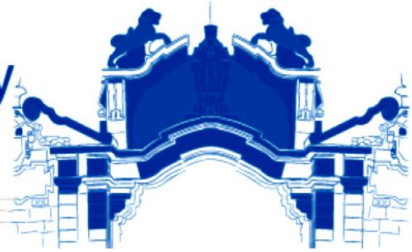




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College of Business and Economics

Department of Management

Master of Business Administration

The Effect of Social Network Website and Communication Instruments
on the Performance of Ride-Sharing Business (In Case Of Some
Selected Ride Companies)

A Thesis report submitted to the school of Graduate studies of Addis
Ababa University in Partial fulfillment of the Requirement for the
Master of Business Administration (MBA) in Management

By:

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September, 2021

Addis Ababa, Ethiopia

DECLARATION

I hereby declare that the thesis entitled “The Effect of Social Network Website and Communication Instruments in the Performance of Ride-Sharing Business: the case of selected ride sharing companies” was carried out by me under the supervision of Dr. Asres Abitie, Department of Management, Addis Ababa University, as part of the MBA programmer. I further declare that this thesis is my original work and has not been submitted to any other university for the award of any degree. All sources were noted, referenced, and included in the list of references. This thesis is submitted in partial fulfillment of the requirements for the Degree of Masters of Business Administration (MBA) in Management in College of Business and Economics at Addis Ababa University.

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Place: Addis Ababa University

Date_____

Supervisor’s Approval

This is to certify that the declaration made by the candidate is correct to the best of my knowledge as an advisor.

Approved by: _____

Thesis Supervisor

Signature

Date

Certification

Addis Ababa University

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Department of Management

This is to certify that the thesis entitled, “The Effect of Social Network Website and Communication Instruments on the Performance of Ride-Sharing Business (In Case Of Some Selected Ride Companies)” is an original piece of work carried out by Ruth Chala under the supervision of Asres Abitie (PhD), and submitted in partial fulfillment of the requirements for the degree of Master of Business Administration in Management. It complies with the regulations of the university and meets the accepted standards with respect to originality and quality.

Signed by the Examining Committee:

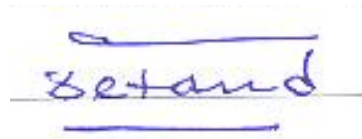
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Date: 02/10/2021

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Abstract

This study has estimated the effect of social networks website and communication instruments on the ridesharing business as it is based on it. The type of research design that has been undertaken in this study was explanatory. The motive of the research is to examine the effect of social network websites, communication instruments, and presently used applications on ride-sharing businesses performance. The selected approach for this research is quantitative methods. The research used both primary and secondary data type. Structured questionnaires were used to collect primary data from the ridesharing business customers and interviews for ridesharing drivers. And secondary data of the study was gathered from various sources which were relevant for the study like journal articles, the information center of the company, e-sources, library books, published thesis, and dissertations of earlier researchers all over the world that could be accessed online. Due to time, budget, and a large number of customer constraints it was difficult to manage all the target population. So, to determine the sample size from large populations the researcher used Cochran (1963) developed Equation to yield a representative sample for proportions. According to the equation, the sample size is 288 ridesharing users. In this study, the researcher used the time-location sampling technique due to the large population size to address. By using the above methods this research have explained briefly the effect on ridesharing businesses performance by social network websites, presently used application and communication instruments in general. It was found that social network website was the dominant practice in ridesharing business performance. And also the relationship among each ridesharing practice and with ridesharing business performance was positive and statistically significant. Independent variables were statistically significant in predicting the dependent variable as the p-values were less than 0.05 which $p=0$ and beta values of all independent variables are positive and significant were $(B=0.240)$, $(B=0.222)$, and $(B=0.238)$ for Communication instruments, social network websites, and the present used application.

Key words: *Social Network Website, Communication Instruments, Performance, Ride-Sharing, Business, phone Application.*

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Chapter One

1. Introduction

1.1 Background of the Study

Ridesharing is the sharing ride for use of a travel means by the driver and one or more passengers for various activity-based commuting purposes. Another form of ride-sharing is car sharing which is various passengers rent or call cars together to share costs which are mostly practiced for the occasional purpose (Sadri, 2016).

The platform of the ride-sharing business is to connect drivers and vehicles with customers who are asking for a ride with the agreed price. The customers can use an app on Smartphone or call the company call center to request a ride at a particular time and place. After their approach through an app or call then the app or the call agent will lead the customer to the next steps, including the price expected the location of the driver, and the waiting period. Then the driver will contact the customer after receiving notification about the customer's information on their smartphone app (Hahn and Metcalfe, 2017).

Ridesharing is not the latest business it has been started from world War by car clubs or car-sharing clubs. Then the U.S.A government requisite for ridesharing arrangements in workplaces because there were no other transportation options were available to save rubber during the war in 1942. The ride-sharing business nowadays have been on market with the development of GPS, smartphone technology, and electric payment (Chan and Shaheen, 2012)

The traditional ridesharing's have predicted the business will increase by its usability *on-demand* ridesharing, which emphasizes the importance of trust and flexibility due to the lack of pre-arrangement of rides. Trust and flexibility are mostly measured by pre-arrangement rating systems nowadays in ridesharing. Though, such peer economy is brazen out with cognitive challenges due to the lack of legitimacy regularity which is formal rules to regulate the business as conventional corporations, which makes depreciate when the platforms grow. At the same time as a peer-rating system make available more information for customers to their decision-

making, it does not solve the problem, for example, that people feel untrustworthy and changeable in their ridesharing schedules. Such bad feelings as lack of reliability are worsening when people have a bad temper with an unfamiliar person (Wang Y., Winter S. & Tomko M, 2018).

Low income, high trip distance, and low trip average speed in addition to other socio-demographic, spatial, and temporal factors are the major three cultural contributors fourth is business which is also an important aspect. In addition, ridesharing is measured as helpful by trim down traffic jamming, emission, and fuel expenditure with other remuneration (Sadri and ArifMohaimin, 2016).

The traditional way of ridesharing was done by personal communication because it was not well organized as an organization; in addition to this lack of social network websites and communication instruments is the major reason. However, nowadays ridesharing business has been organized as a company and it is turning in to modern way which is almost done by social network website and communication instruments as if ridesharing business is a starting up in our country it has been facing a lot of challenges some of the challenges are out of there control like networking system, technological drawback and soon. In this study the researcher has evaluated the effect level of social network websites, presently used application and communication instruments on ridesharing businesses performance.

1.2 Statement of the problem

In the transportation field, there are a lot of struggles to be faced in so many countries mostly in Ethiopia's capital city Addis Ababa. Traffic overcrowding, high gas price and insufficient public transportation are major challenges for any country mostly in our country, business or individual. The usual approach for solving these problems has been to improve public transportation and use greener energy. These approaches call for huge investment, research and time, and can only be carried out by governments or businesses. A substitute way out seeks to decrease the number of vehicles on the road based on ridesharing. However, ridesharing is not being practiced very well as form of public transportation in our country except addis ababa since it is a developing business in our country.

Shared transportation has been widely argued as a key effective way to solve modern ridesharing transportation problems, such as high energy consumption, road release, and traffic congestion. Ridesharing, as one significant component of shared transportation, is an emerging transportation mode under a new concept of Mobility as a Service. The essential meaning of this concept is to deeply understand the travel demand of the public. By integrating travel information into a unified service system and platform, ridesharing can make full use of big data to make decisions, allocate optimal resources, and meet the travel demand of the public. Ride-sharing provides external services and collects huge user data with a unified APP (Zhang, Chen, Li, Song, & Shibasaki, 2020).

Travelers are increasingly turning to smartphone applications for an display of transportation functions. Four types of transportation apps have emerged mobility apps, connected vehicle apps, smart-parking apps, and carrier network service apps. Seventy-one percent of the apps identified unified a real-time data function (e.g., traffic conditions, roadway incidents, parking availability, and public transit wait times). The customer use of mobility aggregators more generally, sought to understand how multi-modal information app users do change their travel behaviour in response to information provided, and they may contribute to a reduction in vehicle use (Shaheen, Cohen, & Martin 2017).

Social media refers to the wide range of Internet-based and mobile services that allow users to participate in online exchanges, contribute user-created content, or join online communities. Social media has exploded as a category of online discourse where people create content, share it, bookmark it, and network at a prodigious rate. Because of its ease of use, speed and reach, social media is fast changing the public discourse in society and setting trends and agendas in topics that range from the environment and politics to technology and the entertainment industry (Asur and Huberman, 2010).

Ridesharing business has been implemented for few years since 2013G.C in Ethiopia. It is fully based on the social network to implement the entire process of the business starting from registering the drivers and vehicles, accepting customer calls, controlling the path of the vehicles, and price estimations for that it is calculated by kilometers. As our country is facing a lot of

problem like political crises and instability with so many reasons the internet has been closed for few months. This has a very huge influence on the ridesharing business.

ZayRide, which was launched in July 2016, in collaboration with the Liberian web solutions firm Hack Technologies, the Ethiopian on-demand taxi service was introduced by 200 cars in the first year, according to the founder. The expansion is a noteworthy move for ZayRide, which was the first to introduce Uber-style ridesharing services in Ethiopia, making bookings via an app.

This study has studied the effect of social networks website, present used applications and communication instruments on the ridesharing business performance as it is based on it.

1.3 Research questions

Based on the social network website and communication instrument influence the study tries to answer mainly the question

- How do social network websites and communication instruments affect the ridesharing Business performance?

And as subresearch questions the study answers the following question:-

- How do presently used applications affect the business?
- How does communication instrument affect the business?
- How does network stability affect the business?
- How effected is ride-sharing business by Social Networking Websites and Communication instruments?

1.4 Objectives of the study

The general objective of the study is to assess the effect of social network websites, presently used application and communication instruments on the ridesharing business performance.

The specific objectives are:

- To evaluate the effect of presently used applications on the ride-sharing business performance.

- To evaluate the effect of communication instruments on the ride-sharing business performance.
- To evaluate the effect of network stability on the ride-sharing business performance.
- Determine the effect level of Social Networking Websites and Communication instruments on ride-sharing business performance.

1.5 Scope of the study

Conceptually: The effect of the Internet network and communication instruments in the performance of Ride-Sharing business.

Geographically: The study will be limited to the area of Addis Ababa because of our limited time and resource.

Methodologically: Explanatory research design, quantitative methods. Multiple linear regression analysis and correlation analysis will be used to analyze the data collected from ridesharing customers.

1.6 organization of the study

The research paper has five chapters; the first chapter includes background of the study, statement of the problem, research questions, objectives and scope. The second chapter is a literature review which is related to the study area and it gives a detail description of the study phenomenon by relating other scholar papers on the area. The third chapter is all about methodology of the study in which research approach and method, sources of data, sampling techniques and procedure, method of data collection and analysis and the like will be included. In the fourth chapter the collected and analyzed data is discussed and interpreted. And the last chapter contains conclusion, recommendation, references and annex (if any).

Chapter Two

2. Literature Review

2.1 Definitions and Concepts in social network website and communication instruments

A Social Network Website is a relatively new form of online communication. The first Social Network Website was **Six Degrees**, which was launched in 1997. The current popularity of Social Network Websites is an even more recent phenomenon and it wasn't until 2003 when they were considered mainstream. Social networking websites have grown in popularity among all segments of society, but particularly among younger groups such as university students (Goreva, N., & D'Souza, R. 2008).

Many tasks, ranging from collaboration within and between organizations, a search of hobbies, or forming romantic relationships, depend on finding the right people to partner with. Social networking services gather information on users' social contacts, construct a large interconnected social network, and reveal to users how they are connected to others in the network. The services allow their users to get to know one's friends of friends and hence expand their social circle (Adamic, L., & Adar, E.2005).

Recently, mobile communication technologies have been rapidly advanced. They have the great potential to be used as survey instruments for observing individual travel behavior. Mobile communication systems such as GPS (global positioning systems), cellular phone, and RF-ID (Radio Frequency Identification) systems are available to measure the accurate place and time of a mobile object. Those technologies can be used as the core instruments of tracking surveys of a traveler's behavior. As well as observing individual travel behavior, the travel data measured with mobile instruments can be used for evaluating the level of service of transport systems in ridesharing business areas. A floating car survey previously used in traffic engineering can be extended to various modes of transport systems when a sampled individual travels with a mobile communication handset in his pocket. Although the GPS is suitable for the measurement of vehicular traffic, it is not sufficient for tracking an individual's travel behaviour (Asakura Y., & Hato, E.2004).

Ever-present technologies have allowed for the emergence of these real-time ridesharing services, with GPS providing driver and customer locations and route navigation, smartphone apps affording real-time ride requests, and social networks establishing trust and accountability between customers and drivers. Further, advances in computing speed and data storage have enabled the development of platforms to run rideshare optimization algorithms in real-time (Alexander, L. P., & González, M. C.2015).

2.1.1. Major concepts guiding performance of the ride-sharing business

Ride-share providers across the globe are offering online notice boards for potential carpoolers, whether for daily commutes or one-time trips to festivals, concerts, or sports events. Some online services, such as Nitride, provide incentives like restaurant coupons, gift certificates, or retail sales discounts to participants.

Effective usage of empty car seats by ride-sharing may represent an important opportunity to increase occupancy rates, and could substantially increase the efficiency of ridesharing transportation systems, potentially reducing traffic congestion, fuel consumption, and pollution. Moreover, ride-sharing allows users to share car-related expenses, which can be substantial. Ride-sharing is not a new idea; recent technological advances should increase its popularity. The term is known as dynamic ride-sharing to describe an automated system that facilitates drivers and riders to share one-time trips close to their desired departure times. The concept is also known as real-time ride-sharing (Agatz, N., Erera, A., Savelsbergh, M., & Wang, X. 2012).

Ride-sharing allows participants with cars to save on travel-related expenses by sharing trip costs and enhance the mobility of system users without cars at their disposal. A ride-share provider, either private or public, helps people to establish ride-shares on short notice by automatically matching up drivers and riders. If the system is private and operated for profit, the provider will generate revenues by commissions or advertisement. Public systems may have a societal objective, such as the reduction of pollution and congestion. The objectives of the ride-share provider and ride-share users are mostly in line (Agatz, N., Erera, A., Savelsbergh, M., & Wang, X. 2012).

2.1.2 The Market and Marketing platform on ride-sharing business

2.1.2.1 Market of ridesharing

The market can be defined as an area in which one or more sellers of given products/services and their close substitutes exchange with and compete for the patronage of a group of buyers. Originally, the term market stood for the place where buyers and sellers are gathered to exchange their goods, such as the village square. A market is a point or a place or sphere within which price-making force operates and in which exchanges of title tend to be accompanied by the actual movement of the goods affected (Backman and Davidson, 1962).

In the ridesharing market, there are two distinct groups of users those are the drivers who offer rides, and the passengers who take rides (Teubner and Flath, 2015). Ridesharing platforms are thus examples of multisided platforms. These platforms serve as exchanges for multiple groups of users. They can be understood as information brokers that facilitate exchange, interaction, and matchmaking between their members (Schweitzer, S., & Brendel, J. (2018).

A ridesharing platform is more attractive if there are more users. This is an example of network effects. The concept of network effects was popularized by Katz and Shapiro (1985), who states that there are many products for which users benefit from a growing user base. The authors speak of direct network externalities as occurring when users benefit from other users directly, while indirect network externalities refer to benefits gained when a larger user base attracts a larger choice of complementary products.

A ridesharing business is a huge market in Europe and America. The high-speed social network website and well-educated customers have helped the ride-sharing market to grow in the continent. In Africa and South America, the ridesharing business is on start-up. It has a low market on this continent; there is a lot of reason for this like a social network, customer knowledge, GDP and so on. In our country Ethiopia ridesharing is almost a new business line it is also limited in our capital city Addis Ababa in other regions and the city the modern way of ridesharing is almost zero present. The traditional way of ridesharing has been implemented for several years in our country the modern ridesharing has started in 2013G.C.

2.1.2.2. Market segmentation of ride-sharing business

According to Mordor Intelligence(2020) report the Ridesharing Market is segmented by Membership Type (Fixed Ridesharing, Dynamic Ridesharing, Corporate Ridesharing), Service Type (Web-Based, App-Based, Web and App-Based), and Geography.

A. Membership Type

1. Fixed Ridesharing: The fixed ridesharing ridership for each vehicle was also imposed by Liu and LI. It is adopted here to simplify our analyses and generate linear departure rate functions with a certain linear ridesharing changing-compensation scheme, which is in line with the traditional bottleneck model for the morning commute problem.

2. Dynamic Ridesharing: - Is distinguished from traditional carpooling and is focused on single, non-recurring trips which do not require long-term commitments between people to travel together for a particular purpose.

3. Corporate Ridesharing: - Corporate ridesharing encourages employees to share transports when driving to and from their place of work. It differs from traditional carpooling in that it is not a public, neighbourhood initiative, but one motivated directly by the corporation. Corporate ridesharing programs also increase resilience and attendance at work, as they help commuters emerge from dependence on their vehicles. Businesses can the number of days missed due to issues like inclement weather, transit strikes, and mechanical failures, potentially saving tens of thousands of dollars per year in lost productivity.

B. Service Type

- Web-Based
- App-Based
- Web and App-Based

C, Geography

2.3. Social network website and communication instruments approach

Social networking sites are instruments for building virtual communities, or social networks, for individuals with similar education, lifestyles, interests, or activities. A social network website is a loose affiliation of people who interact through websites. The web enables any person to build a vast number of relationships with others, regardless of geographical distance. These sites are further broken down into sub networks, based on demographic or geographical preferences (Bolotaeva, V., & Cata, T. (2010).

The ever-increasing advancement and popularity of online social networks have had a tremendous impact on the way companies conduct marketing. Through the use of certain technologies, companies are attracting new clients, servicing current clients, and making money, as well as promoting brand image, providing helpful services, and gearing up targeted advertising campaigns (Jiang, Dominguez, Zhang, Shen, & Zhang, 2018).

Social networking services gather information on users' social contacts, construct a large interconnected social network, and reveal to users how they are connected to others in the network. Although the online social networking trend may be fairly recent, the observation that any two people in the world are most likely linked by a short chain of acquaintances, known as the "small world" (Adamic, L., & Adar, E. (2005).

Today's ridesharing revolution was made possible by the development of GPS, smartphone technology, and electronic payments (Hahn, R., & Metcalfe, R. (2017).

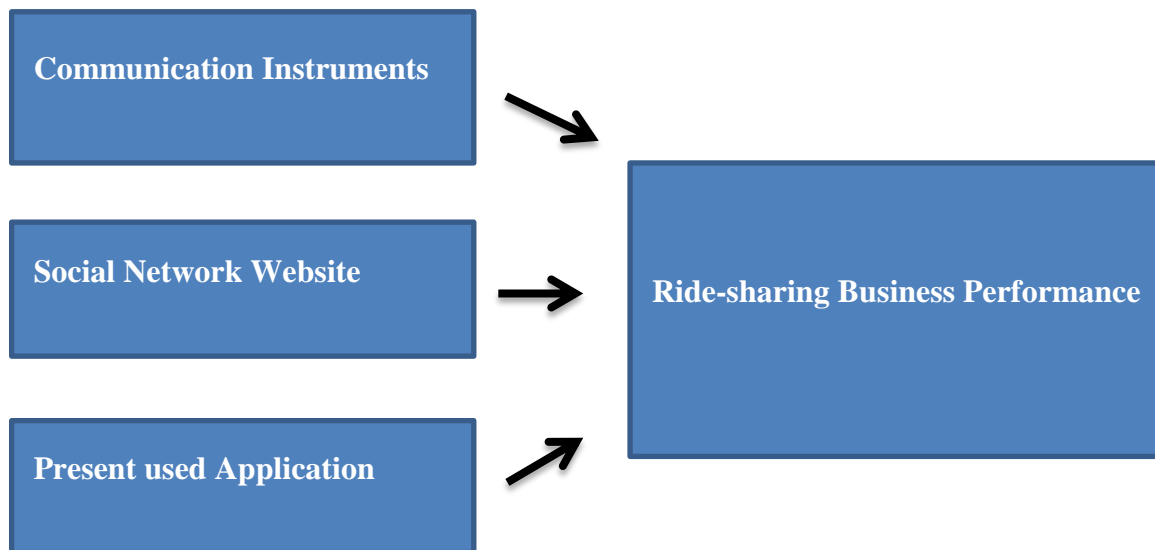
Ethiopia's first taxi service that is scaling beyond the streets of Addis Ababa is ZayRide, which was launched in July 2016. In collaboration with the Liberian web solutions firm Hack Technologies, the Ethiopian on-demand taxi service has introduced 200 cars by August 2016 according to the CEO of Zayride company.

2.4. Determinants of the ridesharing market

In our country, the social network instability and miss use of communication instruments occurs with a lot of matters the major variables are

1. Political situation: market failures serve as a rationale for public intervention. However, the fact that self-interested market behavior does not always produce felicitous social consequences is not sufficient reason to draw this conclusion (Shepsle K., & Weingast, B., 1984).
2. Customers knowledge about communication instruments
3. Network line and instruments

2.5. Conceptual frame work



Chapter Three

3. Methodology and Data

3.1 Description of the Study Areas

Ethiopia's capital Addis Ababa has many of the hallmarks of a thriving, outward-looking metropolis. The city boasts Sub-Saharan Africa's first metro outside of South Africa, hosts the UN and the AU, and is in the grip of an endless construction boom. But its taxi system shines a spotlight on the country's somewhat Janus-faced encounter with twenty-first-century globalization. Its 15th city on the continent Ethiopia remains one of the company's last major frontiers. This is despite having Africa's second-largest population and, in Addis Ababa at least, swelling ranks of middle-class urbanites equipped with the latest smartphone. Into this gap has stepped three local startups ETTA Ethiopian taxi app, ZayRide, and RIDE. All three have developed apps with an eye to local conditions. Zayride's designed for slow internet speed. ETTA Ethiopian taxi developed one that can do online payment processing technology that is still less absent in Ethiopia RIDE. Meanwhile, started with SMS to appeal to 96% of Ethiopians without smartphones but has since pivoted into app technology.

Without the internet, startups like these are hopelessly hamstrung. They have all been forced to set up traditional call centers, which has drastically initially inflated costs. When 3G is eventually restored, things will remain difficult since another paradox of Ethiopia's development story is that while the government has made big investments in ICT infrastructure, the country still has one of the lowest rates of internet penetration on the planet. Just 8% of Ethiopians report using the internet, according to the Pew Research Center.

3.2 Types, Source and Methods of Data collection and analysis

3.2.1. Research design

The type of research design that has been undertaken in this study is the explanatory type. The motive of the research is to examine the relationship between social network websites, presently used applications, communication instruments, and ride-sharing businesses. The selected approach for this research is quantitative methods due to the nature of the instrument. The

research has used both descriptive research design simply to summarize the sample respondent's information and inferential research design to generalize from a sample result to the wider population.

3.2.2. Method of Data Collection

The researcher has used both primary and secondary data sources. Structured questionnaires were used to collect primary data from the ridesharing business customers and interviews for ridesharing drivers. And secondary data of the study were gathered from various sources which were relevant for the study like journal articles, the information center of the company, e-sources, library books, published thesis, and dissertations of earlier researchers all over the world that could be accessed online.

3.2.3. Participants

The target population of the study was ridesharing passengers in Addis Ababa under different ridesharing companies with an undefined number of ridesharing users the sample has been taken.

3.2.4. Sample Size

Due to time, budget, and a large number of customer constraints it is difficult to manage all the target population. So, it is necessary to draw a representative sample from which the result of the research could be inferred to the total population. For large populations, Cochran (1963) developed the Equation to yield a representative sample for proportions (Singh, A. S., & Masuku, M. B. 2013).

$$n_o = \frac{Z^2 pq}{e^2}$$

n_o- Sample size

Z²- The abscissa of the normal curve that cuts off an area at the tails

p- The estimated proportion of an attribute that is present in the population

$q = 1 - p$

e^2 - Precision

As the population is a large population number and have to define a specific number of population numbers, that the researcher does not know the variability in the proportion that will adopt the practice; so I'm going to assume that 25% of the Addis Ababa population uses ridesharing business, this gives me maximum variability. So $p = 0.25$. Now let's say we want 95% confidence, and at least 5 percent plus or minus precision. A 95 % confidence level gives us Z values of 1.96 per the normal tables, so we get

$$n_o = \frac{Z^2 pq}{e^2} = \frac{(1.96)^2 (.25)(.75)}{(.05)^2} = 288$$

3.2.5 Sampling techniques

In this study, the researcher has used time location sampling, because of that it is difficult to gather the respondents at the same place and time. Time–location sampling (TLS) is useful for collecting information on a hard-to-reach population by sampling locations where persons of interest can be found, and then sampling those who attend (Karon, J. M., & Wejnert, C. 2012). So the place where I can found an interested person and also participated in using ride-sharing is the ride itself so I chose to give the questionnaire in the ride service.

So the questionnaires have been given to ridesharing drivers in the morning when they are gathered at the taxi station. So that they will give the questioner to their customer for the full day, it has been done from morning 8:00 AM to 6:00 PM afternoon for seven days. Ten drivers have participated in this data gathering. Each driver has collected 4 questionnaires per day on average.

3.2.6. Method of data analysis

Quantitative methods emphasize objective measurements and statistical, mathematical, or numerical analysis of data collected through polls, questionnaires, and surveys or by manipulating pre-existing statistical data using computational techniques (Labaree, R. V. 2009).

Multiple Linear Regression (MLR) Analysis is the core analysis in researching to test the correlation between the dependent variable and a few independent variables rather than a single variable (Nimon & Oswald, 2013). MLR was run to find R as Pearson Correlation, R Square, Value, and significance test of the variables. The purpose of conducting MLR analysis was to examine the magnitude of the impact of each determinant factors type of the ridesharing business towards the business (Loewen & Plonsky, 2016). Since the conceptual model has many independent variables it is appropriate to use this statistical analysis technique (Teh, 2019).

3.3. Regression Model

$$RSB = \beta_1 RC + \beta_2 RS + \beta_3 RP + \epsilon$$

RSB- ridesharing business performance

RC- communication instruments

RS- social network website

RP- present used application

3.4 Ethical Considerations

Ethical consideration of confidentiality and privacy was kept throughout every step while conducting this study. A guarantee was given to the ECSU respondents that their responses would be collected for academic research purposes and kept strictly confidential. In addition to this, their participation in the study was based on their consent. The respondents were completely free to stop filling the questionnaires whenever they felt discomfort. The researcher would not personalize any of the responses of the respondents during data presentations, analysis, and interpretation.

3.5 Variability and Reliability

- A. Validity of Questionnaire:** refers to the degree to which an instrument measures what it is supposed to be measuring. Validity has a number of different aspects and assessment approaches. Statistical validity is used to evaluate instrument validity, which include internal validity and structure validity. The questionnaire used has been approved for its validity through various literatures.
- B. Reliability of the Research:** is the degree of consistency which measures the attribute; it is supposed to be measuring (Polit& Hunger, 1985). The less variation an instrument produces in repeated measurements of an attribute, the higher its reliability. Reliability can be equated with the stability, consistency, or dependability of a measuring tool. The test is repeated to the same sample of people on two occasions and then compared the scores obtained by computing a reliability coefficient (Polit& Hunger, 1985).

3.6 Hypothesis

H-1: communication instrument was positively and significantly related with ridesharing business performance according to the data.

H-2: social network website had positively and significantly related with ridesharing business performance according to the data.

H-3: present used application had positively and significantly related with ridesharing business performance according to the data.

CHAPTER FOUR

4. DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.1. Data cleaning and Response Rate

A total of 288 questionnaires were distributed based on the already determined sample size. Then about 180 (62.5%) questionnaires were returned and 168 questionnaires were valid to be used for the analysis part and the rest were rejected because of poor data quality, were not filled by consumers and incomplete responses.

After cleaning the data, the obtained responses were entered into SPSS 20 for analyzing the descriptive statistics and inferential statistics like correlation and regression analysis.

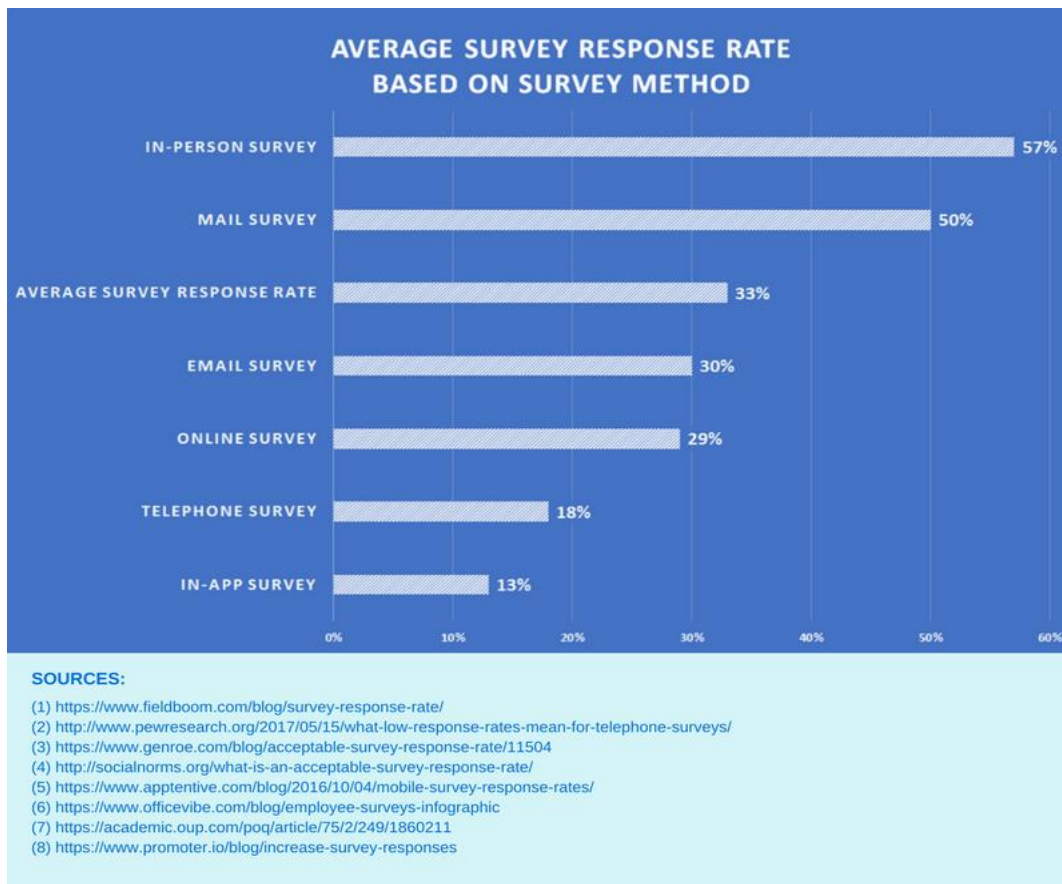
Table 4. 1Response frequency

DESCRIPTION	RESPONSE/FREQUENCY
Sample selected	288
Questionnaires distributed	288
Questionnaires returned	180
Valid questionnaires	168
Response rate	62.5%

Source: survey data 2021

As it is shown in Table 4.1, the response rate was 62.5%: it is under expected estimation by collecting process, the major problems for this response rate were

- The covid19 pandemic
- The biggest ride sharing company in Ethiopia (RIDE) were not allowing the research to be done on their customers which holds majority of ride customers of the city
- Some of the drivers were very careless on collecting the questionnaires properly



Source Lindemann, N.2019

A survey's response rate has always been viewed as an important indicator of survey quality. However recent studies have shown that surveys with lower response rates (near 20%) had more accurate measurements compared to surveys with higher response rate (near 60 or 70%). Nevertheless, in spite of these recent research studies, a higher response rate is preferable because the missing data is not random. A high response rate (>80%) from a small, random sample is preferable to a low response rate from a large sample. The average respondent rate in personal survey is 57%. In-person surveys can be held at the moment when the survey is most relevant and allows for the most personalized experience. When we accumulate all this data into one number, we find an average survey response rate of 33% (Lindmann, N.2019). According to this our response rate has reached the average percentage and also personal survey rate so we can accept the estimation.

Response rate of 50% is adequate, 60% is good, and 70% or above is very good (Babbie, 1990). So, the response rate of this report has reached the good level according to Bobbie.

4.2 Descriptive Statistics

This part of the report explains the outcomes of the descriptive analysis. The outcomes reported are the distribution of participants by gender, age, Period of ride using and educational qualification, frequently used transportation, way to contact ride, ride often usage and frequent hour for ride usage, and the respondents' level of agreement on the presence of each ridesharing culture types. Demographic features were taken as vital inputs in offering appropriate background of the participants from whom data were collected.

4.2.1 Demographic Profile of Respondents

Table 4. 2 Gender of respondents

Sex					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	97	57.7	57.7	57.7
	Female	71	42.3	42.3	100.0
	Total	168	100.0	100.0	

Source: survey data, 2021

As it is shown in Table 4.2, about 97 (57.7%) of the valid respondents were male and the rest 71 (42.3%) of the valid respondents were female. This shows that majority of ride sharing users were male. The number of female users was by far less than the number of male users. The difference is not high so we can't say there is a huge gap on gender difference.

Table 4. 3 Age of respondents

Age					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18 to 31	93	55.4	55.4	55.4
	31 to 40	23	13.7	13.7	69.0
	41 to 50	36	21.4	21.4	90.5
	above 50	16	9.5	9.5	100.0

Total	168	100.0	100.0	
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Source: survey data, 2021

Age distribution of the respondents is shown on Table 4.3 above. This table shows that 93 (55.4%) of the valid respondents were between 18 to 31 years of age, 23 (13.7%) of the valid respondents were between 31- 40 years of age, 36 (21.4%) of the valid respondents were between 41-50 years of age and the rest 16 (9.5%) of the valid respondents were above 50 years old. This indicated that majority of the respondents were aged between 18-31 years of age and above 50 years of age group contained the least respondents. There for we can conclude that the young age group is ridesharing business major customers, so that ridesharing business should focus on young age group of population.

Table 4. 4 professional Qualification

professional Qualification

	Frequency	Percent	Valid Percent	Cumulative Percent
B	117	69.6	69.6	69.6
M	17	10.1	10.1	79.8
O	34	20.2	20.2	100.0
Total	168	100.0	100.0	

Source: survey data, 2021

Table 4.4 above indicates that 117(69.6%) of the valid respondents had BA/BSC, 17(10.1%) of the valid respondents had MA/MSc and the rest 34(20.2%) of the valid respondents had other level of education. The table shows that majority of the valid respondents had BA/BSC and only 10.1% of the valid respondents had MA/MSc degree. Based on this percentage we can confidently infer that the respondents can offer reliable information by understanding the questionnaire that was distributed.

Table 4. 5Period of ride using

Period of ride using				
	Frequency	Percent	Valid Percent	Cumulative Percent
Valid less than 2 years	100	59.5	59.5	59.5
2 to 4 years	34	20.2	20.2	79.8
above 4 years	34	20.2	20.2	100.0
Total	168	100.0	100.0	

Source: survey data, 2021

Table 4.5 indicates that 100(59.5%) of the valid respondents had less than 2 years ride using experience, 34(20.2%) of the valid respondents had 2 to 4 years of ridesharing experience and the rest 34(20.2%) of the valid respondents had above 4 years of ridesharing experience. The table shows that majority of the respondents had less than 2 year of ride sharing experience and only 40.4% of the respondents more than 2 years of ridesharing experience. From this one we can in refer that ridesharing business have been gaining customers year by year and have been getting in to one of transportation ways for customers who uses payable way of transportation. Also this refers that the respondents have adequate knowledge about ridesharing business for the questioner.

4.2.2 Descriptive statistics Customers information about ridesharing business

Table 4.6 frequently used transportation

frequently used transportation				
	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Public	89	53.0	53.0	53.0
Privet	35	20.8	20.8	73.8
Ridesharing	35	20.8	20.8	94.6
Other	9	5.4	5.4	100.0
Total	168	100.0	100.0	

Source: survey data, 2021

Respondents frequently used transportation is shown on Table 4.6 above. This table shows that 83(53%) of the valid respondents uses public transportation, 35(20.8%) of the valid respondents uses private cars for transportation, 35(20.8%) of the valid respondents uses ridesharing for transportation and the rest 9(5.4%) of the valid respondents uses other way of transportation. This indicated that majority of the valid respondents use public transportation frequently and around 5% of valid respondents use other way of transportation like company service contained the least respondents. According to this we can infer that most of ridesharing users are also public transport customers.

Table 4.7 Way to contact ride

way to contact ride				
	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Phone call	95	56.5	56.5
	ride application	42	25.0	81.5
	in person	31	18.5	100.0
	Total	168	100.0	100.0

Source: survey data, 2021

As it is shown in Table 4.7 about 95(56.5%) of the valid respondents uses phone call to contact ride, 42(25%) of the valid respondents uses ride applications to contact ride and the rest 31(18.5%) of the valid respondents uses in person to contact ride. This shows us that phone call is the most used way of contacting ridesharing drivers or company by customers.

Table 4. 8ride often usage

ride often usage				
	Frequency	Percent	Valid Percent	Cumulative Percent
3 times per week	100	59.5	59.5	59.5
once per week	14	8.3	8.3	67.9
Valid once per two weeks	18	10.7	10.7	78.6
once per month	36	21.4	21.4	100.0
Total	168	100.0	100.0	

Source: survey data, 2021

As it is shown on Table 4.8 above 100(59.5%) of the valid respondents uses ridesharing 3 times per week, 14(8.3%) of the valid respondents uses ridesharing once per week, 18(10.7%) of the valid respondents uses ridesharing once per two week, and the rest 36(21.4%) of the valid respondents uses ridesharing once per month. This indicated that majority of the valid respondents use ridesharing 3times per week, this give as the indication for that respondent have frequently used ridesharing so that they can give well oriented information about the ridesharing business performance for our study.

Table 4. 9 frequent hour for ride usage

frequent hour for ride usage				
	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 6:00am-10:00am	33	19.6	19.6	19.6
2:00pm-6:00pm	60	35.7	35.7	55.4
10:00pm-6:00am	75	44.6	44.6	100.0
Total	168	100.0	100.0	

Source: survey data, 2021

Respondents frequently used hour interval shown on Table 4.9 above. This table shows that 33(19.6%) of the valid respondents uses from 6:00am – 10:00am hour, 60(35.7%) of the valid respondents uses 2:00pm – 6:00pm hour, and 75(44.6%) of the valid respondents uses

ridesharing from 10:00pm-6:00am hour. This indicated that majority of the valid respondents frequently uses from 10:00pm-6:00am hours and 19% of respondents use ridesharing from 6:00am-10:00am. This shows that ridesharing is mostly preferred at night time this can be because of safety on transportation.

4.2.3 Descriptive statistics of ridesharing culture types

In order to examine the general perception of the respondents with regard to the dominant type of ridesharing business effecters in the selected companies, the researcher has summarized the measures of each effector type with the respective means and standard deviations. The results were interpreted by using the means and standard deviations of the ridesharing effector types. The means indicate that to what extent does the sample group averagely agrees or does not agree with the statements given. Lower means show more disagreements with the statements offered, whereas higher means show more agreements with the statement given. On the other hand, standard deviations show the variation of the observed data from the mean. Based on the result, comparison of communication instrument, social network website and present used application type of effector’s were done.

Table 4. 10Descriptive statistics of communication instrument

		Communication instrument 1	Communication instrument 2	Communication instrument 3	Communication instrument 4
N	Valid	168	168	168	168
	Missing	0	0	0	0
Mean		2.89	2.77	3.62	3.79
Std. Deviation		1.795	1.307	1.409	1.168

Source: survey data, 2021

As it is indicated in Table 4.10 above, the researcher had given four statements to know the level of agreement of the valid respondents on each sentence that indicates the presence of communication instrument. As the result, the means of the collected responses range from 2.77 which is the least and given to the second statement that says “Phone types are required to have ridesharing service.” to a mean of 3.79 which is the largest and given to the last statement which

says “Communication instrument and ridesharing business have direct relationship” with a standard deviation of 1.307 and 1.168 respectively.

The statement that was given ‘Phone types have major influence on ridesharing to communicate with the company and have ride’ had a mean value of 2.89 and a standard deviation (SD) of 1.795 and “The network infrastructure affects the communication between customers and companies” had a mean value of 3.62 and a standard deviation (SD) of 1.409.

According to this we can see that communication instrument can have effect on ridesharing business performance highly as its high mean is 3.79 shows the valid respondents agreed with the statement.

Table 4. 11 Ridesharing and social network website

	Social network website 1	Social network website 2	social network website 3	social network website 4
N Valid	168	168	168	168
Missing	0	0	0	0
Mean	3.71	3.33	3.54	3.53
Std. Deviation	1.513	1.065	1.060	1.066

Source: survey data, 2021

As it is indicated in Table 4.11 above, the researcher had given four statements to know the level of agreement of the valid respondents on each sentence that indicates the presence Social network website effect on ridesharing business. As the result, the means of the collected responses range from 3.33 which is the least and given to the second statement that says “Network stability and political stability have direct relationship.” to a mean of 3.71 which is the largest and given to the last statement which says “Network stability affects the ridesharing business.” with a standard deviation of 1.065 and 1.513 respectively.

The statement that was given “There have been network instability interfere because of political instability in our country.” had a mean value of 3.54 and a standard deviation (SD) of 1.060, and “Social network website has major effects on ridesharing business communication” had a mean

value of 3.53 and a standard deviation (SD) of 1.066. according to this estimation we can also say that social network website have effects on ridesharing business performance as its mean is 3.71 which is more than half but when we compare it to communication instrument it have less effect on ridesharing business performance.

Table 4. 12Ridesharing and Present used Application

	Present used Application 1	Present used Application 2	Present used Application 3	Present used Application 4	Present used Application 5
N Valid	168	168	168	168	168
Missing	0	0	0	0	0
Mean	3.45	2.69	3.92	2.92	4.01
Std. Deviation	1.566	1.243	1.058	1.595	1.111

Source: survey data, 2021

As it is indicated in Table 4.12 above, the researcher had given five statements to know the level of agreement of the respondents on each sentence that indicates the presence of Present used Application. As the result, the means of the collected responses range from 2.69 which is the least and given to the second statement that says “The applications that are being implemented at this time are difficult to use.” to a mean of 4.01 which is the largest and given to the last statement which says “Using phone application is more simple and easy way of calling for ride.” with a standard deviation of 1.243 and 1.111 respectively.

The statement that was given “Present used phone applications are effective for ridesharing business” had a mean value of 3.45 and a standard deviation (SD) of 1.566, “The present applications need high network or internet speed to work.” had a mean value of 3.92 and a standard deviation (SD) of 1.058, and “There is cost difference between using application and phone call.” got a mean value of 2.92 and a standard deviation (SD) of 1.595.

According to this we can see that present used application have also an effect on the ridesharing business. When it is compared to the other effects this one have the major effect on it.

Table 4. 13 Ridesharing business performance

Statistics			
	Ridesharing business performance 1	Ridesharing business performance 2	Ridesharing business performance 3
N Valid	168	168	168
Missing	0	0	0
Mean	4.04	3.51	3.44
Std. Deviation	1.142	1.105	1.167

Source: survey data, 2021

As it is indicated in Table 4.13 above, the researcher had given three statements to know the level of agreement of the valid respondents on each sentence that indicates the presence of ridesharing business performance affected. As the result, the means of the collected responses range from 3.44 which is the least and given to the third statement that says “Ridesharing business highly dependent on communication instrument.” to a mean of 4.04 which is the largest and given to the last statement which says “Ridesharing business highly dependent on communication instrument.” with a standard deviation of 1.167 and 1.142 respectively. “The ride-sharing business is dependent on Social Networking Website” got a mean value of 3.79 and a standard deviation (SD) of 1.142. This shows us ridesharing business can be affected by all three practices namely communication instrument, social network website and present used application.

Table 4. 14summary of Descriptive statistics of culture type and ridesharing business

	N	Mean	Std. Deviation
communication instrument	168	3.2693	.63103
social network website	168	3.5298	.59237
present used application	168	3.3964	.58871
ridesharing business	168	3.6607	.62598
Valid N (listwise)	168		

Source: survey data, 2021

As it is indicated in Table 4.14, social network website had the highest mean value with a 3.5298 and a standard deviation of 0.59237 followed by, present used application with a mean value of 3.3964 and a standard deviation of 0.58871, and communication instrument with a mean value of 3.2693 and a standard deviation of 0.63103 respectively. The overall ridesharing business has mean value of 3.6607 with a standard deviation of 0.62598. This indicate that social network website have more effect on ridesharing business performance and followed by present used application and communication instrument respectively.

4.3 Tests of Assumptions of Classical Linear Regression Model

The tests of five assumptions of Classical Linear Regression Model; normality, linearity, homoscedasticity, autocorrelation and Multicollinearity were conducted and the results are discussed hereunder. The analysis results (tables and graphs) for each assumption are attached in appendix B.

4.3.1 Normality

One of the assumptions for most parametric tests to be reliable is whether the data is approximately normally distributed. Normally distributed data peaks at the middle and is symmetrical about the mean. This assumption was tested by using normal probability plot (Normal P-P). The decision rule was, if the fitted line in the Normal P-P is approximately a straight line, one can conclude that the variables of interest are normally distributed (Gujarati, 2004). Based on this decision rule, the Normal p-p was closer to the straight line all over the quadrant so the data was normally distributed.

The other tests of normality assumption were the values of skewness and kurtosis. These two tests that can be used to validate the assumption of normality of collected data. According to Pallant (2011), skewness refers to the symmetry of the distribution whereas kurtosis provides information about the peakedness of the distribution. A distribution is considered normal when the values of skewness and kurtosis are equal to zero. As Newsom (2005) suggests that the absolute value of skewness less than or equal to 2 and the absolute value of kurtosis less than or equal to 3 are acceptable limits for the condition of normality to be satisfied. The skewness and kurtosis values of the collected data were within these acceptable ranges (see appendix B).

4.3.2 Linearity

Linearity explains that the predictor variables in the regression have a straight-line relationship with the outcome variable. Multiple linear regression model (MLRM) assumptions assume there is a linear relationship between the independent variables and the dependent variables. The linearity assumption can best be tested with scatter plots.

Linearity assumption was not serious threat to the study since we can draw one straight line to approximate the observations for all independent variables against the dependent variable (Semene, 2018). The scatter plot from the test indicated linear relationship between the dependent variable and independent variables (see appendix B).

4.3.3 Homoscedasticity

This assumption assumed whether the residuals are equally distributed, or whether they tend to bunch together at some values, and at other values, spread far apart. This assumption can be checked by scatter plot diagram. The data is homoscedastic if it looks somewhat like a shotgun blast of randomly distributed data. The opposite of homoscedasticity is heteroscedasticity, where the researcher might find a cone or fan shape in the data.

From the test of this assumption using scatter plot, the data was homoscedastic since the dots were randomly distributed all over the plot. So, the data fulfilled assumption of homoscedasticity (see appendix B).

4.3.4 Autocorrelation

Multiple linear regression models assume that the residuals are independent of one another. The Durbin Watson (DW) statistic is a test for autocorrelation in the residuals from a statistical regression analysis. If the errors are correlated with one another, it would be stated that they are auto-correlated. The Durbin-Watson statistic always ranges in value from 0 to 4. A value near 2 indicates non-autocorrelation; a value toward 0 indicates positive autocorrelation; a value toward 4 indicates negative autocorrelation.

The Durbin Watson (DW) statistic was run to test the presence of autocorrelation in the residuals and the result indicated there was no such problem among the variables since the value is closer to 2 which is .66 (see appendix B).

4.3.5 Multicollinearity

Highly correlated variables can be a noise in the model and even reduce the accuracy of the final model. Multicollinearity could be checked in two ways: correlation coefficients and variance inflation factor (VIF) values. The Pearson's Correlation was used for measuring the association between variables of the study and the correlation coefficients were less than 0.9. Multicollinearity problem exists when correlation coefficient value exceeds 0.90 (Ratner, 2009). Hence no variables had a correlation value of greater than 0.9, so there was no multicollinearity problem.

In addition, the absence of multicollinearity was supported by the values of variance inflation factor (VIF) and tolerance (TOL). The VIF is a measure of the reciprocal of the complement of the inter-correlation among the predictors. The decision rule is that if a variable has a VIF value greater than 10, it indicates the possible existence of multicollinearity problem among variables. On the other hand, tolerance (TOL) defined as $1/VIF$, it is also used by many researchers to check on the degree of collinearity. The decision rule for tolerance is that a variable whose TOL value is less than 0.1 shows the possible existence of multicollinearity problem (Gujarati, 2004). From this test of assumption, all independent variables had greater than 0.1 tolerance value and less than 10.0 variance inflation factor (VIF) value. So, the data is free from multicollinearity problem (see appendix B).

4.4 Correlational Analysis

The relationship between the three independent variables (communication instrument, social network website, and present used application) and the dependent variable (ridesharing business) was done using correlation analysis. In order to determine the relation among these types of ridesharing practice and ridesharing business performance, the researcher used Cohen's (1988) classification of the strength of relationship as it is shown in Table 4.15 below.

Table 4. 15Correlational strength Determination

Correlation strength	Positive value	Negative value
Small	$r=0.10$ to 0.29	$r = -.10$ to $-.29$
Medium	$r=0.30$ to 0.49	$r = -.30$ to $-.49$
Large	$r=0.50$ to 1.0	$r = -.50$ to -1.0

Source: (Cohen 1988)

As it is shown in Table 4.15, the range of possible correlation coefficient values is from -1 to +1. Zero correlation indicates the absence of relationship between the variables. A correlation value without a sign shows that the relationship is positive. Whereas, a correlation value with a negative sign indicates negative relationship. A positive relationship means scores change in the same direction for both variables. A negative relationship means the scores change in the opposite direction. Based on this concept of correlation, the relation between ridesharing business effecter types and ridesharing business performance was analyzed below.

Table 4. 16, correlation between the ridesharing business practice types and ridesharing business performance

Correlations					
		communication instrument	social network website	present used application	ridesharing business
communication instrument	Pearson Correlation	1	.128	-.036	.622**
	Sig. (2-tailed)		.099	.642	.000
	N	168	168	168	168
social network website	Pearson Correlation	.128	1	.072	.649**
	Sig. (2-tailed)	.099		.351	.000
	N	168	168	168	168
present used application	Pearson Correlation	-.036	.072	1	.552**
	Sig. (2-tailed)	.642	.351		.000
	N	168	168	168	168
ridesharing business	Pearson Correlation	.622**	.649**	.552**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	168	168	168	168

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

As it is shown in Table 4.16, the correlation between the ridesharing business effecter types and ridesharing business performance by ridesharing customers was conducted using Pearson

Correlation. The relationship among each ridesharing business effecter and ridesharing business performance was positive and statistically significant. On the case of ridesharing business performance and present used application the relationship was positive with the correlation value of $r = 0.552$ and also significant. The other effecters also had positive and significant correlation with ridesharing business performance; Social network website with ridesharing business performance ($r = 0.649$), and Communication instrument with ridesharing business performance (0.622). So, it was possible to conclude that all types of ridesharing business effecter were correlated with ridesharing business performance with significance level.

4.5 ANOVA Analysis

Table 4. 17 ANOVA^a

ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	16.159	3	5.386	12.061	.000 ^b
	Residual	73.238	164	.447		
	Total	89.397	167			

a. Dependent Variable: ridesharing business performance

b. Predictors: (Constant), present used application , communication instrument, social network website

As it is shown in Table 4.18, the analysis of variance (ANOVA) indicates the overall significance and acceptability of the model from a statistical perspective. As the significance value of F statistics shows a value where $p < 0.05$, it implies the model is significant as $F(3,164)=12.061$, $p=0$. So, we can conclude that our regression model results in significant prediction of the ridesharing business performance because the p-value indicates that the variation explained by the model is not due to chance.

Table 4.18 Coefficients^a

Coefficients ^a							
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	93.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	.331	.483		.686	.494	-.550	1.213
1 communication instrument	.279	.083	.240	3.370	.001	.128	.430
social network website	.274	.088	.222	3.101	.002	.113	.435
present used application	.296	.088	.238	3.357	.001	.135	.457

a. Dependent Variable: ridesharing business performance

As it is indicated from Table 4.19 above, all independent variables were statistically significant in predicting the dependent variable as the p-values were less than 0.05. The relationship between dependent and independent variables will be declared as statistically significant if the p-value of the independent variable is below 0.05 and otherwise insignificant (Greenland et al., 2016). Each regression coefficient explains the average amount of change in the dependent variable that is caused by a unit of change in the independent variable. All the independent variables the present used application, communication instrument and social network website had a positive effect on the dependent variable on ridesharing business performance.

The standardized beta coefficient for the predictor variables were (B=0.240), (B=0.222), and (B=0.238) for Communication instrument, social network website, and present used application.

$$RSB = (0.240)RC + (0.222)RS + (0.238)RP + 0.331$$

From the above regression equation, it is possible to interpret that, there will be increment in ridesharing business performance by 0.240 when communication instrument increases by 1, by 0.222 if social network website increases by 1 and by 0.238 when present used application culture increase by 1. According to this all the ridesharing practice can bring positive increment

on the ridesharing business performance from the three practices that communication instrument culture had the largest coefficient in predicting ridesharing business performance.

4.6. Discussion of Major findings

The first objective of the study was to define the effect of social network website, present used application and communication instruments on the ride sharing business performance. According to the mean values of present used application is more related than social network website and communication instrument. Based on this result the dominant practice is present used application on ridesharing business performance followed by social network website and communication instrument respectively. The perceived level of agreement for the existence of present used application was 3.39 mean values.

According to Robbins and Judge (2013) the existing culture in any business can be strong or weak. So it's possible to differentiate between strong and weak effecter based on degree of agreement obtained from the collected data. If the most customers have the same opinion about the ridesharing's shared values and believes, the practice is strong. If opinions vary widely, the practice is weak. Therefore the practice of ridesharing business was found weak as values of agreement vary across the data.

One of the major objectives of this study was examining the effect of communication instrument on ridesharing business performance. Communication instrument was conceptualized as communication products used on the ridesharing business like phone, network infrastructure and so on. The research there for revealed the communication instrument was positively and significantly related with ridesharing business performance according to the data. Srinivasan, & Raghavender (2006) have mentioned that there appears to be a strong and complementary relationship between phone type and ridesharing on their study.

The other objective of this study was to investigate the effect of social network website on ridesharing business performance. Social network website was perceived as network built to communicate network instruments like mobile network, internet, web net and so on. This study found that social network website had positive and significant effect on ridesharing business performance according to the data gathered.

Brereton, Roe, Foth, Bunker, & Buys (2009) have mentioned the strong relationship between social network website and ridesharing business on their study strongly.

The first objective of this study was to inspect the effect of present used application on ridesharing business performance. Present used application is presented as phone applications used for communicating ridesharing drivers with customers. This study there for found out that present used application also have positive significant relation with ridesharing application according to the data.

CHAPTER FIVE

5. SUMMARY OF MAJOR FINDINGS, CONCLUSION, AND RECOMMENDATION

5.1 Summary

The general objectives of the study were the effect of social network websites, present used applications and communication instruments on the ridesharing business. The following basic research questions were addressed in the study.

- How do social network websites and communication instruments affect the ridesharing Business performance?
- How do presently used applications affect the business performance?
- How does communication instrument affect the business performance?
- How does network stability affect the business performance?
- How effected is the ride-sharing business on Social Networking Websites and Communication instruments?

About 288 questionnaires were distributed based on the determined sample size and 168 useful responses were used for data analysis which makes the response rate 62.5%. The respondents were required to express their perception of current ridesharing business practices through questionnaires which consisted of 4 dimensions 30 items for all these dimensions.

To measure ridesharing performance which was the dependent variable (DV) of this study, the original scale measurement originated by Babin and Boles (1998) that was later modified by Gibbs and Ashill (2013) comprising five items was used. A 5-point Likert scale [(1) = strongly disagree; (2) = disagree; (3) = neutral; (4) = agree and (5) = strongly agree] response framework was used for the structured questionnaire.

Data collected from respondents were analyzed using Statistical Package for Social Science SPSS software. The demographic profiles of target respondents were analyzed using descriptive analysis such as frequency, percentage, tables, and central tendencies like mean and standard deviation (SD) to measure the variability of collected data.

Pearson's Correlation Analysis was used for measuring the association between variables of the study. MLR was run to find R as Pearson correlation coefficient, R Square, B-values, and a significance test of the variables.

The study came up with the following major findings after investigating the collected data.

- About 97 (57.7%) of the respondents were male and the rest 71 (42.3%) of the respondents were female. About 93 (55.4%) of the respondents were between 18 to 31 years of age, 23 (13.7%) of the respondents were between 31- 40 years of age, 36 (21.4%) of the respondents were between 41-50 years of age and the rest 16 (9.5%) of the respondents were above 50 years old. About 117(69.6%) of the respondents had BA/BSC, 17(10.1%) of the respondents had MA/MSc and the rest 34(20.2%) of the respondents had another level of education. About 100(59.5%) of the respondents had less than 2 years ride using experience, 34(20.2%) of the respondents had 2 to 4 years of ridesharing experience and the rest 34(20.2%) of the respondents had above 4 years of ridesharing experience.
- About 83(53%) of the respondents use public transportation, 35(20.8%) of the respondents uses private cars for transportation, 35(20.8%) of the respondents uses ridesharing for transportation and the rest 9(5.4%) of the respondents uses another way of transportation. About 95(56.5%) of the respondents use a phone call to contact ride, 42(25%) of the respondents use ride applications to contact ride and the rest 31(18.5%) of the respondents uses in-person to contact ride. About 100(59.5%) of the respondents use ridesharing 3 times per week, 14(8.3%) of the respondents uses ridesharing once per week, 18(10.7%) of the respondents uses ridesharing once per two weeks, and the rest 36(21.4%) of the respondents uses ridesharing once per month. About 33(19.6%) of the respondents uses from 6:00am – 10:00am hour, 60(35.7%) of the respondents uses 2:00pm – 6:00pm hour, and 75(44.6%) of the respondents uses ridesharing from 10:00pm-6:00am hour.
- Social network websites had the highest mean value with a 3.5298 and a standard deviation of 0.59237 followed by, presently used application with a mean value of 3.3964 and a standard deviation of 0.58871, and communication instrument with a mean value of 3.2693 and a standard deviation of 0.63103 respectively. The overall ridesharing business has a mean value of 3.6607 with a standard deviation of 0.62598. So, it was found that social network website was the dominant practice in ridesharing business performance.
- The correlation between the ridesharing business practice and ridesharing business performance by ridesharing customers was conducted using Pearson Correlation. The

relationship among each ridesharing practice and with ridesharing business performance was positive and statistically significant. For the case of ridesharing business and present used application where the relationship was positive with the correlation value of ($r=0.552$) and also significant. The other practice also had a positive and significant correlation with ridesharing business performance; Social network websites with ridesharing business ($r=0.649$), and Communication instruments with ridesharing business ($r=0.622$). So, it was possible to conclude that all types of ridesharing practice were correlated with ridesharing business with significance level.

- All types of ridesharing practices were regressed against the overall ridesharing business performance. The R-Squared value of 0.181 from the regression analysis indicated that about 16.6% of the variation in ridesharing business can be explained by ridesharing practices. This also implies that the remaining 83.4% of the variation in the dependent variable (ridesharing business) is explained by other variables other than ridesharing selected practices. The R-value of 0.425 shows a strong relationship between the dependent variable (ridesharing business) and independent variables (ridesharing practice) for Addis Ababa ridesharing business customers.
- All independent variables were statistically significant in predicting the dependent variable as the p-values were less than 0.05. All the independent variables the present used application, communication instrument, and social network website had a positive effect on the dependent variable on ridesharing business performance. The standardized beta coefficient for the predictor variables were ($B=0.240$), ($B=0.222$), and ($B=0.238$) for Communication instruments, social network websites, and the present used application.
- So, a communication instrument with a standard beta value of 0.240 is the most contributing ridesharing practice type in predicting ridesharing business performance followed by a present used application with a standard beta value of 0.238 and a social network website with a standard beta value of 0.222.

5.2 Conclusion

The study investigated the role of each type of ridesharing practice on ridesharing business performance on some selected ridesharing companies.

The result indicated that social network websites were the dominant type of ridesharing practice with the relevantly high mean value from the other two practices such as communication

instrument and present used application. And also these practices are found strong and significant across the data.

The lower mean value of communication instrument practice shows a lower level of agreement with the presence of different types of communication instrument in the business has a major effect.

The customers of the ridesharing business had a high level of experience with the mean value of 3.6607 and this could be due to the lower mean value of the ridesharing practices types particularly communication instruments, social network websites, and presently used applications. Even though social network websites appeared as dominant practice in the business, the mean value was in between '3' "neutral and '4' "agree". The regression coefficient for these three types of practices indicated a significant positive relationship with the ridesharing business performance.

The result of the study showed that there is no such single dominant practice where most customers agree with its existence in the business. What was explained is based on comparing the mean values of all practices types used in the study.

From the regression result, it was found that communication instrument practice best predicts ridesharing business performance positively with a beta value of (B=0.240) followed by presently used application with a beta value of (B=0.238) and social network website with a beta value (B=0.222). So, the ridesharing business owners must work more to improve all the cultures so as to enhance business performance.

5.3 Recommendations

Based on the findings and conclusions made above, the following recommendations are proposed to improve the ridesharing practices of some selected ridesharing companies. As a result, the level of business performance will also be improved.

Recommendation to ridesharing business companies:

- Some of the communication instrument I suggest is all type of phones, electronics that can be networked like tablets, laptops smart watches and communication types like text.
- The offline way of communication is all done without internet connection which is direct phone call and text only. This has been implemented on one company in our country and it was very successful so that it can be an example for other ridesharing companies.

- In this business internet is the most important thing almost the base for the business. As our internet stability and infrastructure is not satisfyingly build, until it comes to satisfying infrastructure the business owners must have another way to build the communication like text, or direct phone call.
- The applications which are used to this service are somehow complicated and some of them are only in one language which makes it difficult for customers to understand it and implement it. So the ridesharing company must work on making their application more simple and understandable.
- The companies must work on how to improve all the three practices based on the customers need and want.
- Further researches must be conducted to examine the preferred practices of the business, to identify the existing practices and the issues that caused a total dependency on the internet.
- Further researchers also need to use different way of data gathering to get more efficient data than this research.

Reference

- Adamic, L., & Adar, E. (2005). How to search a social network. *Social networks*, 27(3), 187-203.
- Alexander, L. P., & González, M. C. (2015). Assessing the impact of real-time ridesharing on urban traffic using mobile phone data. *Proc. UrbComp*, 1-9.
- Asakura, Y., & Hato, E. (2004). Tracking survey for individual travel behaviour using mobile communication instruments. *Transportation Research Part C: Emerging Technologies*, 12(3-4), 273-291.
- Agatz, N., Erera, A., Savelsbergh, M., & Wang, X. (2012). Optimization for dynamic ride-sharing: A review. *European Journal of Operational Research*, 223(2), 295-303.
- Asur, S., & Huberman, B. A. (2010, August). Predicting the future with social media. In 2010 IEEE/WIC/ACM international conference on web intelligence and intelligent agent technology (Vol. 1, pp. 492-499). IEEE.
- Babbie, E. R. (1990). *Survey research methods* Wadsworth Pub. Co Belmont, Calif, 3(9), 31-50.
- Babin, B. J., & Boles, J. S. (1998). Employee behavior in a service environment: A model and test of potential differences between men and women. *Journal of marketing*, 62(2), 77-91.
- Brereton, M., Roe, P., Foth, M., Bunker, J. M., & Buys, L. (2009, November). Designing participation in agile ridesharing with mobile social software. In *Proceedings of the 21st Annual Conference of the Australian Computer-Human Interaction Special Interest Group: Design: Open 24/7* (pp. 257-260).
- Bolotaeva, V., & Cata, T. (2010). Marketing opportunities with social networks. *Journal of Internet Social Networking and Virtual Communities*, 2010, 1-8.
- Chaube, V., Kavanaugh, A. L., & Perez-Quinones, M. A. (2010, January). Leveraging social networks to embed trust in rideshare programs. In 2010 43rd Hawaii International Conference on System Sciences (pp. 1-8). IEEE.
- Cohen, J. (1988). *Statistical power analysis for the social sciences*.
- Hahn, R., & Metcalfe, R. (2017). The ridesharing revolution: Economic survey and synthesis. *More equal by design: economic design responses to inequality*, 4.

- Jiang, W., Dominguez, C. R., Zhang, P., Shen, M., & Zhang, L. (2018). Large-scale nationwide ridesharing system: A case study of Chyunyun. *International Journal of Transportation Science and Technology*, 7(1), 45-59.
- Karon, J. M., & Wejnert, C. (2012). Statistical methods for the analysis of time–location sampling data. *Journal of Urban Health*, 89(3), 565-586.
- Labaree, R. V. (2009). *Research Guides: Organizing Your Social Sciences Research Paper: 5. The Literature Review*.
- Langton, N., Robbins, S. P., & Judge, T. A. (2013). *Fundamentals of organizational behaviour*. Pearson Education Canada.
- Marshall, B. A., Cardon, P. W., Norris, D. T., Goreva, N., & D'Souza, R. (2008). Social networking websites in India and the United States: A cross-national comparison of online privacy and communication. *Issues in Information Systems*, 9(2), 87-94.
- Mann, J., Ten Have, T., Plunkett, J. W., & Meisels, S. J. (1991). Time sampling: A methodological critique. *Child development*, 62(2), 227-241.
- Pathak, P. K., Dhami, A. J., & Chaudhari, D. V. (2018). Seminal Attributes, Freezability and their Interrelationships in Zebu Cattle and Buffalo Bulls from Central Gujarat. *Indian Journal of Veterinary Sciences & Biotechnology*, 14(2).
- Pallant, J. (2011). *Survival manual. A step by step guide to data analysis using SPSS*, 4.
- Rezende, P. H. D. R., Sadri, A. M., & Ukkusuri, S. V. (2016). *Social network influence on mode choice and carpooling during special events: The case of Purdue game day* (No. 16-3466).
- Schweitzer, S., & Brendel, J. (2018). The Segmented Introduction of Transaction Fees in the German Ridesharing Market. In PACIS (p. 54).
- Shaheen, S., Cohen, A., & Martin, E. (2017). Smartphone app evolution and early understanding from a multimodal app user survey. In *Disrupting Mobility* (pp. 149-164). Springer, Cham.
- Srinivasan, K. K., & Raghavender, P. N. (2006). Impact of mobile phones on travel: Empirical analysis of activity chaining, ridesharing, and virtual shopping. *Transportation Research Record*, 1977(1), 258-267.

Shepsle, K. A., & Weingast, B. R. (1984). Political solutions to market problems. *American Political Science Review*, 78(2), 417-434.

Singh, A. S., & Masuku, M. B. (2013). Fundamentals of applied research and sampling techniques. *International journal of medical and applied sciences*, 2(4), 124-132.

Taherdoost, H. (2016). Sampling methods in research methodology; how to choose a sampling technique for research. *How to Choose a Sampling Technique for Research* (April 10, 2016).

Wang, Y., Winter, S., & Tomko, M. (2018). Collaborative activity-based ridesharing. *Journal of Transport Geography*, 72, 131-138.

Wood, J., Gahm, K., Neidel, I., Lioutikova, S., Lindemann, L., Lee, L., & Holubkov, J. *Mapbook of Syntactic Variation in American English: Survey Results, 2015–2019*.

Young, L. H., Frans, J. T., Chyun, D. A., Davey, J. A., Barrett, E. J., Taillefer, R., ... & DIAD Investigators, F. T. (2009). Cardiac outcomes after screening for asymptomatic coronary artery disease in patients with type 2 diabetes: the DIAD study: a randomized controlled trial. *Jama*, 301(15), 1547-1555.

Zhang, H., Chen, J., Li, W., Song, X., & Shibasaki, R. (2020). Mobile phone GPS data in urban ride-sharing: An assessment method for emission reduction potential. *Applied Energy*, 269, 115038.

Section A: Demographic Profile

In this section, please put 'X' mark inside the box of the answer you select. Your answers will be kept strictly confidential.

1: Gender

- A. Male B. Female

2: Age:

- A. 18 to 31 years C. 41 to 50 years
B. 31 to 40 years D. above 50 years

3: How long have you been using ridesharing way of transportation?

- A. Less than 2 years B. 2 - 4 years c. 4 years and above

4: Your professional qualification

- A. BA/BSC C. PhD
B. MA/MSC D. Other

Section B: Customers information about ridesharing business

1, which way of transportation do you use frequently?

- A, public transportation B, Privet car
C, Ridesharing D, Other _____

2, How do you contact to ride?

- A, phone call B, Ride Application
C, In person D, Other _____

3, How often do you use one of ridesharing transportation ways?

- A, 3 times per week B, Once per week
C, 1 times per two weeks D, 1times per month

E, Other _____

4, which hour is the most frequent hour you use ridesharing from 24/7 hours?

A, 6:00am -10:00am B, 10:00am - 2:00pm

C, 2:00pm – 6:00 pm D, 6:00pm - 10:00pm

E, 10:00pm – 6:00am

Section C: Ridesharing Culture

This section was seeking respondents’ opinion regarding the different types of ridesharing culture on selected ridesharing company.

No	Questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Ridesharing and Communication instrument						
RC1	Phone types have major influence on ridesharing to communicate with the company and have ride.					
RC2	Phone types are required to have ridesharing service.					
RC3	The network infrastructure affects the communication between customers and companies.					
RC4	Communication instrument and ridesharing business have direct relationship.					
Ridesharing and social network website						

RS1	Network stability affects the ridesharing business.					
RS2	Network stability and political stability have direct relationship.					
RS3	There have been network instability interfere because of political instability in our country.					
RS4	Social network website has major effects on ridesharing business communication.					
Ridesharing and Present used Application						
RP1	Present used phone applications are effective for ridesharing business.					
RP2	The applications that are being implemented at this time are difficult to use.					
RP3	The present applications need high network or internet speed to work.					
RP4	There is cost difference between using application and phone call.					
RP5	Using phone application is more simple and easy way of calling for ride.					
Ridesharing Business						
RSB1	Ridesharing business highly dependent on communication instrument.					
RSB2	The ride-sharing business is dependent on Social Networking Website.					

RSB3	Using only phone applications ridesharing business can be effective.					
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Section D: additional opinion about ridesharing business

1, What are major problems that you have faced during contacting and using ridesharing?

2. As per your experience what do you think are major way of communication instruments for ridesharing business effectiveness?

3. As per your experience what do you think are major factors that affect social network website stability?

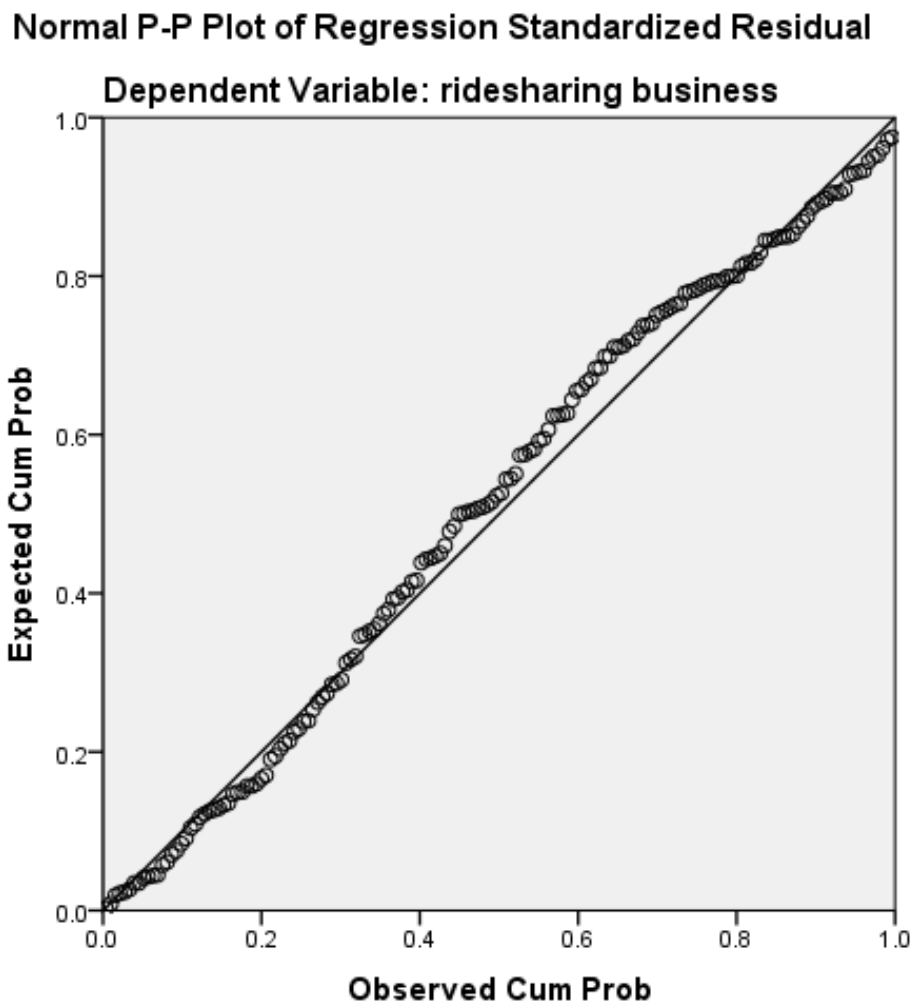
4. Do you recommend any of your beloved once to use any way of ridesharing communication way?

5. if your answer is yes for the above question which way of communication have you been recommending?

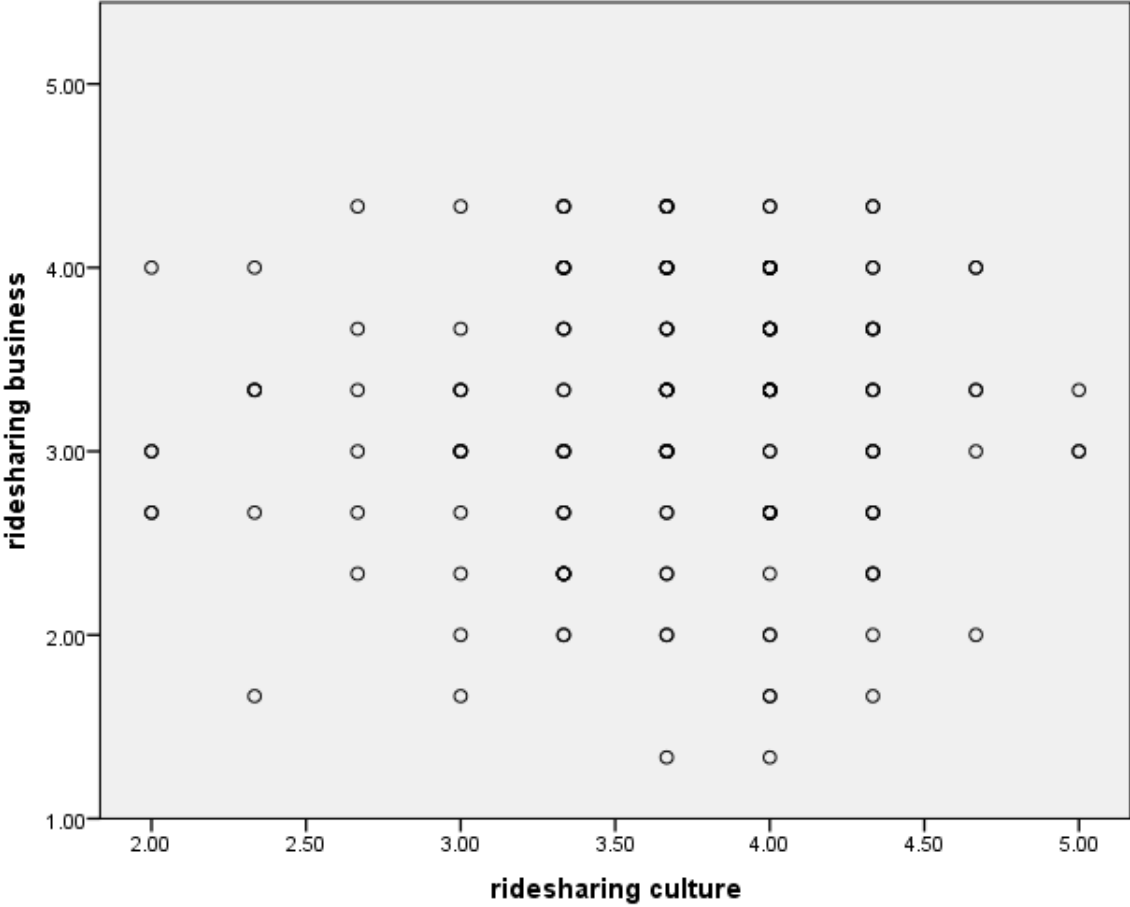
-Thank You-

APPENDIX B: Tests of CLRM

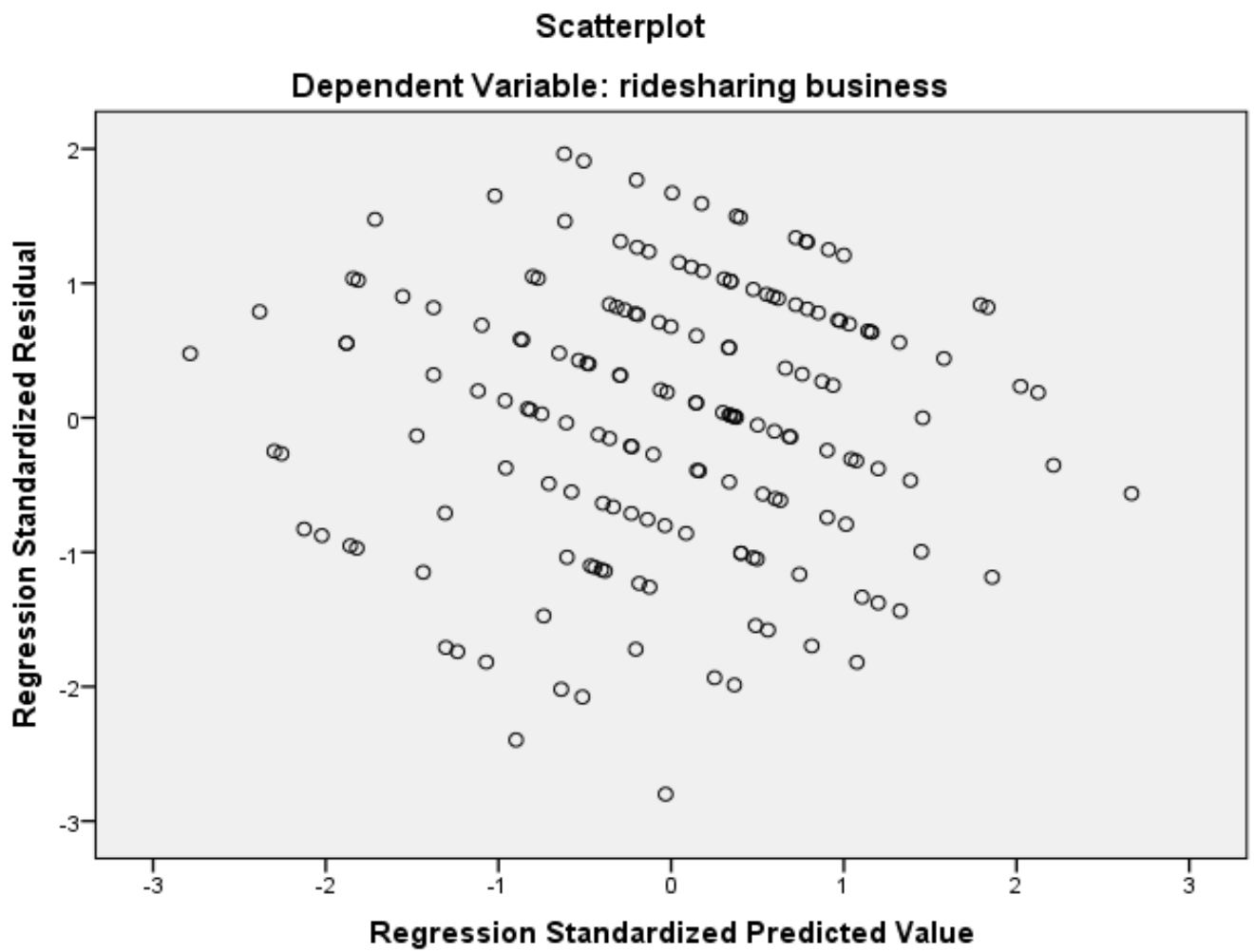
A, Test of Normality



B, test of linearity



c, Test of Homoscedasticity



D. Test of Autocorrelation

Model Summary^b

Model	95.0% Confidence Interval for B		Collinearity Statistics	
	Lower Bound	Upper Bound	Tolerance	VIF
1 (Constant)	-.550	1.213		

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.425 ^a	.181	.166	.66826

a. Predictors: (Constant), present used application , communication instrument, social network website

b. Dependent Variable: ridesharing business

E. Test of Multicollinearity

communication instrument	.128	.430	.982	1.019
social network website	.113	.435	.978	1.023
present used application	.135	.457	.993	1.007