precise country of affairs (Hawking, 1996). A formal precept has a syntactic nature and is only fantastic when something semantic is given through its use to some fabric of content, i.e. data and relationships of the actual historic world as it develops (Zima, 2007).

2.4.1. Replacement Theory

Replacement theory was applied in many studies related to transport and logistics as a useful tool in modelling many systems. This theory is significant for this study because it helps to evaluate the performance of field work that is performed with the use of rental vehicles. This theory also helps to apply policies regarding inventory and management of rental vehicles through two policies that are very known in inventory management issues that are primarily based on a totally choice policy by way of which a machine is modified when a cumulative measurement product

is produced, the most vital production dimension have to be determined; in rental engine logistics, the proprietor of the engines have to figure out the most preferred workload planned for use prior to what can be vehicle to repair or maintain it, so now he does no longer have to enter the performance of fieldwork, when it does, factors such as the cost of repair and upkeep must be counted to limit pace and time-based substitute policy, whereby the computer is replaced each time after understanding the super-election period of each manufacturing cycle (Bask, Tinnilä & Rajahonka, 2010).

To gain a fantastic performance of the work of the subject, it is preferable coverage based totally on the time that coverage based on the volume for a higher use of the vehicles of rental. Time-based coverage consolidations have emerged as section of the transportation contract to so many establishments in the house, the costs to be assumed correspond to every for the value of maintaining the maintenance rate for new machines and laptops (Bagui, Chakraborti and Bhadra, 2012).

The thought of substitution refers rather to problem associated with rental vehicles and their replacement, their maintenance in case of failure or break down. Replacement is applied when the existing items is out dated, destroyed either by accident or otherwise. In rental vehicles logistics, the out-dated vehicles and spare parts are replaced to ensure better functioning of the vehicles to enhance fieldwork performance, the same is applied to staff working in an organisation are retired or replaced in case of expansion, accident or otherwise (Bagui, Chakraborti & Bhadra, 2012).

In the context of this study this theory of replacement supports this study in the sense of field work performance due to help of rental vehicle logistics, the rental vehicles in good condition are more likely to perform better on the field compared to vehicles in poor condition. Thus, this theory of replacement comes in as an evaluating tool that help the policies regarding the management and inventory of rental vehicles through inventory management issue which is based on modifying the cumulative measurement product to enhance fieldwork performance.

2.4.2. Human Capital Theory

This theory of human capital is relevant to this study of rental vehicles logistics and fieldwork performance because it is mainly based on transferability of the acquired skills to the drivers of

rental vehicles and staff transported to fieldwork. It is very prerequisite that the employer provides facilitate the acquisition of skills and further trainings, generally trainings increase the productiveness of a worker in an agency, aside from those who instruct.

Becker's theory, one by one, offers with these phenomena and attracts two crucial conclusions. First, employers: share the returns and burden of investing in distinctive enterprise skills with their employees. Second, in a competitive job market, companies no longer invest in skills seen with the help of their personnel crew due to their lack of attainable to achieve returns on these investments. Therefore, human beings pay the full cost of giant training. That notion focuses on driver behaviour and Genius acquisition. The significance of coaching cannot go omitted and it is necessary for all firms to strive to add cost to group of workers thru training, which corresponds to larger regular average overall performance and tax evasion than in any other case they need to have incurred for lack of scope education (Collins, Henschion, & O'Reilly, 2009).

Drivers favour to be adept at making certain vehicles get stuck and how they can reply quickly before consulting an expert to prevent injuries. In addition, drivers want to be aware of the safe use of the street between extraordinary practices that are of mutual advantage to the business enterprise and to the drivers themselves. As in human capital thinking, this will increase the regular performance of thematic work (Franz and Soskice, 2011). However, the employer in this case lets in drivers to be educated till the cost is usually shared. Therefore, this principle is the relevance of human capital in relation to the usual logistical trendy overall performance of vehicle and region work.

This theory of human capital theory supports this study of rental vehicle logistics and field work performance since it is based on the transportation of skilled labour to the field so that the performance of the institution gets geared by effective rental vehicle logistics which is competitive. The drivers and other employees of NISR as the human capital within the institution increases its performance when interacting and utilizing based on the behaviours of both the drivers and the staff who know their role in performing better at the fieldwork.

2.5. Conceptual framework

The conceptual framework described the relationship between variables of study. With the developing focal point on the strategic implications of logistics and the modern-day approach on

the benefits of leveraging logistics to do suited fieldwork (Stank ,2003), it became a disproportionate priority to measure easy and regular performance of accepted logistics (Cheng and Grimm, 2006; Stank, Davis, & Fugate, 2005; Griffis, Goldsby, Cooper, & Closs, 2007).

based there is the overall performance of the problem work and it is for this reason recognized due to the fact the work region to be worthwhile should depend on the use of rental vehicles. The unbiased variables in this case are the important thing main to field work performance which is rental vehicles logistics that includes repair and maintenance of rental vehicles, fuel management and drivers’ behaviour and skills, whereas the intervening variables are road status and employee factors.

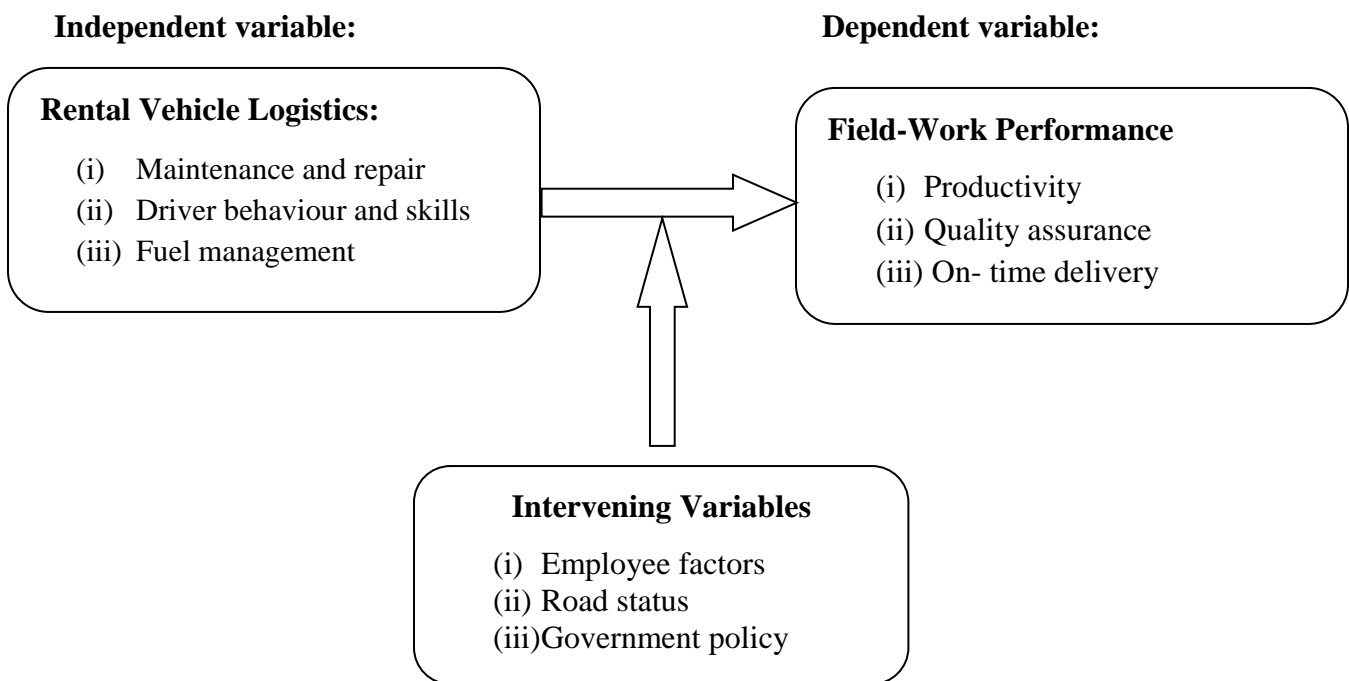


Figure 2. 1: Conceptual Framework

Sources: Adopted from Gitahi & Ogollah, 2014

The figure 2.1 of conceptual framework represents the independent variable as rental vehicle logistic and it is measured in terms of maintenance and repair, driver behaviour and skills, and fuel management; and dependent variable as field work performance and it is measured in terms of productivity, quality assurance and on – time delivery. Whereas other factors such as

employee factors and road status are intervening variables that can falsify the information in fieldwork performance.

1.6.Summary

This chapter two of the literature overview consists of theoretical review, empirical review, identification and analysis of search holes, the theoretical and conceptual framework that relates the variables of the study include the factors that influent rental vehicles logistics and fieldwork performance and other factors that can cause change in field work performance.

CHAPTER THREE: RESEARCH METHODOLOGY

3.0. Introduction

Chapter three describes the search designs considered, the area of the study, population information, lookup design, fact-gathering techniques consisting of vital sources of information and different secondary, collection data tool that encompass questionnaires and interview guides, file analysis procedures, reliability and validity of statistics series equipment and moral consideration

3.1. Research Design

This research about rental vehicles logistics and fieldwork performance used descriptive research design to facilitate the researcher to include the interview, narratives and other descriptive data into research. The numerical data was also considered to accumulate the perceptions and views of the researchers into questionnaires. Eyisi (2016) supports the use of descriptive survey while collecting data because it includes various viewpoints of the the respondents, it also helps to minimize the biases through deciding minimum statistical analyses that enhances quantitative findings.

This work was limited on rental vehicles logistics and fieldwork performance in National Institute of Statistics of Rwanda, the researchers such as Mugenga (2003) supported the use of case studies to facilitate the researcher to focus a study on a certain group of respondents or entity that needed inclusion of all data that regards the respondents and directed in the field of study.

3.2. Area of Study

The area of study was limited on National Institute of Statistics of Rwanda, and this study was driven in terms of rental vehicles logistic and field work performance. Whereby, the information was carried out from the 381 employees of NISR who perform field work including 148 who are temporary employees.

3.3. Target Population

The target population refers to the entire group of men and women or objects from which respondents are extracted (Mugenda, 2010). Therefore, the goal population for this study consists of all 381 targets of National Institute of Statistics of Rwanda whereby 181 permanent employees inclusive, and 48 drivers who drives the vehicles while doing fieldwork.

Table 3. 1: Target Population

Respondents	Target population
Employee in Office Work	4
Permanent employees	181
SAS (Contractual)	148
Drivers	48
Total	381

Source: NISR, 2019

Table 3.1 represents the number of employees of NISR who go to the fieldwork when they are permanent employees as 181, while 148 are contractual employees of SAS, 48 are the drivers who take them to the field in groups, and 4 other employees remain at the office and the total number of the employees in NISR goes up to 381 employees.

3.4. Sample Design

3.4.1. Sample Size Determination

The researcher was forced to look for a reasonable number of sample size or respondents to participate in this study because of financial and time constants. Hence, the use of Yamane (1967) formula in determination of sample size whereby

$$n = \frac{N}{1 + Ne^2}$$
$$n = \frac{381}{1 + 381(0.05)^2}$$

$$n = \frac{381}{1.82}$$

$$n = 180$$

N is target population or study population, while n is sample size or respondents and e is the margin error of 5% or 0.05 at confidence level of 95%. Thus, this study about rental vehicles logistics and field work performance used the total number of respondents who are equal to 180 respondents.

Table 3. 2: Categorization of Sample Size

Respondents	Sample size	Sampling techniques
Employees in Office work	2	Purposive
Permanent employees	70	Purposive
SAS Temporary employees	82	Purposive
Drivers	26	Purposive
Total	180	Yamane (1967) formula

Source: Researcher, 2019

The researcher used a sample size of 180 respondents that included 2 respondents from the office, 70 respondents who go to field but who are permanent employees, 82 respondents who go to the field but non-permanent and 26 respondents from the drivers' group and the sampling technique was purposive so that the researcher selected the relevant respondents to the study.

3.4.2. Sampling Technique

The researcher applied purposive sampling technique to avoid minimizing biases and errors that may occur while conducting this study about rental vehicles logistics and field work performance. As determined the sample size of 180 respondents were considered in this study including 2 respondent from the office, 70 respondents who go to field but who are permanent employees, 82 respondents who go to the field but non-permanent and 26 respondents from the drivers' group to increase the number to 180 respondents who were selected purposively basing on who has the better information about rental vehicle logistics and fieldwork performance.

3.5. Data Source

3.5.1. Primary Data

The major information of the most prominent respondents are collected, for example, 2 office respondent, 70 respondents who go to field but who are permanent employees, 82 respondents who go to the field but non-permanent and 26 respondents from the drivers' group who acquire interviews and questionnaires to fill out. To facilitate the system of compiling statistics, respondents and drivers of the administrative center had obtained an interview, whilst field work respondents had to answer the questions to all and the researcher self-managed the questionnaire and the interview to make it fantastic that the questionnaires had been answered one hundred percentage to acquire all relevant statistics.

3.5.2. Secondary data

The researcher gathered secondary facts from nearby reports, newspapers, magazines and television and radio directions to take advantage of all the related literature to rental vehicles logistics and field work performance in NISR.

3.6. Data collection instruments

3.6.1. Questionnaire

The researcher formulated questionnaire in relation to the study of rental vehicles logistics and field work performance to the respondents who go to the field. This questionnaire was divided into five parts, whereby the first part -- be about bio-data of respondents, the second part -- be about the effect of quality assurance of rental vehicles on field work performance of NISR, the third was about the impact of on-time delivery of rental vehicles on field work performance, the forth was about problems associated with rental vehicle logistics and field work performance in NISR and the fifth was about the relationship between rental vehicle logistics and fieldwork performance of NISR.

3.6.2. Interview Guide

The researcher formulated interview guide in English and be translated in Kinyarwanda to facilitate some of the respondents to give reason information about rental vehicle logistics and fieldwork performance in NISR. The interview guide was formulated to capture descriptive

information about the effect of quality assurance of rental vehicles on field work performance of NISR, the impact of on-time delivery of rental vehicles on field work performance, the problems associated with rental vehicle logistics and field work performance in NISR and the relationship between rental vehicle logistics and fieldwork performance of NISR.

3.7. Data Analysis Procedure

Data analysis is par excellence due to the truth that it helps to clean and remodel documents for ultimate selection. Its motive is to reduce and considerably change the data accrued in an understandable and interpretable way and to get family to collaborate on the search issues that can be examined and the conclusions that can be drawn from them. From this, the archives amassed in the discipline had been prepared and analyzed qualitatively and quantitatively. Qualitative information on the form of popularity notes via observations, interviews, and the questionnaires had coded and analyzed the use of the statistical bundle for social sciences (SPSS version, 21.0).

The effects of the lookup are represented in the shape of texts and direct key informants. The application of this method of data analysis used primarily based on the reality that there was no bias in the facet of the researcher as hostile to the original opinions of the respondents. In addition, this procedure elementally describes the phenomena described under and facilitates the satisfactory distinctions that were drawn (Mugenga, 2008). Pre-coded data was commonly acquired from questionnaires that had been brought using the Statistical Package for Social Science (SPSS version, 21.0) to facilitate the evaluation of quantitative data.

On the different hand, opinions and perceptions have been classified; counted and statistical models have been used to explain what the outcomes of inferential records are in the course of quantitative research. In view of this, data have been presented, defined, and mentioned for evaluation through descriptive documents such as frequencies, tables, and percentages. Therefore, a quantitative allowed the researcher to generalize the findings and also to make comparisons between two variables. Finally, an accuracy of the results of being aware in numerical sentences is allowed researcher by quantitative analytical approaches.

3.8. Reliability and Validity

The validity of research instruments was tested using a pilot study of 10 respondents who were given questionnaires to respond in three different times at the first pilot study the results from 10 respondents have given 0.73 content validity index with the use of Cronbach Alpha, the second round of pilot study have given 0.79 of content validity index whereas the third conducted after one month has given 0.80 content validity index. Thus, these results have brought me to the point of concluding that the instruments are valid since they give results which are above 0.70 standard of content validity index. The results have also made me to conclude that the instruments are reliable since they kept giving the results of content validity index which were above the standard level. These preliminary tests were conducted before making the definite data collection process.

Table 3. 3: Results of Pilot study to measure validity and reliability

Variable	Tools	Reliability Cronbach Alpha results			Remarks
		1 st round	2 nd round	3 rd round	
Maintenance and repair	10	0.73	0.79	0.80	Valid and reliable
Driver's behavior and skills	10	0.73	0.79	0.80	Valid and reliable
Fuel management	10	0.73	0.79	0.80	Valid and reliable
Productivity	10	0.73	0.79	0.80	Valid and reliable
Quality assurance	10	0.73	0.79	0.80	Valid and reliable
Timely delivery	10	0.73	0.79	0.80	Valid and reliable

Source: Primary Data, 2020

The results in Table 3.3 shows that the variables of the study used in the questionnaire for pilot study are valid and reliable due to the fact that the cronbach alpha results are above standard of 0.70 content validity indexes. To make sure the instruments of data collection are valid and reliable, the researcher have used other different methods such involving the experts in the field of logistics and work performance to be sure of content validity and ensure the relevance of the questions to make crucial modifications. In order to reply the respondents who would answer the determined congruence to the closed and open questions posed through the researcher, the questionnaire was made simple to understand. The validity and reliability of instrument was also a work which involve much my research supervisor from the University of Rwanda.

3.9. Ethical issues

During the events of the period, they choose to meet ethical needs, as they serve to shield the dignity, right, safety and welfare of all research informants (Luci, 2012). Development information: Complete it with ethical troubles in mind. During the study route, there had been no imposition of troubles on collaborators in participatory sentences. Respondents have been knowledgeable of your rights to terminate participation at any time, besides penalty. In addition, in order to cease exposing the identification or any one-of-a-kind document that the participants, the records accumulated is saved and processed in an expert manner. In addition, respondents had been asked to end writing their title on the questionnaires given to them.

Once the researcher did no longer have interaction in any deceptive form in the sentences of the objectives, content or nature of the information and the advantages that every participant and community may additionally desire to gain from studying have been utterly defined to participants. After the provision of the introductory letter, informant accepted willingly to be part in the study and the researcher obtained their content. The investigator kept and treat confidential all the information from the respondents after taking note. In addition, in terms of the intent and persona of the respondents are predicted to be very cooperative and totally joyful to have new faces and human beings who will enthusiastically help accumulate documents and fill out the questionnaire even at their mining sites. Therefore, in general, an excessive level of openness in this research was obtained.

Table 3.2: Operationalization Table

Operationalization table refers to the process of strictly defining variables into measurable factors which allow them to be empirically and quantitatively measured. Each indicator of rental vehicle logistics and field work performance is measured empirically and quantitatively in the table 2.1 below:

Objectives	Variables	Indicators	Measurement	Methodology
1. To assess the effect of quality assurance of rental vehicles on field work performance of NISR	Rental vehicles: Indep. Variable Field-work performance of Public Institutions: Dep. Variable	2. Maintenance and repair 3. Fuel management	<ul style="list-style-type: none"> ✓ Oil change ✓ Routine servicing ✓ Spare part management ✓ Fuel sourcing ✓ Fuel monitoring ✓ Consumption rate 	Descriptive
2. To identify problems associated with rental vehicles logistics and field work performance in NISR	Problem associated to rental vehicles: Indep. Variable Field-work performance of Public Institutions: Dep. Variable	3. Vehicle tracking 4. Vehicle inspection 5. Maintenance and repair	<ul style="list-style-type: none"> ✓ Routing ✓ Dispatching ✓ Observe speed limits ✓ Physical inspection ✓ Oil level ✓ Water level ✓ Maintenance schedule ✓ Vehicle management ✓ Vehicle recovery 	Descriptive
3. To examine the relationship between rental vehicle logistics and fieldwork performance of NISR.	Rental vehicles logistics: Indep. Variable Field-work performance of Public Institutions: Dependent v	6. Driver behaviour & skills 7. Driver management	<ul style="list-style-type: none"> ✓ Maintenance skill ✓ Off-road driving skills ✓ Interpersonal skills ✓ Supervision/ planning ✓ Driver hiring process ✓ Formal rewards 	Descriptive

Source: Primary data, 2019

The table 2.1 indicates that this study deals with only three objectives which are to assess the effect of quality assurance of rental vehicles on field work performance of NISR, to determine the impact of on-time delivery of rental vehicles on field work performance of NISR and to

identify problems associated with rental vehicles logistics and field work performance in NISR. With rental vehicles logistic as independent variable which has repair and maintenance, fuel management, driver behaviour and skills, vehicle tracking as indicators that are measured by oil change, routine servicing, spare part management, fuel monitoring, fuel consumption rate and as indicated in the table 2.1.

3.10. Conclusion

This chapter clearly demonstrated that the researcher determined the sample size of the study through use of purposive sampling technique basing on the criteria set by the researcher in order to minimize sampling errors, 180 respondents were drawn from 381 employees of NISR who perform field work -- be targeted, study area and data sources -- also be highlighted within this study, the strategies and strategies used in this learn about have been highlighted at some point in the facts gathering. In the equal way, it indicated how the records supplied had been transmitted with the help of the respondents with outstanding confidentiality and secrecy.

CHAPTER FOUR: RESEARCH FINDINGS AND DISCUSSIONS

4.0. Introduction

This chapter four dealt with research findings and discussion extracted from 180 respondents who participated at rate of 100%. The perceptions and views of the respondents were collected in relation to assess the effect of quality assurance of rental vehicles on field work performance of NISR, to determine the impact of on-time delivery of rental vehicles on field work performance of NISR, to identify problems associated with rental vehicles logistics and field work performance in NISR, and to examine the relationship between rental vehicle logistics and fieldwork performance of NISR.

4.1. Bio-Graphic Data of Respondents

Respondents' biographical data are extracted from the respondent's gender, the age of the respondents' workforce, the respondent's level of education, and the work day out to NISR. The biographical records of the respondents help the researcher to analyse and talk about the outcomes of the study gathered in relation to the study objectives.

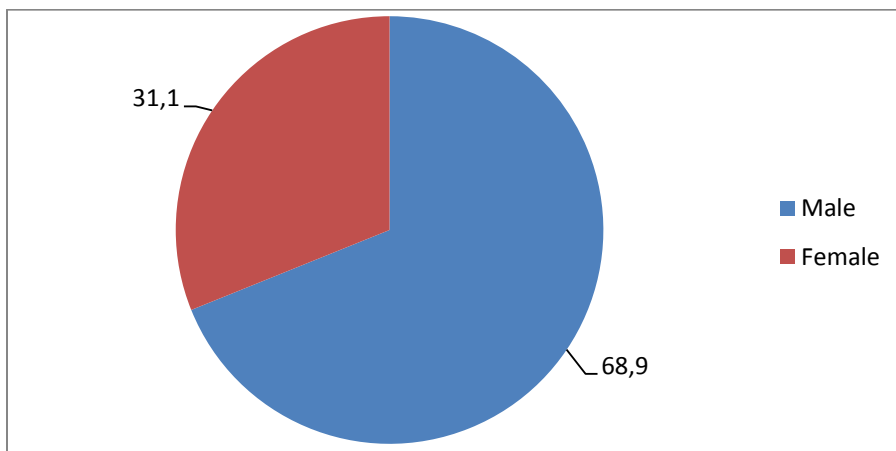


Figure 4. 1: Gender of respondents

Source: Primary Data, 2020

The results of Figure 4.1 demonstrated that 124 (68.9%) of the respondents who participated are men, 56 (31.1%) of the respondents who participated are women. It implies that a wide variety of human beings are boys and they are strong to perform field work of NISR.

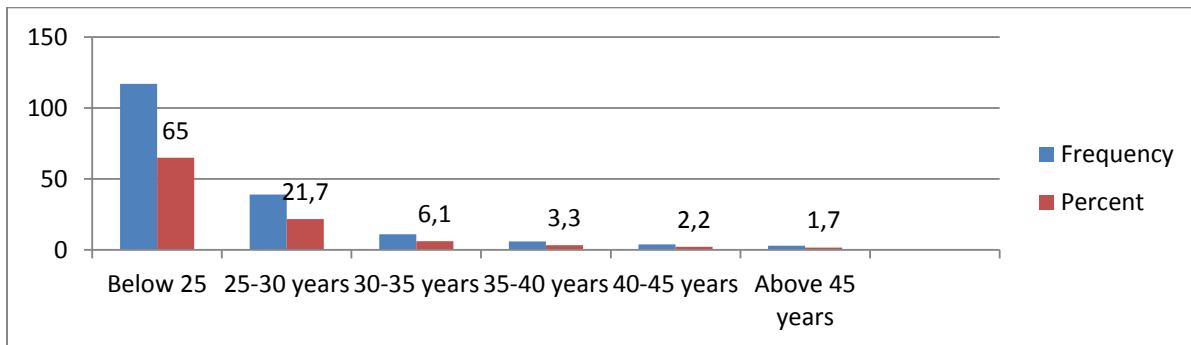


Figure 4. 2: Age group of respondents

Source: Primary Data, 2020

Table 4.2 shows that 117 (65.0%) of the respondents who participated in this survey are below 25 years old, 39 (21.7%) of the respondents who participated in this survey are between 25 and 30 years old, 11 (6.1%) respondents who participated are between 30 and 35 years old, 6 (3.3%) of respondents who participated are between 35 and 45 years old, four (2.2%) of respondents who participated in this survey are between forty and forty five years old, three (1.7) of the respondents who participated in this survey are over forty five years old. This is the one that gives the absolute excellent range respondents is below 25 years old meaning the big number of employees is energetic to perform field work of NISR.

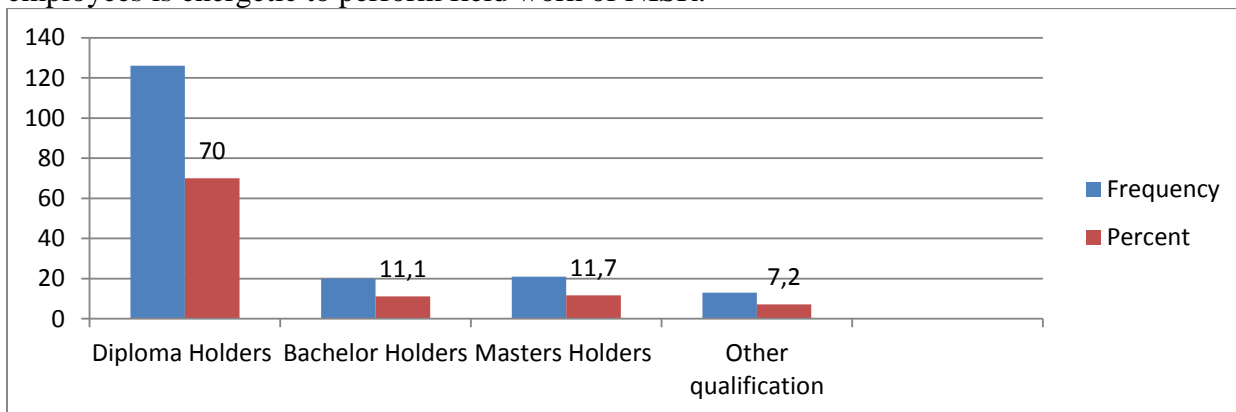


Figure 4. 3: Educational level of the respondents

Source: Primary data, 2020

Figure 4.3 show that 126 (70.0%) of the respondents who participated are diploma holders, 21 (11.7%) of the respondents who participated are bachelor holders, 20 (11.1%) of respondents participated have master's levels, 13 (7.2%) of the respondents who have participated have qualifications. Therefore, it has a broad range of respondents' diploma holders and necessary knowledge to perform field work for NISR.

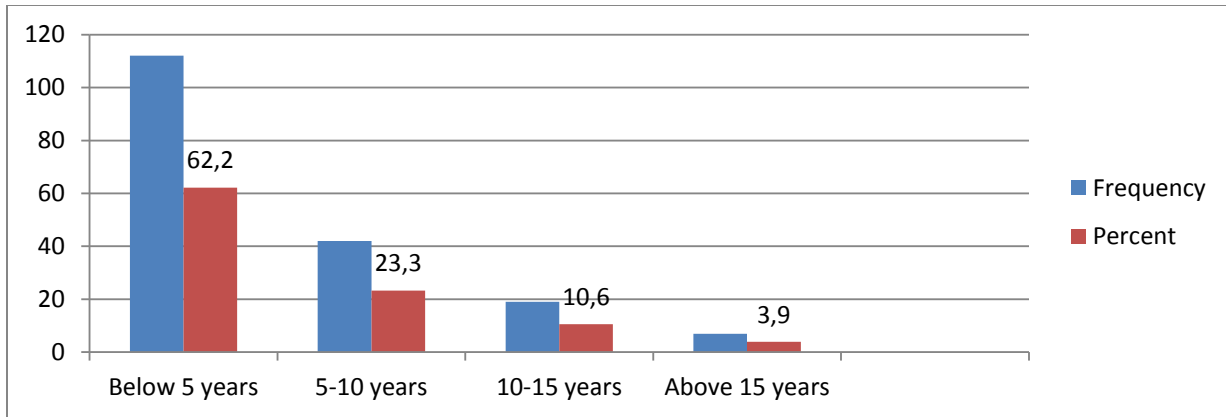


Figure 4. 4: Working experience in NISR

Source: Primary Data, 2020

The Figure 4.4 indicate that 112 (62.2%) of respondents who have participated in this application have much less than 5 years of work experience, forty-two (23.3%) of respondents who have participated in this application have between 5 and 10 years working experience, 19 (10.6%) of the respondents who participated in this information have between 10 and 15 years of work experience, 7 (3.9%) of the respondents who participated in this learn about have greater than 15 years of work experience. Therefore, it implies that there are a large number of group of workers in NIRS work there for a period which is less 5 years of experience in National Institute of Statistics of Rwanda.

4.2. Presentation of Findings

The findings of the facts in this place of information are drawn from respondents 'opinions and understanding related to investigate the effect of quality assurance of rental vehicles on the performance of fieldwork of NISR, to determine the impact of on-time delivery of rental vehicles on field work performance of NISR, to identify problems associated with rental vehicles logistics and field work performance in NISR, and to examine the relationship between rental vehicle logistics and fieldwork performance of NISR.

4.2.1. The effect of quality assurance of rental vehicles on field work performance of NISR

The findings of the study are collected from the views and perceptions of the respondents regarding well-being of rental vehicles which is practices to ensure field work performance

including changing oil regularly, servicing done on routine basis, poor physical inspection of vehicle and issues of driver management.

Table 4.1: Statement regarding well-being of rental vehicles practiced to ensure field work performance

The collected Likert Scale data are presented in a point of 5 scales from not sure to a very great extent. The results presented regard the well – being of rental vehicles to ensure field work performance of NISR

Statement	5	4	3	2	1	Mean	Std.
Oil is changed regularly	4(2.2%)	18(10.0%)	21(11.7%)	31(17.2%)	106(58.9%)	1.7944	1.12710
Servicing is done on routine basis	4(2.2%)	9(5.0%)	13(7.2%)	48(26.7%)	106(58.9%)	1.6500	.97152
Spare parts are well managed	4(2.2%)	8(4.4%)	9(5.0%)	33(18.3%)	126(70.0%)	1.5056	.94246
Fuel sourcing is managed on daily basis	10(5.6%)	17(9.4%)	9(5.0%)	44(24.4%)	100(55.6%)	1.8500	1.21202
Fuel is monitored on daily basis	11(6.1%)	13(7.2%)	31(17.2%)	25(13.9%)	100(55.6%)	1.9444	1.25392
The consumption rate of the vehicle is monitored	4(2.2%)	6(3.3%)	13(7.2%)	41(22.8%)	116(64.4%)	1.5611	.92853

Source: Primary Data, 2020

The results in Table 4.1 indicate that 106 (58.9%) of respondents asserted that oil is changed regularly to enhance well – being of rental vehicle for the sake of field work performance to a very great extent, 106 (58.9%) of respondents asserted that servicing is done on routine basis for field work performance to a very great extent, 126 (70.0%) of respondents asserted that spare parts are well managed for the sake of fieldwork performance to a very great extent, 100 (55.6%) of respondents asserted that fuel sourcing is managed on daily basis for fieldwork performance to a very great extent, 100 (55.6%) of respondents asserted that fuel is monitored on daily basis for fieldwork performance, 116 (64.4%) of respondents asserted that the consumption rate of the

vehicle is monitored for the sake of fieldwork performance to a very great extent. The results also show the highest mean is 1.5056 while the lowest mean is 1.9444 because the highest score is 1 and all means are rating in 1. Thus, implies that well – being of rental vehicles affect field work performance in NISR.

4.2.2. The impact of on-time delivery of rental vehicles on field work performance of NISR

The respondents gave out their perception regarding on – time delivery of rental vehicles on field work performance of NISR including routine vehicle tracking and regular vehicle management.

Table 4. 2: Statement regarding effect of on – time delivery of rental vehicles practiced to ensure field work performance

The collected Likert Scale data are presented in a point of 5 scale from not sure to a very great extent. The results presented regard the on – time delivery of rental vehicles affect field work performance of NISR

Statement	5	4	3	2	1	Mean	Std.
Routine vehicle tracking	5(2.8%)	16(8.9%)	23(12.8%)	21(11.7%)	115(63.9%)	1.7500	1.14762
Routine vehicle dispatching	5(2.8%)	16(8.9%)	20(11.1%)	24(13.3%)	115(63.9%)	1.7333	1.13649
Observation of vehicle speed limits	5(2.8%)	10(5.6%)	19(10.6%)	86(47.8%)	60(33.3%)	1.9667	.95660
Physical inspection of vehicle	5(2.8%)	16(8.9%)	36(20.0%)	19(10.6%)	104(57.8%)	1.8833	1.17362
Oil level inspection	5(2.8%)	30(16.7%)	58(32.2%)	54(30.0%)	33(18.3%)	2.5556	1.05821
Regular water level inspection	5(2.8%)	21(11.7%)	18(10.0%)	23(12.8%)	113(62.8%)	1.7889	1.18646
Observing maintenance schedule	5(2.8%)	16(8.9%)	23(12.8%)	29(16.1%)	107(59.4%)	1.7944	1.13697
Regular vehicle management	5(2.8%)	14(7.8%)	25(13.9%)	31(17.2%)	105(58.3%)	1.7944	1.11715

Source: Primary Data, 2020

The outcomes in Table 4.2 show that one hundred and fifteen (63.9%) of the respondents mentioned that the identification of the vehicle was tracked to make certain the performance of the work in the location to a very great extent, 86 (47.8%) of the respondents cited that the observation and manage of speed limits done for the sake of fieldwork performance to a great extent, 104 (57.8%) of respondents asserted that physical inspection of vehicle is practiced to enhance fieldwork performance to a very great extent, 58 (32.2%) of respondents asserted that oil level inspection is practiced for the sake of field work performance to small extent, 113 (62.8%) of respondents asserted that regular water level inspection is practiced to enhance fieldwork performance to a very great extent, 107 (59.4%) of the respondents stated that seeing the maintenance agenda is practiced to enhance the typical overall performance of the fieldwork to a very suitable extent, (58.3%) of the respondents noted that everyday vehicles management is practiced to enhance area work overall performance to a very excellent extent. The results additionally proves that the great viable recommendation is 1.7333, whilst the lowest advice is 2.5556, most of the means are in rating score of 1 which implies that on-time delivery of rental vehicles affect field work performance in NISR.

4.2.3. The problems associated with rental vehicles logistics and field work performance in NISR

The respondents' perceptions in regarding to the problems associated with rental logistics and field performance in NISR including poor physical inspection of vehicles and issues of driver management and management.

Table 4. 3: Statement regarding problem associated to rental vehicles

The collected Likert Scale data are presented in a point of 5 scale from not sure to a very great extent. The results presented regard problems associated to rental vehicles affect field work performance of NISR

Statement	5	4	3	2	1	Mean	Std.
Poor physical inspection of vehicle	5(2.8%)	15(8.3%)	24(13.3%)	18(10.0%)	118(65.6%)	1.7278	1.14253
Problems of speed limits	5(2.8%)	13(7.2%)	28(15.6%)	27(15.0%)	107(59.4%)	1.7889	1.11860
Poor management of spare parts	5(2.8%)	17(9.4%)	25(13.9%)	16(8.9%)	117(65.0%)	1.7611	1.16927
Poor management of rental vehicle	5(2.8%)	13(7.2%)	26(14.4%)	25(13.9%)	111(61.7%)	1.7556	1.11677
Problems associated to vehicle recovery	5(2.8%)	18(10.0%)	25(13.9%)	15(8.3%)	117(65.0%)	1.7722	1.18100
Problems associated to consumption rate of the vehicle	5(2.8%)	13(7.2%)	25(13.9%)	27(15.0%)	110(61.1%)	1.7556	1.11176
Problems associated to vehicle maintenance and repair	5(2.8%)	15(8.3%)	22(12.2%)	18(10.0%)	120(66.7%)	1.7056	1.13697
Problems associated to fuel management	5(2.8%)	13(7.2%)	28(15.6%)	26(14.4%)	108(60.0%)	1.7833	1.12003
Problems associated to vehicle tracking	5(2.8%)	17(9.4%)	25(13.9%)	16(8.9%)	117(65.0%)	1.7611	1.16927
Problem regarding vehicle inspection	5(2.8%)	13(7.2%)	26(14.4%)	25(13.9%)	111(61.7%)	1.7556	1.11677
Problem concerning behavior and skills of drivers	5(2.8%)	18(10.0%)	25(13.9%)	15(8.3%)	117(65.0%)	1.7722	1.18100
Issues of driver management and management	5(2.8%)	16(8.9%)	28(15.6%)	24(13.3%)	107(59.4%)	1.8222	1.15384

Source: Primary Data, 2020

The results in Table 4.7 indicate that 118 (65.6%) of respondents cited that a terrible bodily inspection of the vehicles influences the overall performance of fieldwork to a very early level, 107 (59.4%) of respondents cited that speed restrict troubles have an effect on work in the overall performance vicinity to a very giant extent, 117 (65.0%) of respondents referred to that poor management of spare parts has an impact on discipline overall performance in a very significant level, 111 (61.7%) of the respondents cited that poor management of rental vehicle affect field work performance to a very great extent, 117 (65.0%) of respondents asserted that

problems associated to vehicle recovery affect field work performance to a very great extent, 110 (61.1%) of respondents asserted that problems associated to consumption rate of the vehicle affect fieldwork performance to a very great extent, one hundred and twenty (66.7%) of the respondents cited that the issues related with the maintenance and repair of vehicles have a very great effect on the performance of field work, 108 (60.0%) of the respondents showed that the problems related with fuel management has a very massive impact on the standard overall performance of fieldwork, 117 (65.0%) of respondents verified that problems related to vehicle supervision have a very high in fieldwork performance, 111 (61.7%) of respondents cited that the trouble associated to vehicle inspection significantly impacts the performance of the fieldwork, 117 (65.0%) of respondents showed that discomfort in relation to drivers' behavior and skills has a very large effect on fieldwork performance, 107 (59.4%) of respondents validated that drivers' management and management has an impact on the performance of fieldwork to a very extension level. The consequences have additionally indicated that the average is between 1.7056 and 1.8222, because the high-quality viable rating is 1, which potential that the issues associated with rental vehicle practices have a high negative effect on the performance of fieldwork performance.

4.2.4. The relationship between rental vehicle logistics and fieldwork performance of NISR

The findings of the study are collected from the views and perceptions of the respondents regarding relationship between rental vehicle logistics and fieldwork performance in NISR.

Table 4. 4: Statement regarding relationship between rental vehicle logistics and field work performance

The collected Likert Scale data are presented in a point of 5 scale from not sure to very satisfied. The results presented regard the relationship between rental vehicles logistics to ensure field work performance of NISR

Statement	5	4	3	2	1	Mean	Std.
I am satisfied with vehicle maintenance and repair	0 (.0%)	17(9.4%)	23(12.8%)	21(11.7%)	119(66.1%)	1.6556	1.02659
I am satisfied with fuel management	0 (.0%)	15(8.3%)	31(17.2%)	28(15.6%)	106(58.9%)	1.7500	1.01868
I am satisfied with vehicle tracking	0 (.0%)	15(8.3%)	25(13.9%)	30(16.7%)	110(61.1%)	1.6944	.99775
I am satisfied with vehicle inspection	0 (.0%)	15(8.3%)	25(13.9%)	30(16.7%)	110(61.1%)	1.6944	.99775
I am satisfied with behavior and skills of drivers	0 (.0%)	17(9.4%)	23(12.8%)	21(11.7%)	119(66.1%)	1.6556	1.02659
I am satisfied with management of drivers	0 (.0%)	15(8.3%)	30(16.7%)	28(15.6%)	107(59.4%)	1.7389	1.01587

Source: primary data, 2020

The results in Table 4.4 show that 119 (66.1%) of the respondents showed that they are very satisfied with vehicle maintenance and repair practice for fieldwork performance, 106 (58.9%) of respondents confirmed that they are very satisfied with fuel management for fieldwork performance, 110 (61.1%) of respondents asserted that they are satisfied with vehicle tracking for the sake of fieldwork performance, 110 (61.1%) of respondents confirmed that they are satisfied with vehicle inspection for field work performance, 119 (66.1%) of respondents asserted that they satisfied with behaviour and skills of drivers for the sake of field work performance, 107 (59.4%) of respondents confirmed that they are satisfied with management of drivers to enhance fieldwork performance in NISR. The results have also established that the satisfactory average is 1.6556, whilst the lowest is 1.7500, due to the fact the exceptional score

the results they have additionally shown that the absolute best average is 1.6556, whilst the lowest is 1.7500, as the best classification score is 1. Therefore, it implies that the logistics of rental vehicles has an excessive have an impact on the performance of field work, indicating that there is a significant relationship between rental vehicle logistics and field work performance in NISR, Rwanda.

Basing on the information collected from the secondary data in NISR in 2018 and 2019 reports have revealed that the vehicles rented from rental companies have helped them to reach remote areas where the office vehicles. However, due to huge funds that was being spent on 53 vehicles that were rented in EICV 3 and EICV 4 the fieldwork performance was very requiring.

4.2.4. Correlation analysis results

To measure the relationship between rental vehicle logistics and fieldwork performance, the researcher analysed the relationship between sub-variables of independent variable as rental vehicle logistics measured by maintenance and repair, driver behaviour and skills, and fuel management. The sub-variables of dependent variable which is field work performance is also measured by productivity, quality assurance and on-time delivery and the relationship between the rental vehicle logistics and fieldwork performance.

Table 4. 5: Correlation analysis between sub-variables of rental vehicle logistics

		Maintenance and repair	Driver behavior and skills	Fuel management
Maintenance and repair	Pearson Correlation	1	.832**	.941**
	Sig. (2-tailed)		.000	.000
	N	180	180	180
Driver behavior and skills	Pearson Correlation	.832**	1	.888**
	Sig. (2-tailed)	.000		.000
	N	180	180	180
Fuel management	Pearson Correlation	.941**	.888**	1
	Sig. (2-tailed)	.000	.000	
	N	180	180	180

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

Source: Primary Data, 2020

The findings in Table 4.5 prove that there is a relationship between maintenance and repair and driver behavior and skills ($p=.832$ and $\text{sig}=.000$), between maintenance and repair and fuel management ($p=.941$ and $\text{sig}=.000$), between driver behavior and skills and fuel management (p

= .888 and sig = .000), due to the fact all calculated p values are properly below 0.01 level of significance. Therefore, it implies that there is a relationship between predictors of rental vehicles logistics in NISR, Rwanda.

Table 4. 6: Analysis of the correlation between sub-variables of fieldwork performance

		Productivity	Quality assurance	On time delivery
Productivity	Pearson Correlation	1	.874**	.853**
	Sig. (2-tailed)		.000	.000
	N	180	180	180
Quality assurance	Pearson Correlation	.874**	1	.909**
	Sig. (2-tailed)	.000		.000
	N	180	180	180
On time delivery	Pearson Correlation	.853**	.909**	1
	Sig. (2-tailed)	.000	.000	
	N	180	180	180

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

Source: Primary Data, 2020

Table 4.6 indicates that there is a relationship between productivity and quality assurance (p = .874 and sig = .000), between productivity and transport time (p = .853 and sig = .000), between profitability and on-time delivery. (p = .909 and sig = .000), due to the reality that all calculated p values are a bright bid a good deal much less than 0.01. Therefore, it implies that there is a relationship between the sub-variables of rental vehicles logistics and the field work performance in NISR, Rwanda.

Table 4. 6: Correlation analysis between rental vehicle logistics and fieldwork performance

		Productivity	Quality assurance	On time delivery
Maintenance and repair	Pearson Correlation	.903**	.923**	.853**
	Sig. (2-tailed)	.000	.000	.000
	N	180	180	180
Driver behavior and skills	Pearson Correlation	.822**	.801**	.757**
	Sig. (2-tailed)	.000	.000	.000
	N	180	180	180
Fuel management	Pearson Correlation	.934**	.910**	.862**
	Sig. (2-tailed)	.000	.000	.000
	N	180	180	180

Source: Primary Data, 2020

Table 4.7 shows that there is a relationship between maintenance and productiveness ($p = .903$ and $\text{sig} = .000$), between maintenance and repair, and cost affectivity ($p = .923$ and $\text{sig} = .000$), between driver behavior and skills and productiveness ($p = .822$ and $\text{sig} = .000$) between driver behavior and skills and quality assurance ($p = .801$ and $\text{sig} = .000$) between driver behavior and skills and the on time delivery ($p = .757$ and $\text{sig} = .000$) between fuel management and productiveness ($p = .934$ and $\text{sig} = .000$) between management and quality assurance ($p = .910$ and $\text{sig} = .000$). 000) between fuel management and on-time transport ($p = .862$ and $\text{sig} = .000$) due to reality, all calculated p-values are below 0.01 significance levels. Therefore, it implies that there is a relationship between rental vehicles logistics and performance of fieldwork in NISR, Rwanda.

4.2.4. Regression analysis results

To measure the linear regression between rental vehicle logistics and sub-variables of fieldwork performance in NISR, Rwanda; the relationship is presented and analysed between rental vehicle logistics and productivity, between rental vehicle logistics and fuel management; and between rental vehicle logistics and on time delivery in NISR, Rwanda.

Table 4. 7. Model Summary of rental vehicle logistics and productivity in NISR, Rwanda

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.936 ^a	.877	.875	.38276

a. Predictors: (Constant), Fuel management, Driver behavior and skills, Maintenance and repair

Source: Primary Data, 2020

The results of Table 4.8 show that the coefficient R .936 suggests that the logistics of the rental vehicle has a massive relationship with productivity. The rectangular .877 R coefficient also suggests that rental vehicle logistics increase for 87.7% of the productivity growth variability. It therefore implies that predictors of rental auto logistics, such as fuel management, driver behavior and skills, and maintenance and repair, have an effect on productivity increase by using 87.7% and NISR, Rwanda.

Table 4. 8: Analysis of Variance (ANOVA) of rental vehicle logistics and productivity in NISR, Rwanda

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	183.876	3	61.292	418.356	.000
Residual	25.785	176	.147		
Total	209.661	179			

a. Dependent Variable: productivity

b. Predictors: (Constant), Fuel management, Driver behavior and skills, Maintenance and repair

Source: Primary Data, 2020

Table 4.9 shows that there is a massive relationship between apartment logistics and productivity due to the truth that the calculated p cost is plenty much less than 0.05 levels of sig (sig.

Calculated .000 and level of significance 0.05). Therefore, the statistical model that predicts the relationship between rental vehicle logistics and productivity is significant.

Table 4. 9: Coefficients of rental vehicle logistics and productivity in NISR, Rwanda

Model	Unstandardized		Standardized	t	Sig.
	Coefficients		Coefficients		
	B	Std. Error	Beta		
(Constant)	.127	.056		2.282	.024
Maintenance and repair	.199	.074	.209	2.671	.001
Driver behavior and skills	-.028	.054	-.030	-.524	.001
Fuel management	.741	.092	.764	8.095	.000

a. Dependent Variable: productivity

Source: Primary Data, 2020

The outcomes in Table 4.10 exhibit that rental vehicles logistics predictors have coefficients that affect productivity amplification in NISR. The regression suggests that there is a specific fine-grained relationship between rental vehicles logistics and productivity, as all calculated p values are well under 0.05 each. Thus, the coefficient gives a regression model, $Y = \beta_0 + \beta_1x_1 + \beta_2x_2 + \beta_3x_3 + \beta$. Therefore, $Y = .127 + .199x_1 + .028x_2 + .741x_3$, this regression equation suggests that there is an immoderate excellent massive between the predictors of rental vehicle logistics and NISR productivity.

The first intention to organize the relationship between maintenance and repair and productiveness has an extremely good and wide relationship ($b = .199$ and $p = .001$). The 2nd cause of setting up the relationship between driver behavior and skills and productivity has a considerable, exceptional relationship ($b = 0.028$ and $= 0.001$), purpose 0.33 to establish the relationship between management of fuel and productivity has a exact ratio ($b = .741$ ip $= .000$). It consequently implies that there is a big and big relationship between vehicle logistics and productiveness in NISR, Rwanda.

Table 4. 10: Model Summary of rental vehicle logistics and quality assurance in NISR, Rwanda

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	.932 ^a	.868	.866	.40982

a. Predictors: (Constant), Fuel management, Driver behavior and skills, Maintenance and repair
Source: Primary Data, 2020

The results in Table 4.11 prove that the coefficient R .932 suggests that rental vehicles logistics has an appropriate relationship with quality assurance. The rectangular .868 R dedication coefficient also indicates that rental vehicle logistics money owed for 86.8% of the variability of progress in quality assurance. Therefore, it implies that the predictors of rental vehicles logistics, such as Fuel management, Driver behavior and skills and Maintenance and repair affect the progress of Quality assurance by 86.8 % in NISR, Rwanda.

Table 4. 11: Analysis of Variance (ANOVA) of rental vehicle logistics and quality assurance in NISR, Rwanda

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	194.018	3	64.673	385.058	.000
Residual	29.560	176	.168		
Total	223.578	179			

a. Dependent Variable: Quality assurance
b. Predictors: (Constant), Fuel management, Driver behavior and skills, Maintenance and repair
Source: Primary Data, 2020

The conclusions in Table 4.12 point out that there is a sturdy relationship between the logistics of the residential vehicle and the efficiency of the value, as the calculated importance cost is zero. an awful lot lower than the 0.05 importance stage (cost sig. Calculated 0 & It; level of significance 0.05). Therefore, the statistical model that predicts the relationship between rental vehicle logistics and cost-effectiveness is significant.

Table 4. 12: Coefficients of rental vehicle logistics and quality assurance in NISR, Rwanda

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.116	.060		1.952	.052
Maintenance and repair	.571	.080	.581	7.170	.000
Driver behavior and skills	-.024	.058	-.024	-.410	.002
Fuel management	.386	.098	.385	3.936	.000

a. Dependent Variable: Quality assurance

Source: Primary Data, 2020

Table 4.13 indicates that the logistics of the rental vehicle has coefficients that affect the effectiveness of the amplification cost in NISR. The regression suggests that there is a massive relationship between the logistics of rental vehicles and the efficiency of the load, as all calculated p values are accurate below 0.05 each. Therefore, the coefficient provides a regression model, $Y = \beta_0 + \beta_1x_1 + \beta_2x_2 + \beta_3x_3 + \beta$. Therefore, the model becomes as $Y = .116 + .571x_1 + .024x_2 + .386x_3$, this regression equation suggests that there is an outstanding distinction between the predictors of rental vehicle logistics and the efficiency of the NISR, Rwanda.

The first objective of organizing the relationship between maintenance and repair and cost effective has an extensive and high best relationship ($b = .571$ and $p = .000$). The second objective to set up the relationship between driver behavior and skills and cost effectiveness has a fantastic and huge relationship ($b = .024$ and $sig = .002$), the third goal to set up the relationship between fuel management and cost effective is a significant ($b = .386$ and $p = .000$). Therefore, it implies that there is a properly relationship between the logistics of the rental vehicles and the effectiveness of the cost in NISR, Rwanda.

Table 4. 13: Model Summary of rental vehicle logistics and on time delivery in NISR, Rwanda

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.871 ^a	.759	.754	.57885

a. Predictors: (Constant), Fuel management, Driver behavior and skills, Maintenance and repair

Source: Primary Data, 2020

The results of Table 4.14 indicate that the coefficient R .871 shows that rental vehicle logistics has a precise relationship with on-time delivery. The coefficient .759 R rectangular shows, moreover, that the logistics of rental vehicles explains 75.9 percent the variability of the improvement in the delivery time. It therefore implies that predictors of rental vehicles logistics, such as fuel management, driver behavior and skills, and maintenance and repair, effect on-time transport growth through 75.9% in NISR, Rwanda.

Table 4. 14: Analysis of Variance (ANOVA) of rental vehicle logistics and on time delivery in NISR, Rwanda

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	185.222	3	61.741	184.264	.000 ^b
	Residual	58.972	176	.335		
	Total	244.194	179			

a. Dependent Variable: On time delivery

b. Predictors: (Constant), Fuel management, Driver behavior and skills, Maintenance and repair

Source: Primary Data, 2020

The conclusions in Table 4.15 point out that there is a strong relationship between rental vehicles logistics and on-time delivery, as the calculated value cost 0.00 is less than 0.05 significance stage (value sig. 0.05). Therefore, the statistical significant that predicts the relationship between rental vehicles logistics and one-time delivery is significant.

Table 4. 15: Coefficients of rental vehicle logistics and on time delivery in NISR, Rwanda

Model	Unstandardized		Standardized	t	Sig.
	Coefficients		Coefficients		
	B	Std. Error	Beta		
(Constant)	.149	.084		1.770	.078
Maintenance and repair	.380	.112	.370	3.376	.001
Driver behavior and skills	-.030	.082	-.030	-.371	.001
Fuel management	.565	.138	.540	4.085	.000

a. Dependent Variable: On time delivery

Source: Primary Data, 2020

The results in Table 4.16 disclose that rental vehicles logistics predictors have high pleasant coefficients that embellish a fantastic impact on the progress of one-time shipment to NISR. The regression assessment suggests that there is a proper dimension relationship between vehicle rental logistics and on-time delivery, as all calculated p values are a substantive bid nicely below 0.05 each. Therefore, the coefficient offers a regression model, $Y = \beta_0 + \beta_1x_1 + \beta_2x_2 + \beta_3x_3 + \beta$. Therefore, the model becomes $Y = .149 + .380x_1 + .030x_2 + .565x_3$, this regression equation suggests that there is a massive dimension between the predictors of 0.05 each rental vehicle logistics and on time delivery of NISR, Rwanda.

The first objective of organizing the relationship between maintenance and repair and time transport has a first-rate and wide relationship ($b = .380$ and $p = .001$). The second objective of organizing the relationship between driver behavior and skills and on time delivery has a significant and extensive relationship ($b = 0.030$ and $sig = 0.001$), the 0.33 objective of organizing the relationship between fuel management and on time delivery is significant ($b = .565$ and $p = .000$). It therefore implies that there is a high satisfactory relationship between rental vehicle logistics and on-time delivery in NISR, Rwanda.

Basing on the secondary data findings, rental vehicles were very costly and expensive because one rental vehicle was 144000 Rwandan Francs and for one EICV the NISR have to rent 53 vehicles. However, after getting the 22 vehicles donated by the UNICEF the NISR rents only 23 vehicles. Thus, this has highly improved the field work performance because the 22 vehicles donated by UNICEF to NISR work 24 hours and the informant can be reached at any time depending on his/her available to give out information for NISR usage.

CHAPTER FIVE:

SUMMARY OF RESEARCH FINDINGS, DISCUSSION AND RECOMMENDATIONS

5.0. Introduction

This chapter five dealt with summary of research findings, discussion and recommendations extracted from the views and perceptions in relation to assess the effect of quality assurance of rental vehicles on field work performance of NISR, to determine the impact of on-time delivery of rental vehicles on field work performance of NISR, to identify problems associated with rental vehicles logistics and field work performance in NISR, and to examine the relationship between rental vehicle logistics and fieldwork performance of NISR, Rwanda.

5.1. Summary of Research Findings

5.1.1. The effect of quality assurance of rental vehicles on field work performance of NISR

The results demonstrated that 106 (58.9%) of respondents asserted that oil is changed regularly to enhance well – being of rental vehicle for the sake of field work performance to a very great extent, 106 (58.9%) of respondents asserted that servicing is done on routine basis for field work performance to a very great extent, 126 (70.0%) of respondents asserted that spare parts are well managed for the sake of fieldwork performance to a very great extent, 100 (55.6%) of respondents asserted that fuel sourcing is managed on daily basis for fieldwork performance to a very great extent, 100 (55.6%) of respondents asserted that fuel is monitored on daily basis for fieldwork performance, 116 (64.4%) of respondents asserted that the consumption rate of the vehicle is monitored for the sake of fieldwork performance to a very great extent. The results also show the highest mean is 1.5056 while the lowest mean is 1.9444 because the highest score is 1 and all means are rating in 1. Thus, implies that well – being of rental vehicles affect field work performance in NISR.

5.1.2. The impact of on-time delivery of rental vehicles on field work performance of NISR

The results showed that 115 (63.9%) of respondents asserted that routine vehicle tracking id practiced to ensure field work performance to a very great extent, 115 (63.9%) of respondents asserted that routine vehicle dispatching is done to enhance field work performance to a very great extent, 86 (47.8%) of respondents asserted that observation and monitoring of vehicle

speed limits is done for the sake of fieldwork performance to a great extent, 104 (57.8%) of respondents asserted that physical inspection of vehicle is practiced to enhance fieldwork performance to a very great extent, 58 (32.2%) of respondents asserted that oil level inspection is practiced for the sake of field work performance to small extent, 113 (62.8%) of respondents asserted that regular water level inspection is practiced to enhance fieldwork performance to a very great extent, 107 (59.4%) of respondents asserted that observing maintenance schedule is practiced to enhance fieldwork performance to a very great extent, 105 (58.3%) of respondents asserted that regular vehicle management is practiced to enhance field work performance to a very great extent. The results also demonstrate that the highest mean is 1.7333 while the lowest mean is 2.5556 showing that most of the means are in rating score of 1 which implies that on-time delivery of rental vehicles affect field work performance in NISR.

5.1.3. The problems associated with rental vehicles logistics and field work performance in NISR

The results indicated that 118 (65.6%) of respondents asserted that poor physical inspection of vehicle affect fieldwork overall performance to a very brilliant extent, 107 (59.4%) of respondents cited that pace restrict troubles affect the universal performance of the subject's work to a very amazing extent, 117 (65.0%) of respondents mentioned that mismanagement of spare components impacts performance to a very extremely good extent, 111 (61.7%) of respondents stated that bad management of rental vehicles has a very substantive effect on the normal job performance of the subject, 117 (65.0%) of respondents mentioned that issues associated to vehicle recuperation affect the work of the performance region to a very large level, one hundred ten (61.1%) of respondents stated that problems associated to vehicle repair Consumer rate of the vehicle have a very shiny impact on the overall performance of field work, 108 (60.0%) of the respondents tested that the issues related to gas management have a very shocking impact on the normal overall performance of the work field, 117 (65.0%) of the respondents validated its problems associated to vehicle tracking affect field work performance to a very great extent.

The results have also indicated 120 (66.7%) of respondents asserted that problems associated to vehicle maintenance and repair affect fieldwork usual performance to a very amazing extent, 111 (61.7%) of respondents noted that the problem related to vehicle inspection affects very properly

the performance of work in the area, 117 (65.0%) of the respondents confirmed that behavioral problems and drivers' skills have an impact on fieldwork overall performance to a gorgeous extent, 107 (59.4%) of respondents showed that drivers' management and management issues have an effect very top notch in the typical performance of the fieldwork. The consequences also indicated that the absolute fine implicit is 1.7056, whilst the lowest common is 1.8222, because the pleasant viable valuation is 1, which means that problems associated to rental vehicle practices have a high negative effect on the performance of fieldwork performance.

5.1.4. The relationship between rental vehicle logistics and fieldwork performance of NISR

The results demonstrated that 119 (66.1%) of respondents confirmed that they are very satisfied with vehicle maintenance and repair practice for fieldwork performance, 106 (58.9%) of respondents confirmed that they are very satisfied with fuel management for fieldwork performance, 110 (61.1%) of respondents asserted that they are satisfied with vehicle tracking for the sake of fieldwork performance, 110 (61.1%) of respondents confirmed that they are satisfied with vehicle inspection for field work performance, 119 (66.1%) of respondents asserted that they satisfied with behavior and skills of drivers for the sake of field work performance, 107 (59.4%) of respondents confirmed that they are satisfied with management of drivers to enhance fieldwork performance in NISR. The consequences have additionally verified that the pleasant implies that it is 1.6556, while the lowest is 1.7500 because the fine ranking score is 1. Hence, it implies that rental vehicles logistics has a high effect on field work performance which means that there is significant relationship between rental vehicle logistics and fieldwork performance in NISR, Rwanda.

5.1.5. Summary of correlation analysis results

The findings proved that there is a relationship between maintenance and repair and driver behavior and skills ($p=.832$ and $\text{sig}=.000$), between maintenance and repair and fuel management ($p=.941$ and $\text{sig}=.000$), between driver behavior and skills and fuel management ($p=.888$ and $\text{sig}=.000$), because all calculated p - values are less than 0.01 level of significance. Thus, implies that there is a relationship between predictors of rental vehicle logistics in NISR, Rwanda. The findings also proved that there is a relationship between productivity and cost effectiveness ($p = .874$ and $\text{sig} = .000$), between productiveness and on time delivery ($p = .853$ and $\text{sig} = .000$), between rate effective and on-time delivery ($p = .909$ and $\text{sig} = .000$), due to the reality that all

calculated p-values are a whole lot much less than 0.01 tiers of significance. Therefore, it implies that there is a relationship between the sub-variables of the usual overall performance of the fieldwork in NISR, Rwanda.

5.1.6. Summary of regression analysis results

The results proved that the coefficient $R = .936$ indicates that the logistics of rental vehicles has an excessive satisfactory relationship with productivity. The willpower coefficient $.877$ R rectangular shows, moreover, that the logistics of house vehicles money owed for 87.7% of the variability of growth in productivity. It consequently implies that predictors of house vehicle logistics, such as fuel management, driver behavior and skills, and maintenance and repair, have an effect on productivity development with the assist of 87, 7 pc in NISR, Rwanda. The findings prove that there is a large relationship between rental vehicles logistics and productivity due to the fact that the calculated 0.00 level of sig. is less than 0.05 stage of significance. Therefore, the statistical mannequin that predicts the relationship between rental vehicle logistics and productivity is significant.

The results indicated that rental vehicle logistics predictors have nice coefficients that enhance a suitable effect on productivity increase in NISR. The first intention of organizing the relationship between renewal and repair and productivity has a high-quality and generalized relationship ($b = .199$ and $p = .001$). The second objective of establishing the relationship between driver behavior and their skills and productivity has a great and enormous relationship ($b = .028$ and $\text{sig} = .001$), the 1/3 purpose of setting up the relationship between driver management and fuel and productiveness have a exquisite relationship ($b = .741$ $\text{ip} = .000$). It therefore implies that there is a large relationship between auto logistics and productiveness in NISR, Rwanda.

The results tested that the coefficient $R = .932$ reveals that the logistics of rental vehicles has a fine relationship with value efficiency. The $.868$ R rectangular self-control coefficients also suggest that rental vehicle logistics accounts for 86.8% of the variability of development in value efficiency. Therefore, it implies that the predictors of rental vehicle logistics, such as Fuel management, Driver behavior and skills and Maintenance and repair affect the progress of Quality assurance by 86.8 % in NISR, Rwanda. The findings also indicate that there is a massive relationship between rental vehicle logistics and cost-effectiveness, as the calculated zero-

importance cost is a lot much less than 0.05 stage significance (sig cost. Therefore, the statistical mannequin that predicts the relationship between rental vehicles logistics and quality assurance is significant.

The results disclose that predictors of rental vehicles logistics have excessive quality coefficients that adorn a accurate have an impact on growing cost-effectiveness in NISR. The first intention of organizing the relationship between maintenance and repair and the nice cost has a notable and proper relationship ($b = .571$ and $p = .000$). The objective two is to set up the relationship between driver behavior and skills and fare effective has a brilliant and giant relationship ($b = .024$ and $\text{sig} = .002$), the objective of third d. organizing the relationship between gas management and value efficiency has an excessive -quality ratio ($b = .386$ and $p = .000$). Therefore, it implies that there is a robust relationship between rental vehicles logistics and quality assurance in NISR, Rwanda.

The results confirmed that the coefficient R $.871$ reveals that the logistics of vehicles in rental have a precise relationship with on-time delivery. The rectangular $.759$ R determination coefficient also suggests that rental vehicle logistics accounts for 75.9% of growth variability in delivery time. It therefore implies that predictors of rental vehicle logistics, such as gas management, driver behavior and skills, and maintenance and repair, have an effect on the improvement of one-time vehicle go with the assist of 75.9% in NISR, Rwanda. The findings indicate that there is a massive relationship between rental vehicles logistics and on-time delivery, as the calculated significance cost zero is a lot less than 0.05 importance level. Therefore, the statistical model that predicts the relationship between rental vehicle logistics and on-time deliveryation is significant

The consequences divulge that predictors of rental vehicle logistics have high quality coefficients that decorate a desirable impact on the improvement of one-time shipment to NISR. The first objective of organizing the relationship between conservation and repair and timely vehiclego has a huge and great relationship ($b = .380$ and $p = .001$). The second intention of organizing the relationship between the driver's behavior and skills and on time vehiclego has an effective and sizable relationship ($b = 0.030$ and $\text{sig} = 0.001$), the intention 1/3 to arrange the relationship between fuel management and on time vehiclego has advantageous relationship ($b = .565$ $p =$

.000). Therefore, it implies that there is a significant wonderful relationship between the logistics of rental motors and well-timed delivery in NISR, Rwanda.

5.2. Conclusion

The previous studies in this field of rental vehicle logistics and fieldwork performance like the one behavior by Soltun (2007) on Fleet Management Optimisation have revealed that fleet management relying on the effective management of the company which in turn enhance the performance of the employees and other logistics at work. Although Ratcliffe (2007) referred to that there had been fundamental matters to do for fleet management: hare routing and scheduling, fuel management, vehicle acquisition, vehicles maintenance, driver information and control. These activities are monitored through the management of fleets and mainly serve as information for these activities. He emphasizes that the most indispensable factor in fleet management is cost management and fleet managers coordinate employee schedules, manipulate communication between drivers and headquarters, and graph driving routes or choice routes, in addition to referring to or resolving problems that may also additionally arise for the duration of the day, such as accidents, absenteeism, and vehicle malfunction. Bask, Tinnilä & Rajahonka (2010), have demonstrated that logistics and deliberation services in developing world have a couple of services alongside with to obtain decrease costs (reduced rate trucks) or to provide brought cost of presents (storage, packaging, sale of tariffs and final assembly) via agreements and alliances of third events and third events.

Therefore, the current study have revealed that there is a relationship between renewal and repair and productiveness ($p = .903$ and $\text{sig} = .000$), between Maintenance and restore and effectiveness of the tariff ($p = .923$ and $\text{sig} = .000$), between behavior and driver skills and productiveness ($p = .822$ and $\text{sig} = .000$) between driver behavior and skills and cost effectiveness ($p = .801$ and $\text{sig} = .000$) between driver behavior and skills driver and on-time delivery ($p = .757$ and $\text{sig} = .000$) between fuel management and productivity ($p = .934$ and $\text{sig} = .000$) between fuel management and cost effective ($p = .910$ and $\text{sig} = .000$) between petrol delivery and delivery on time ($p = .862$ and $\text{sig} = .000$) due to the reality that all calculated p-values are an awful lot much less than 0.01 levels of significance. It therefore implies that there is a relationship between house vehicle logistics and the typical overall performance of fieldwork in NISR, Rwanda.

5.3. Recommendations

Based on the findings of the printed data that there is a relationship between rental vehicles logistics and fieldwork performance, the researcher would like to recommend to the NISR to rent the vehicles which are well maintained and repaired because most of the activities that NISR behaviors are behaved in rural areas where the roads are not in good condition. Thus, hiring quality vehicles is required if fieldwork performance is needed.

The researcher would also recommend to the employees who go to the fieldwork to always be much cautioned on the vehicle they use while they are going to the field because the results of this study have revealed that field work performance is dependent to rental vehicle logistics. However, the researcher would like to recommend to NISR if finances allow owning their own field work vehicles with mobile garage that is able to double – service field maintenance and break downing the vehicles in case they get mechanic issues at the field.

5.4. Suggestion for Further Studies

Based on the gaps left apart by of the findings of this study since it is limited on rental vehicles logistics and field work performance, the researcher have identified areas of related studies that need more attention so that the future researcher would consider them for examination. Thus, I would like to propose to the future researchers to conduct researches in the area related to rental vehicles logistics and fieldwork performance with the following topics:

- (i) To assess the role of rental vehicle inspection and fieldwork performance of public corporates in Rwanda.
- (ii) To determine the contribution of individual vehicles on promoting field work performance in Rwanda.
- (iii) To find out the effect of vehicle tracking system on enhancing the field work performance in Rwanda.

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APPENDICES

APPENDIX ONE: QUESTIONNAIRE

Section One: Socio-demographic characteristics of respondents

1. Gender of respondents
 - (1) Male
 - (2) Female
2. Age group of respondents
 - (1) Below 25
 - (2) 25 – 30 years
 - (3) 30 – 35 years
 - (4) 35 – 40 years
 - (5) 40 – 45 years
 - (6) Above 45 years
3. Education level of respondents
 - (1) Primary level of education
 - (2) Secondary level of education
 - (3) Bachelors level of education
 - (4) Postgraduate level of education
4. Working experience in NISR
 - (1) Below 5 years
 - (2) 5 – 10 years
 - (3) 10 – 15 years
 - (4) Above 15 years

Section Two: The effect of quality assurance of rental vehicles on field work performance of NISR

5. To what extent do you maintain well – being of rental vehicles to ensure field work performance of NISR? (5- Not sure, 4- To no extent, 3- To small Extent, 2- To a great Extent, 1- To a very great extent).

Statement regarding well-being of rental vehicles is practiced to ensure field work performance	1	2	3	4	5
Oil is changed regularly					
Servicing is done on routine basis					

Spare parts are well managed					
Fuel sourcing is managed on daily basis					
Fuel is monitored on daily basis					
The consumption rate of the vehicle is monitored					

Section Three: The impact of on-time delivery of rental vehicles on field work performance of NISR

6. To what extent does on – time delivery of rental vehicles affect field work performance of NISR? (5- Not sure, 4- To no extent, 3- To Small Extent, 2- To a great Extent, 1- To a very great extent).

Statement regarding effect of on – time delivery of rental vehicles is practiced to ensure field work performance	1	2	3	4	5
Routine vehicle tracking					
Routine vehicle dispatching					
Observation of vehicle speed limits					
Physical inspection of vehicle					
Oil level inspection					
Regular water level inspection					
Observing maintenance schedule					
Regular vehicle management					

Section Four: The problems associated with rental vehicles logistics and field work performance in NISR

7. To what extent do the problems associated to rental vehicles affect field work performance of NISR? (5- Not sure, 4- To no extent, 3- To small Extent, 2- To a great Extent, 1- To a very great extent).

Statement regarding problem associated to rental vehicles is practiced to ensure field work performance	1	2	3	4	5
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Poor physical inspection of vehicle					
Problems of speed limits					
Poor management of spare parts					
Poor management of rental vehicle					
Problems associated to vehicle recovery					
Problems associated to consumption rate of the vehicle					
Problems associated to vehicle maintenance and repair					
Problems associated to fuel management					
Problems associated to vehicle tracking					
Problem regarding vehicle inspection					
Problem concerning behavior and skills of drivers					
Issues of driver management and management					





Section Five: The relationship between rental vehicle logistics and fieldwork performance of NISR.

8. To what level of satisfaction are you with rental vehicles to ensure field work performance of NISR? (4- Not sure, 3- Not satisfied, 2- Satisfied, 1- Very satisfied).

Statement relationship between rental vehicles and field work performance	1	2	3	4
I am satisfied with vehicle maintenance and repair				
I am satisfied with fuel management				
I am satisfied with vehicle tracking				
I am satisfied with vehicle inspection				
I am satisfied with behavior and skills of drivers				
I am satisfied with management of drivers				

**APPENDIX TWO:
TIMELINE SCHEDULE 2019-2021**

Activities	November	December	January	March 2021

Research Proposal				
Data collection				
First draft of final				
Final research defense				

**APPENDIX TWO:
RESEARCH BUDGET**

DESCRIPTION	AMOUNT (RWF)
Binding	60. 000
Printing	220. 000
Transport	1260. 000
Communication	1126. 000
Others	220. 000
Total Costs	720,000