

A STUDY ON THE FACTORS IMPACT ON WOMEN CONSUMERS’  
INTENTION TO USE MOTORBIKE BASED RIDESHARING  
SERVICES IN COLOMBO DISTRICT, SRI LANKA.

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**A STUDY ON THE FACTORS IMPACT ON WOMEN CONSUMERS'  
INTENTION TO USE MOTORBIKE BASED RIDESHARING SERVICES IN  
COLOMBO DISTRICT, SRI LANKA.**

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of Sri Lanka in Partial Fulfillment of the Requirements for the Honours Degree of  
Bachelor of Science in Business Management

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## ABSTRACT

Today, ride-sharing intention has received great attention among the scholars in both international and local context. In the present study, the researcher attempts to find the factors of motorbike based ride-sharing intention in the Colombo district, Sri Lanka. The preliminary study of the current context has proved that the lowest level of motorbike based ride-sharing intention among the women consumers who are in the age category of 18-39 in Colombo district, Sri Lanka. Therefore, the researcher decided to identify the factors which impact for the less intention to motorbike-based ride sharing among women consumers who are in the age category of 18-39 in the present context. Then, the researcher developed six research objectives based on the technology acceptance model. This model is extended by the researcher by referring to the previous studies and this model is tested with the support of the survey questionnaire. The data are collected from 264 respondents and mainly reliability analysis, correlation and, regression analysis were used as analytical tools to analyze the collected data. Results indicated that motorbike based ride-sharing intention of the women consumers who are in the age category of 18-39 is positively impacted by perceived usefulness, and subjective norms while negatively impacted by perceived risk. The results also showed that personal innovativeness, Environmental awareness, and perceived ease of use have no impact on the motorbike based ridesharing intention of the selected respondents. Based on these results, the researcher recommends the companies which provide ride-sharing services like Uber, PickMe and, SLT muve to take appropriate strategies to improve the customers' perception of safety level on the ride-sharing services. Also, the researcher suggests future researchers to find more factors that impact to the motorbike based ride-sharing intention of the consumers in other districts, Sri Lanka.

**Keywords:** *Environmental Awareness, Motorbike based Ride Sharing Intention, Perceived Usefulness, Perceived Risk, Personal Innovativeness, Perceived Ease of Use, Subjective Norm*

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## **LIST OF ABBREVIATIONS**

MBRS- Motorbike Based Ridesharing Service

PU- Perceived Usefulness

PEOU- Perceived Ease Of Use

PR- Perceived Risk

PI- Personal Innovativeness

EA- Environmental Awareness

SN- Subjective Norm

ANOVA- Analysis of Variance

VIF- Variance Inflation Factor

DW Test- Durbin Watson Test



## **CHAPTER 01**

### **INTRODUCTION**

#### **1.1 Background of the study**

In the world of limited resources, sharing is a very important factor for sustainable development. According to (Matzner et al., 2015) people share their resources for two main reasons. Those are problems of unsustainable resource consumption and new business opportunities. Although Sharing is a familiar concept for our society and the new forms of sharing have become with technology in recent years and that's why it seems to be a new model. Researchers have identified the success of sharing services is based on the participation behavior of potential users and providers of resources (Botsman and Rogers, 2010, Geron, 2013 as cited in John, 2013). According to Walsh, 2011 as cited in Belk (2014), sharing might be more acceptable With the growing concern about environmental protection and sustainable consumption. According to the current literature, the sharing economy has emerged because of the popularity of mobile intelligent devices and the improvement of information and communication technologies (Hamari et al., 2016).

The sharing economy can define a type of business that allows people to share any underused asset such as property, resources, time, and skills, across online platforms (Woskow, 2014). It is also called as the access economy, peer-to-peer (P2P) economy, gig economy, or collaborative economy.

In a traditional economy, the transaction objective is transferring the product ownership. The sharing economy has changed this perspective and it is based on „Access to“ rather than „ownership of“ physical and human assets like time, space, and skills” (Botsman & Rogers 2010 as cited Kim et al., 2015). In other words, people lend and borrow assets rather than purchasing. The drivers of the sharing economy include social media and information technology, which enabled online interaction (Heinrichs, 2013). In a variety of sectors, internet-based platforms have emerged that enable people to share their underutilized assets. Examples include Airbnb for apartments, Uber for cars, and Peerby for tools (Böcker & Meelen, 2017).

According to the researchers, the sharing economy has come about in the transportation industry with the use of a term called ride-sharing (Kuswanto et al., 2019). Among the other sharing services ride-sharing as a significant part of the sharing economy in the transportation sector, has become an increasingly popular model of travel (Woskow, 2014). The road traffic jam has always been increasing and it was affected to increase in the number of vehicles on the road. This reason is affected by the Switch from private vehicles to public vehicles that are faster and cheaper such as Uber, Lyft, Didi, and Grab. The sharing economy has become a global concern with increasingly popular sharing applications such as cars (Liu & Yang, 2018). Nowadays, different types of vehicles are used to provide ride-sharing services rather than cars, such as van, tuk-tuk, and motorbike.

Ridesharing service can make a significant change in the transportation industry through the use of new technology to convey the present demand of new generations like reduced travel time, travel cost, and traffic congestion (Bicocchi & Mamei, 2014). AS well as ride-sharing services create several potential benefits for several parties. For the drivers and passengers, ride-sharing service can reduce their travel costs and increase trip convenience (Agatz et al. 2012, Stiglic et al. 2015, Liu et al. 2017 as cited in Wang et al., 2018). Also, ride-sharing service creates the environmental benefit, it can improve the utilization of obtainable vehicle seat capacity, reduce the number of vehicles used for the personal drive, mitigate traffic congestion and reduce energy consumption and greenhouse gas emissions (Agatz et al. 2012; Teubner and Flath 2015 as cited in Wang et

al., 2018). For society, it creates a pathway for passengers to meet people with different professions and backgrounds and it also improves people's knowledge and trust among them (Kelley 2007, Morency 2007, Chan and Shaheen 2012 as cited in Furuhata et al., 2013).

The sharing economy started growing after the global financial crisis of 2008 when people faced financial difficulties. People re-evaluated their consumption patterns and the economic importance of motorbike ownership. They save on utilization and evaluate the use of motorbikes as ride-sharing (Kathan, Matzler, & Veider, 2016 as cited in Kuswanto et al., 2019). Nowadays, motorbike based ridesharing services have emerged around the world namely Uber Moto, Grab, Go-Jek, etc.

Among the other ridesharing service, motorbike based ridesharing service had significant benefits for passengers and also the riders. Unlike other ride-sharing services, motorbike based ride-sharing can take passengers on their doorsteps, and also they are faster and save time than other means of transportation services (Olubomehin, 2012). A study was done in Bangladesh founded that any other ridesharing services take around 1 hour and 30 minutes to reach the destination, with motorbike based ridesharing service can attend passengers' destination within 30 minutes (Wali Ullah & Islam, 2017). As well as motorbike based ride-sharing services effectively utilize motorbikes as well as initiate the extra earning facilities for motorbikers (Ghosh, 2018). As per the Wali Ullah and Islam (2017) motorbikes as a ridesharing service is much easier to travel through the traffic jam and avoid being stuck in bottlenecks.

## **12 Problem Statement**

Nowadays traffic congestion is becoming a serious issue in Sri Lanka. As per the result, it creates several negative consequences such as higher transit times, loss of productivity and environmental pollution, etc. Figure 1 graph shows the growth of the vehicle population in Sri Lanka from 2008 to 2017.

The below graph shows the vehicles growth rate is higher than the population growth rate between 2008 and 2017. According to the report by the Department of Motor Traffic, the number of vehicle registrations in 2018 has increased by nearly 6.45% or 29,146

compared to 2017 totaling to 480,799 vehicles. In the past decade, the number of vehicles in Sri Lanka has increased but roads and other related infrastructure have not been substantially enhanced to cater to those new vehicles added to the Sri Lankan transportation network.

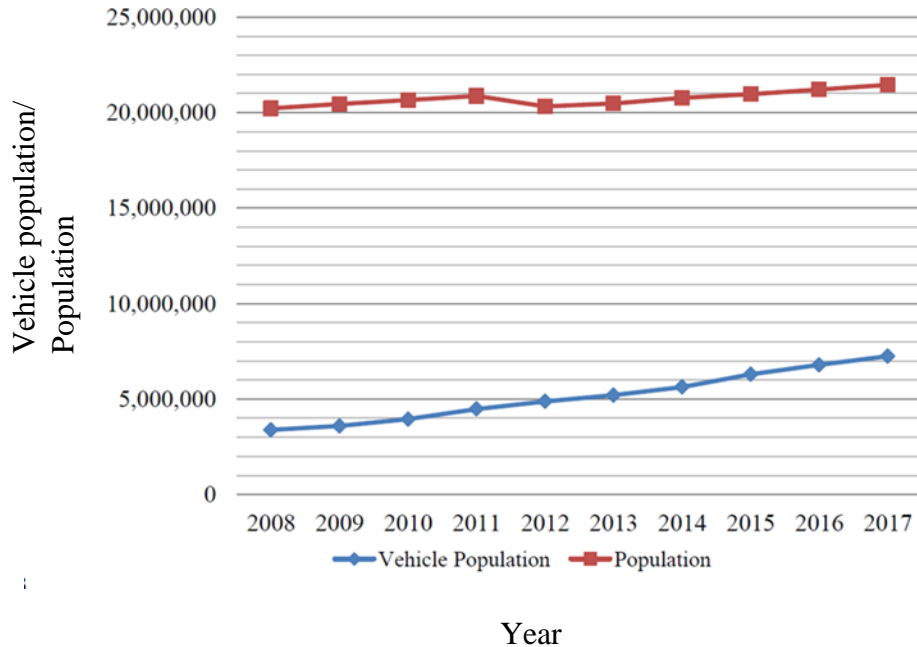


Figure 1.1: Vehicle population growth from 2008 to 2017 in Sri Lanka.

Source : (Sandaruwan et al., 2019).

When focusing on the Colombo district, the so-called commercial capital of the country has huge road traffic, even it has a comparatively well-developed road network. The city of Colombo attracts about 1.5 million floating population on any working day and with the addition of the resident population in the city, the total population increases to more than 2 million during the daytime (Range, 2012 as cited in Fernando, 2016) and over 500,000 vehicles are transporting these people within the city each day (Nuhuman, 2015 as cited in Fernando, 2016). The following graph shows the variation of vehicles and passengers into Colombo in 2015.

The figure 02 graph shows that the highest number of vehicles arriving in Colombo is related to private vehicles and also it shows a clear difference between private vehicles and other vehicles. It proves private vehicles are a major contribution to the traffic

congestion in the Colombo district. Although researchers (Sandaruwan et al., 2019) identified occupancy of a private vehicle is 1.87 passengers per vehicle and average vehicle speeds drop to 17 km/h during peak hours in the Colombo district. Therefore, it can be identified increasing the number of vehicles on the road and driving many vehicles with free seats directly affect increasing traffic congestion in the Colombo district, Sri Lanka.

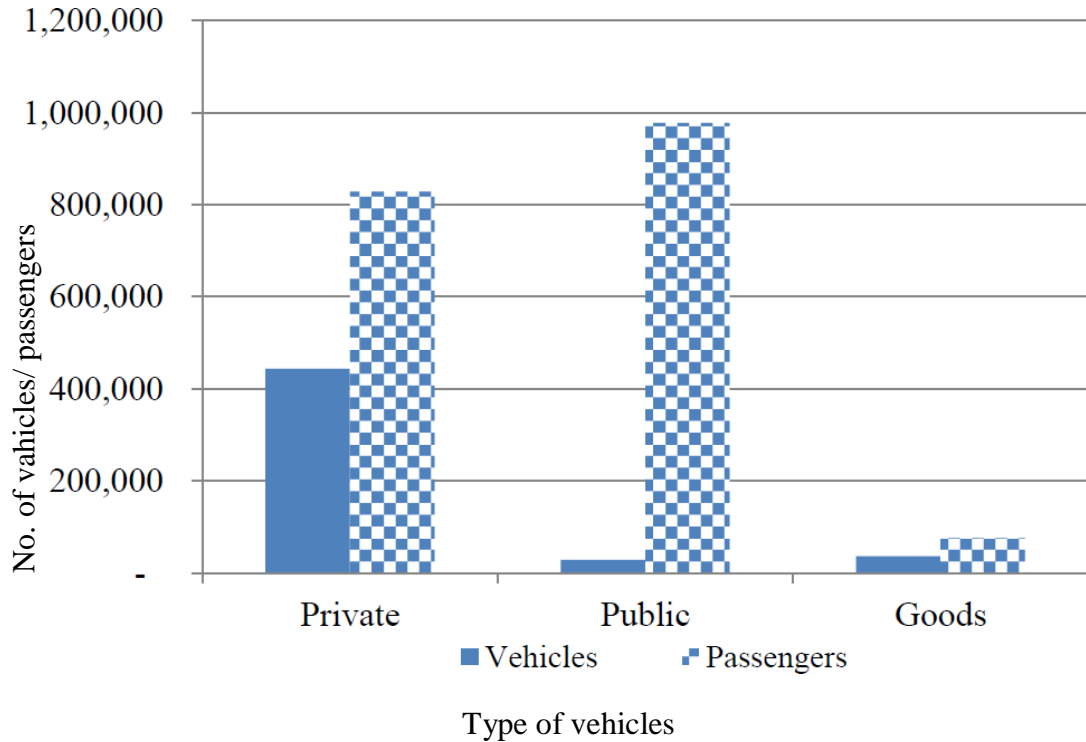


Figure 1.2 : Variation of vehicles and passengers into Colombo in the year 2015.

Source : (Sandaruwan et al., 2019)

Ride service enablers operate in many countries, both developed and emerging economies such as Sri Lanka. Uber, Pick Me, SLT muve ridesharing services for example, recently entered the Sri Lankan market. In last year these ride-sharing companies launched their latest service to Sri Lanka. They introduced motorbike based ride-sharing, namely UberMOTO and PickMe Bike to the Sri Lankan market. Now passengers can book a motorbike at the push of a button via the ride-sharing application through mobile phone or tab, just as book a tuk-tuk or car. Using this bike passenger can hail to get from Point A to Point B. Also motorbike based ride-sharing service is less

expensive when compared to other ride-sharing services. A passenger can avail of this service at a rate of Rs. 25 per km. The ride-sharing can increase the utilization of vehicle capacity and improve travel efficiency without increasing the load on urban infrastructure capacity, and then alleviate travel contradiction and traffic congestion in urban areas (Agatz et al., 2012, Li et al., 2016, Hong et al., 2017 as cited in Wang et al., 2019).

According to the current literature, the individual-level studies on the sharing economy have not received commensurate scholarly attention (Hamari et al., 2015) and empirical studies on ridesharing services are scarce, especially in emerging economies, and some research questions are still unanswered (Xie & Mao, 2017). When come to the Sri Lankan context, there are only two published studies found under the ridesharing services and those studies are focus on the applicability of ridesharing using Para transit (Jayasinghe & Sivakumar, 2014), and step to reduce traffic congestion in Sri Lanka (Sandaruwan et al., 2019). However, there are no any publish research find out under the motorbike based ride sharing concept in Sri Lankan context.

Therefore the researcher did a pilot survey (Appendix 01) for identifying how about the consumer intention to using a motorbike ride-sharing service at the Colombo district. The used measuring instrument for did a pilot survey has developed by (Wang et al. 2018) to identify consumer ride sharing intention. Considering the questionnaire it has consists of demographic information and measuring instruments with 3 items (Appendix A). These 3 items are measured by using Five- Point Likert scale which is ranging from 1 "strongly disagree" to 5 "strongly agree" while 3 is "Neutral". The researcher distributed 50 questionnaires in Sinhala language as google form (Appendix B) to gather data about the consumer intention to using a motorbike ride-sharing service at the Colombo district the researcher used 49 questionnaires for the preliminary survey by removing one questionnaire because of the some errors of it. Venkatesh & Morris ( 2000) founded gender is important for getting technology usage decisions. As well as ride-sharing services are based on new technology. Therefore, the researcher wants to identify who has low consumer intention to using motorbike ride-sharing services based on gender.

Table 1. 1 Actual Mean value of Consumer intention to using motorbike based ride-sharing services.

<b>Consumer intention to using motorbike ride-sharing services</b>	<b>Actual mean value</b>
<b>Male</b>	3.105
<b>Female</b>	1.967

Source: (Pilot survey, 2020)

As shown in Table 1.1, female consumers' intention is low (1.967) compared with male consumers' intention (3.105) to using motorbike ride-sharing services. Otherwise, the scale is 5 point Likert scale and the expected mean value is 3. The actual mean value of female consumers' motorbike ride-sharing services intention (1.967) is less than the expected mean value. Therefore, the researcher focused on the current study to measure the women consumers' intention to using motorbike ride-sharing services. According to Teo & Noyes (2014) age is significantly affect consumer intention. Therefore, the researcher further analysis women consumer intention to using ride-sharing services.

Table 1.2 Actual Mean value of women Consumer intention to using motorbike based ride-sharing services.

<b>Women consumers' intention to using motorbike ride-sharing services</b>	<b>Actual mean value</b>
<b>18-28 years</b>	1.818
<b>29-39 years</b>	1.833
<b>40-50 years</b>	2.167
<b>Above 50 years</b>	2.400

Source: (Pilot survey, 2020)

According to Table 1.2, the actual mean value of motorbike ride-sharing intention of women consumers' who are in the age category of 18-28 years (1.818) is less than the actual mean value of who are in the other age categories. Furthermore, the actual mean value of motorbike ride-sharing intention of women consumers' who are in the age category of 29-39 years (1.833) is closed to the lowest actual mean value (1.818) of women consumers' who are in the age category of 18-28 years. When compared with other age categories, women consumers' who are in the age category of 18-39 show the lowest intention to using motorbike ride-sharing services. Thereby, the researcher formulated the research problem statement of the current study as;

## **Why do women consumers' who are in the age category of 18-39 years, show less intention to using motorbike based ride-sharing service in Colombo district, Sri Lanka?**

### **13 Research Question**

The researchers (Wang et al., 2018) provide a framework for identifying consumer intention to using ride-sharing services and the theoretical framework is based on an extended Technology Acceptance Model(TAM). This framework direct considered 5 independent variables such as Perceived Ease of use, Perceived Usefulness, Perceived Risk, Personal Innovativeness, Environmental Awareness, and consumer intention as a dependent variable. Also, several previous studies (Arora & Rejikumar, 2017; Fleischer & Wahlin, 2016; Mohamad et al., 2016) have adopted TAM to investigate the intention of consumers to use these shared services and to validate their usefulness and feasibility. For example, Giang et al., (2017) technology acceptance model integrated with the theory of planned behavior (TPB) to explore Factors Influencing the consumer Intention to Adopt Ride-Sharing Applications and Lai ( 2014) used TAM for investigates the factors affecting consumers' use intention of a smart bike-sharing system.

Davis (1985) used the Theory of Reasoned Action (TRA) as a fundamental theory to develop TAM. However, there are considerable differences between those two theories. However, the original TAM does not include the subjective norm variable used to determine behavioral intention whereas the TRA does. Subjective norm can be described as the person's perception that most people who are important to him think he should or should not perform the behavior in question (Fishbein and Ajzen, 1975 as cited in Jakobsson, 1994). This study based on women consumers' intention to using motorbike ride-sharing services at Colombo district, Sri Lanka, and motorbike ride-sharing service was a new service recently introduced to the Sri Lankan market. In several countries in Asia as an example of Sri Lanka, women are socialized as part of an extended family led by traditional values and customs. While a boy enjoys a carefree childhood, a girl is taken care of, and a mature girl is always protected from interaction with the society around her. In most families, the eldest daughter, even at adulthood, lacks her youngest brother's decision-making ability (Herath, 2015). As well as a past study explored subjective norm



was more salient for women in the early stages of experience (Venkatesh et al., 2000 as cited in Venkatesh et al., 2003). Therefore researchers add subjective norm to the framework as an independent variable for identifying women consumers' intention to using motorbike ride-sharing services in Colombo district, Sri Lanka.

. Based on that literature, the researcher formulates the research questions as follows.

1. Does perceived usefulness impact on motorbike based ridesharing service usage intention of women consumers who are in the age category of 18-39 years in Colombo district, Sri Lanka?
2. Does perceived ease of use impact on motorbike based ridesharing service usage intention of women consumers who are in the age category of 18-39 years in Colombo district, Sri Lanka?
3. Does perceived risk impact on motorbike based ridesharing service usage intention of women consumers who are in the age category of 18-39 years in Colombo district, Sri Lanka?
4. Does personal innovativeness impact on motorbike based ridesharing service usage intention of women consumers who are in the age category of 18-39 years in Colombo district, Sri Lanka?
5. Does environmental awareness impact on motorbike based ridesharing service usage intention of women consumers who are in the age category of 18-39 years in Colombo district, Sri Lanka?
6. Does subjective norm impact on motorbike based ridesharing service usage intention of women consumers who are in the age category of 18-39 years in Colombo district, Sri Lanka?

#### **14 Research Objectives**

1. To identify whether perceived usefulness impact on motorbike based ridesharing service usage intention of women consumers who are in the age category of 18-39 years in Colombo district, Sri Lanka.

2. To identify perceived ease of use impact on motorbike based ridesharing service usage intention of women consumers who are in the age category of 18-39 years in Colombo district, Sri Lanka.
3. To identify perceived risk impact on motorbike based ridesharing service usage intention of women consumers who are in the age category of 18-39 years in Colombo district, Sri Lanka.
4. To identify personal innovativeness impact on motorbike based ridesharing service usage intention of women consumers who are in the age category of 18-39 years in Colombo district, Sri Lanka.
5. To identify environmental awareness impact on motorbike based ridesharing service usage intention of women consumers who are in the age category of 18-39 years in Colombo district, Sri Lanka.
6. To identify subjective norm impact on motorbike based ridesharing service usage intention of women consumers who are in the age category of 18-39 years in Colombo district, Sri Lanka.

## **1.5 Significance of the study**

### ***1.5.1 Theoretical significance***

In considering the Sri Lankan context, there are few published researches were found under the sharing economy concept. There is limited number of studies under the ride-sharing service (Sandaruwan et al., 2019; Jayasinghe & Sivakumar, 2014) and cannot be founded any research under the ride-sharing intention in the Sri Lankan context. Therefore this study will be very worthwhile to reveal the factors affecting to the Women consumer's intention to using motorbike based ride-sharing services. Also, newly identified factors may be support expand the riding sharing concept.

### ***1.5.2 Practical Significance***

The results of this study support to ride-sharing companies to get an idea of why women consumers are showing less intention of using motorbike ride-sharing services in Sri Lanka. After considering the findings of the study, top management of the ride-sharing companies can identify critical barriers of women consumer's intention to using motorbike ride-sharing services. This study will be helpful for ride-sharing companies to

develop policies to increase the women consumers' motorbike based ride-sharing usage to reduce the traffic congestion in the Colombo district and achieve the sustainability goal.

## **16 Limitation of the Study**

The researcher had to face some limitations when carrying out the current study which are unavoidable due to several reasons.

This study is based on women consumers' who are in the age category of 18-39 years in the Colombo district. Hence the current study will be much effective if the research can be carried out by using the women consumers' who are in the age category of 18-39 years in all districts currently available of these services as the population. And also this research is not focused on the women consumers' who are in specific ridesharing service providers and this research will consider all women consumers' with or without ridesharing experience in the Colombo district. Therefore, the researcher will not able to recognize the factors impact on women consumers' behavioral intention of individual motorbike based ridesharing service providers in the Sri Lankan ridesharing service market. Further, approximately 28% of the respondents did not use any ridesharing services before and, they had to guess factors regarding risk, convenience, of the ridesharing services. Therefore, it may be limit the validity of the current study.

## **17 Chapter Organization**

The first chapter describes the background of the study and then it provides a basic understanding of the research problem to be addressed through this study. After that, it formulates research questions, research objectives, and hypotheses of the study that are intended to achieve by the study. Then it discusses how this study is significant for decision-makers and how this study is contributed to the existing body of knowledge. The latter part of the chapter presents the limitations of the study and how chapters are organized.

Chapter two comprehensively discusses consumer intention with the support of the previous studies and factors impact on consumer intention to using ride-sharing services.

Chapter three provides the methodology part of the study. Under that it explains the research site, research approach, research design, and population and sampling method, the way data is collected, what are the data analysis tools that the researcher is going to use for the study to analyze the data.

Chapter four indicate the data presentation, analysis of gathered data, interpretation of analysis, and decision on the results of the data analysis and discuss the theoretical and practical implications of the study.

Chapter five provides a conclusion that is gained through the findings, recommendations for decision-makers and it gives directions for future researchers who are interesting to conduct researches in the future.

## **CHAPTER 2**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

The following chapter has described the global overview of the concept of sharing economy and consumer intention in ride-sharing services, theoretical and empirical literature review on consumer intention in ride-sharing. Also, the researcher has explained the main determinants of consumer intention in ride-sharing services and identified research gaps.

#### **2.2 Global Overview on Concept of Sharing Economy**

The “sharing economy” term was first used by Professor Lawrence Lessig in 2008 at Harvard Law School. Sharing is not a new concept and when people started living in societies, they shared their resources with their relatives, neighbors, and friends. According to past scholars, the Sharing economy is an umbrella term and researchers defined the sharing economy has several ways based on different perspectives namely economic perspective, social perspective, and communication perspective (Plewnia & Guenther,

2018). The Oxford Dictionary provides a sharing economy definition as “An economic system in which assets or services are shared between private individuals, either for free or for a fee, typically using the internet”. Based on past studies Schor (2014) divided four categories to sharing economy as “recirculation of goods, increased utilization of durable assets, exchange of services, and sharing of productive assets” (Schor 2014 as cited in Suhud et al., 2019) and Martin (2016) suggested 6 consequences regarding sharing economy namely, “economic opportunity, more sustainable form of consumption, Pathway to a decentralized, equitable and sustainable economy, creates unregulated marketplaces, incoherent field of innovation, and reinforces the neoliberal economy”. The sharing economy has created ecological benefits, because the secondary market reduced the new product demand, so users carbon footprint go down (Schor, 2016). This innovative economic model was nominated as „one of 10 ideas that will change the world“ by TIME magazine in 2011 (Kim et al., 2015) and nowadays in a different sector, internet-based sharing platforms have facilitated people to share their underutilized resources as examples Airbnb for home-sharing, Peerby for tool sharing, Blablacar for car sharing, Mobike for bike-sharing, Kickstarter for crowdfunding, Spotify for music-sharing, Uber for ride-sharing.

### **2.3 Ridesharing service**

Ridesharing service is a new technological innovation in the transportation sector and it connects drivers and passengers through a smartphone application (Nor et al., 2016). Amirkiaee & Evangelopoulos (2018) defined ridesharing as any use of an automobile that includes, in addition to the driver, non-dependent passengers, without a fully commercial/formal relationship, with an agreement to share the ride, and with or without sharing the travel costs. According to the past studies, ride-sharing services provide better service than a traditional taxi with a faster time, reduces the cost of money and cost of waiting (Ngo, 2015 as cited in Nor et al., 2016). In recent years, the ride-sharing system extended by technological innovation availability such as IoT (Internet of Things), WoT (Web of Things), and smart mobile devices namely mobile phones, tab, notebook, etc. (Farin et al., 2017). This service more efficiently and effectively utilize the vehicles with different transportation modes (Islam et al., 2019) generally cars, motorbikes, and tuk-tuks. Hasan (2017) explored ride-sharing service is not a „magic bullet“ to resolve traffic

congestion but it was a „middle-class urban solution“ to serve wide mass ( Hasan, 2017 as cited in Ghosh, 2018).

The first ridesharing organization (Car-Sharing Club) was led by the United States government to reduce fuel consumption during the second world war and different ridesharing methods emerged as a result of the oil crisis in 1970 (Furuhata et al., 2013). Chan & Shaheen (2012) categorized North American ride-sharing evolution into 5 key phases such as the World War II car-sharing club, energy crisis, early organized ridesharing scheme, reliable ride-sharing system, and technical advancement. The concept of a ride-sharing service has a long history, however recently it has much popular in emerging economies like Sri Lanka. A new generation of passengers link with providers through technical platforms called „dynamic ridesharing“ has been developed since 2004 (Li et al., 2018) and Uber, Grab, Lyft are examples for more popular dynamic ridesharing companies around the world. There are several necessary technical requirements need for dynamic ridesharing platforms including, mobile phone, constant network connectivity, Global Position System (GPS) functionality, ride-matching algorithm, and data repository. Most of dynamic ridesharing services integrate additional features such as Providers allow users to create and save personal profiles with Personal information, allow participants to rate one another ( provider, passenger evaluation system), and facilitate automatic transactions through online payment systems (Amey et al., 2011).

Most of the developed countries such as the United States, Britain, Canada, and Germany have actively engaged to proclaimed a wide portfolio of policies to encourage ridesharing participation which aims to mitigate traffic congestion and develop environmental friendly travel habits (Collura 1994; Huang et al. 2000; Caulfield 2009 as cited in Wang et al., 2018). Joseph et al. (2006) explored in their study the creative ridesharing services have a considerable positive impact on the urbanites' life as well as for the society (Joseph et al. 2006 as cited in Islam et al., 2019). The global penetration rate of the ridesharing service was 8.3% in 2017 and estimated this rate will reach 13% by within 5 years (Thakur and Jain, 2020).

This innovative service has now become a basic requirement in a woman's life whose husbands are busy with their work, or girls attending school or university, or even aunts or grandmothers who can't travel alone or drive any longer. According to Zafar (2018), females have more intention to using ridesharing services as compared to males. Moreover, researchers identified women users who are divorced or widow prefer Uber as a ridesharing service more because they should feel the sense of high safety in adopting this service (M & G, 2017).

#### **2.4 Motorbike based ridesharing services (MBRS)**

Nowadays, peoples are using different types of vehicles such as cars, bikes, tuk-tuks, and motorbikes as a means of ride-sharing services. MBRS is much faster, efficient, and low cost when comparing the other ride-sharing services (Wali Ullah & Islam, 2017). passengers are no longer willing to wait for a traditional motorcycle taxi at certain places and they can simply request MBRS through the ridesharing application on a smartphone, the providers can pick up the passengers quickly (Amin & Warjio, 2019). In their study of GrabBike service analysis, Nguyen et al. (2016) identified 77% of respondents chose a motorbike as their key transport means because of its convenience, flexibility, and cost savings (Nguyen et al., 2016 as cited in Loan & Hung, 2019). According to the recent World Bank study (2017) of Bangladesh, their capital city (Dhaka) average speed is 7.0-8.0 kmph and the car moves 12 kmph whereas ridesharing bikes ( Pathao) moves at 16 kmph (Akhter, 2018 as cited in Ghosh, 2018). It is justified again the MBRS is more efficient rather than the other ridesharing services.

#### **2.5 Consumers intention**

Several theorists are agreed that consumer intention is a reliable predictor to measure an individual's performance of the specific behavior (Ajzen, 2005; Fishbein and Ajzen, 1975; Fisher & Fisher, 1992; Gollwitzer, 1993; Triandis, 1977 as cited in Fleischer & Wahlin, 2016). Therefore, many studies have been done in different contexts and industries to find out the factors that affect consumer intention. Ajzen, (1991) defined consumer behavioral intention as how hard individuals are willing to try, how much of an effort they are planning to exert to perform or not perform some specific future behavior. When studying ridesharing services, it is more important to investigate the determinants



of the consumers' willingness of ridesharing. Therefore, it is necessary to deeply investigate consumers' perception of ridesharing and the factors that affect consumers' intention to use ridesharing services. The researchers have revealed the main theoretical models to identify the determinants of intention to use ridesharing.

### ***2.5.1 Theoretical models to identify the determinants of intention to use ridesharing***

In the current days, the researchers used several theoretical models to find out the factors impact on consumers intention to using ridesharing services such as the extended theory of plan behavior (Giang et al., 2017) and, extended technology acceptance model (Wang et al., 2018).

#### Technology acceptance model (TAM)

The technology acceptance model (TAM), proposed by Fred Davis in 1986, and currently, it's become an influential model in investigating factors affecting users' acceptance of the technology (Marangunić & Granić, 2015). TAM has derived from the Ajzen and Fishbein's (1980) psychology-based theory of reasonable action (TRA) and theory of planned behavior (TPB) (Marangunić & Granić, 2015), to understand individual's intention to use an information system based products and services, such as online games, online learning, and social media (Yu et al., 2018). TAM proposed that perceived ease of use (PEOU) and perceived usefulness (PU) are two primary factors of consumers' usage attitude and intention toward a new technology. However, Davis et al. (1989) was removed Attitude towards using a technology construct in their final model because of mediation of the impact of beliefs (perceived usefulness, perceived ease of use) on the intention by attitude is weak rather than direct link between beliefs and consumer intention (Venkatesh, 2000). As well as some researchers identified basic TAM, PU directly impact to consumers' intention towards adoption (Shyu & Huang, 2011 as cited in Kaushik et al., 2015) and, PEOU directly and indirectly (through PU) impact to consumers' intention towards adoption (Van der Heijden, 2003, 2004 as cited in Kaushik et al., 2015). The TAM framework proposed by Davis (1989) is depicted in Fig 2.1.

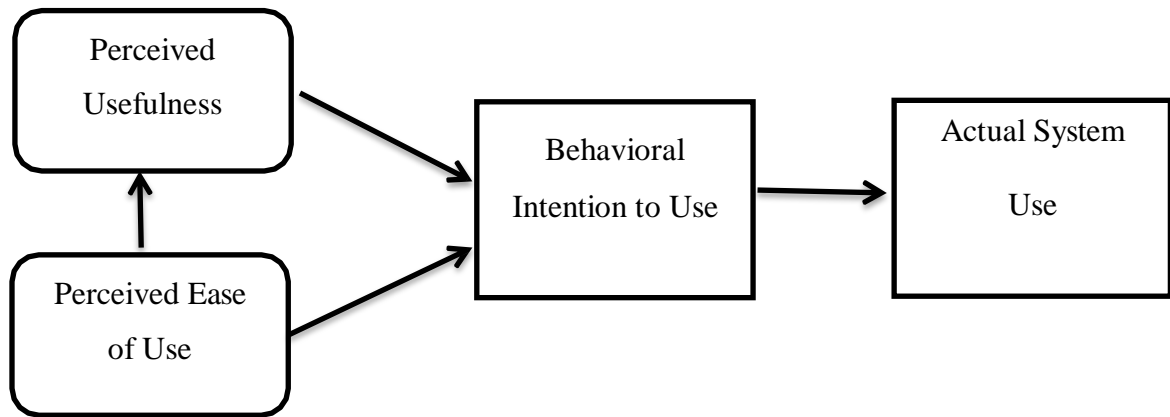


Figure 2. 1: Technology Acceptance Model

Source: Venkatesh et al., (2003)

According to the below literature, TAM has used several shared service studies to examine consumer intention to those sharing services.

Ardra and Rejikumar (2017) used TAM with few modifications to examine the women consumers' adoption intention to ridesharing service of Uber in Kochi, India. They inserted perceived safety and perceived price advantage impact to the model and the result showed perceived safety and perceived ease of use were the most significant variables towards the women adoption intentions to ridesharing service of Uber.

Lai (2014) in their study on "User Intention of a Smart Bike-Sharing System" used extending TAM with trust to explore the factors affecting consumers' use intention of a smart bike-sharing system in Taipei. They founded integration of trust as a variable with TAM represents an acceptable and practical method to investigate the intention to use the YouBike system.

Fleischer & Wahlin (2016) integrated TAM with the theory of plan behavior (TPB) to examine factors impact of the intention of Swedish generation Y consumers to use the ridesharing services of Uber in Sweden. The result of their study showed attitude towards the use of Uber services is influenced by the factors perceived ease of use and perceived usefulness and also generation Y consumers are not substantially influenced by the subjective norm.

As well as, Zafar and Rahman, (2018) integrated TAM with the theory of plan behavior (TPB) and Hofstede Cultural Dimensions to examine “factors influencing the adoption of ridesharing service of UBER in Bangladesh and Pakistan”. Their empirical findings show that Risk negatively affects the user behavioral intention and attitude towards behavior is highly positively significant when it is moderated by masculinity.

Some researchers used TAM, investigate to Factors Influencing the Intention to Adopt Ride-Sharing Applications in Taiwan (Giang et al., 2017). Researchers integrated TAM with TPB to examine influential factors and they identified perceived usefulness and perceived ease of use has a positive influence on attitude toward ridesharing behaviors.

A study was done on “Customer’s Intention to use Uber Service in Tourism Destination” (Mohamad et al., 2016) used TAM for identifying factors that influence consumer’s intention to use Uber app over traditional taxis in a tourism destination.

Further, the bellow summary table will help to review the methodology of existing literatures under the sharing services.

#### Methodological Review

<b>Research</b>	<b>Authors</b>	<b>Approach</b>	<b>Research Strategy</b>	<b>Data Collection Method</b>	<b>Data Analysis Method</b>
Consumers’ intention to use ride-sharing services: using an extended technology acceptance model	(Wang et al., 2018)	Quantitative	Survey	Questionnaire	Confirmatory factor analysis (CFA) and path analysis (PA)
Adoption intentions of women in kochi regarding uber services	(Ardra & Rejikumar, 2017)	Quantitative	Survey	Online Questionnaire	Structural Equation Modeling
Exploring Use Intention of a Smart Bike-	(Lai, 2014)	Quantitative	Survey	Questionnaire	Confirmatory factor analysis

Sharing System- Extending Technology Acceptance Model with Trust					
The intention of generation Y to use Uber	(Fleische r & Wahlin, 2016)	Quantit ative	Survey	Online Questionnai re	Regression analysis
Factors influencing adoption of Uber in Bangladesh and Pakistan	(Zafar & Rahman, 2018)	Quantit ative	Survey	Online Questionnai re	Regression analysis
Factors Influencing the Intention to Adopt Ride-Sharing Applications: A Case Study in Vietnam	(Giang et al., 2017)	Quantit ative	Survey	Online Questionnai re	Regression analysis

Source: (Developed by Researcher, based on literature 2020)

## 2.6 Determinants of intention to use motorbike based ridesharing services

A study done by (Wang et al., 2018), on the factors affecting consumers' intention to use ride-sharing services in China, has been modified the TAM by replacing three factors. Wang et al., (2018) added perceived risk, personal innovativeness and, environmental awareness to their developed model. It included perceived ease of use (PEOU), perceived usefulness (PU), perceived risk, personal innovativeness and, environmental awareness were the independent variable and behavioral intention was the dependent variable.

Also, Venkatesh and Davis (2000) founded subjective norm have a direct impact on users behavioral intention and they proposed extensions to TAM with integration of Subjective norm, an examination of gender differences in the role of the original TAM constructs. Therefore, they developed an extended technology acceptance model named TAM 2 with an integrated subjective norm as a construct (Marangunić & Granić, 2015). As well as

past research reveals that subjective norm has an important role throughout the early stages of innovation acceptance. (Taylor & Todd, 1995 as cited in Kaushik et al., 2015). Based on the literature, the present research tries to add subjective norm to the framework model to better understand women consumers' intention to use motorbike based ride-sharing services.

The current study conduct on identify factors affecting women consumers' intention to use MBRS service in the Sri Lankan context. Therefore, the researcher adopts the framework developed by Wang et al., (2018) to integrate with subjective norm as a dimension to fulfill the purpose.

### ***2.6.1 Perceived Usefulness (PU)***

Perceived ease of use (PEOU) and perceived usefulness (PU) are the two fundamental determinant factors of TAM and have been used to determine their influence on consumers' usage attitude and behavioral intention towards new technological adoption (Davis 1989 as cited in Wang et al., 2018).

The perceived usefulness defined by Davis (1989) as the degree to which a person believes that using a particular system would enhance his or her job performance (Davis, 1989 as cited in Venkatesh et al., 2003). Past studies, such as Taylor and Todd (1995b), Szajna (1996), and Venkatesh and Davis (1996) founded that perceived usefulness remains a significant determinant of behavioral intention (Venkatesh & Morris, 2000). As well as, researchers identified perceived usefulness directly impacts consumers' intention toward adopting the new technologies (Shyu & Huang, 2011 as cited in Kaushik et al., 2015).

In the context of ridesharing service, perceived usefulness refers to an individual's perceptions of using a ridesharing service is useful for achieving their purposes of reducing transportation expenditures, increasing trip convenience, reducing greenhouse gas emissions, and mitigating traffic congestion. As well as, Wang et al. (2018) find out PU has a significant positive relationship with consumers' behavioral intention. Further, the researchers identified PU has a significant impact on consumers' intention to use Commercial Bike-sharing Systems (Yu et al., 2018). Furthermore, Fleischer & Wahlin,

(2016) identify PU positively influence consumers' behavioral intention to using the ridesharing service of Uber.

### ***2.6.2 Perceived Ease of Use (PEOU)***

Perceived ease of use is the degree to which a person believes that using a particular system would be free of effort (Davis, 1989 as cited in Venkatesh et al., 2003). PEOU directly and indirectly (through PU) affects consumers' intention towards adoption (Van der Heijden, 2003, 2004 as cited in Kaushik et al., 2015). Park et al. (2014) addressed, when consumers are deciding to experience innovative technology, they are concern about willingness if it's easy to use and beneficial to their purpose (Park et al. 2014 as cited in Wang et al., 2018).

In the ridesharing context, perceived ease of use refers to the degree to which an individual's perception of using a ride-sharing service is not too difficult. In this context, easy to travel and pickup in doorstep are all considered under the PEOU. Fleischer and Wahlin (2016) identified identify PEOU has a positive influence on consumers' behavioral intention to use the ridesharing service of Uber. As well as Ardra & Rejikumar (2017) find out PEOU has a significant positive impact on the behavioral intention of women in Kochi regarding the ridesharing service of Uber.

### ***2.6.3 Perceived Risk (PR)***

Consumer's negative impression of the adoption of a new product or an innovative service represents a perceived risk. Some past studies have identified perceived risk as a critical resistance factor of consumers' behavioral intention to accept a new technology or use an innovative service (Kim et al., 2008 as cited in Wang et al., 2018). The concept of perceived risk appeared in the marketing literature, Jacoby and Kaplan (1972) identified seven types of risks namely financial, performance, physical, psychological, social, time, and opportunity cost risk (Kim et al., 2008).

In a ridesharing context, perceived risk is defined as "the potential for losses (or negative consequences) consumers perceived in the pursuit of desired outcomes when using ride-sharing services" (Wang et al., 2019). Ride-sharing services are based on the online service such as mobile Internet, GPS technology, and also offline services. so it creates

consumers to more potential risks than traditional taxi services, including financial, privacy, and physical risks (personal and property) (Zhu et al., 2017 as cited in Wang et al., 2019). Trusting and sharing rides with unknown persons(drivers) may increase the consumers' (passengers) perceived risk. Wang et al. (2018) identified PR negative relationships with consumers' intention toward ridesharing services and, Wang et al., (2019) find out PR negative effects on consumers' willingness to use ride-sharing services.

#### ***2.6.4 Personal Innovativeness (PI)***

Personal innovation refers to the extent to which a consumer appears to accept new things earlier than others (Rogers 1995). As an example person tends to adopt new technology, new products, and service before used some others represent a personal innovativeness. Ridesharing service is a technology-based innovative service and, some past studies explored PI is a significant factor in predicting the intention of consumers to adopt new technologies (Cheng and Huang 2013 as cited in Wang et al., 2018). The researchers stated, personal innovativeness is a key personal characteristic that influences the consumer's acceptance of new technology (Girod et al., 2017). As well as in their study, Yi et al. (2006) founded a significant relationship between personal innovativeness and adopter innovativeness (Yi et al., 2006 as cited in Jackson et al., 2013). Furthermore, Wang et al. (2018) identified PI positively effect on consumers' intention to using ridesharing services. It shows innovative persons are adaptable to change and will be more likely to see the potential of novel innovation and new technologies as being appropriate with their purpose.

#### ***2.6.5 Environmental Awareness (EA)***

Environmental awareness refers to knowledge and concerns about the climate and environmental impacts of human behavior (Schuitema et al. 2013 as cited in Wang et al., 2018). Those who are concerned about their behavioral impacts to the environment are more likely to engage in green consumption behaviors (Antil, 1984 as cited in Yoo et al., 2013). Further, people who need to fit their self-image as „green“ images are more likely to have a positive perception of environmental awareness.

The ridesharing service concern as an environmentally friendly service and, the researchers stated people with knowledge of environmental issues may easily change their attitudes towards environmentally friendly products or services (Schuitema et al., 2013). Moreover, Schuitema et al., (2013) addressed EA is a significant determinant for change individuals current behavior to more ecologically friendly. Wang et al. (2018) identified EA has positively related to the consumers' intention towards ridesharing services. As well as the past study done by Zhang et al. (2013) investigate consumers' intention to adopt a hybrid electric vehicle, identified environmental awareness is one of the significant extent that influences consumers' adoption intention (Zhang et al. 2013 as cited in Wang et al., 2014).

#### **2.6.6 Subjective Norm (SN)**

The concept of subjective norm (SN) was firstly introduced by Fishbein and Ajzen (1975) from rational behavioral theory (Kaushik et al., 2015). Ajzen (1991) defined Subjective norm as an individual's perceived social pressure from other people or groups who are important to him/her that wish or expect him/her to perform in a certain way (Ajzen 1991 as cited in Wang et al., 2014).

In the sharing economy, Subjective norm refers to the individual's perception of the social pressure to participate or not in sharing services (Matzner et al., 2015). In their study of "generation Y consumers to use the services of Uber" Fleischer and Wahlin (2016) described a positive subjective norm towards ridesharing, which could lead to a positive behavioral intention and negative subjective norm towards ridesharing, which could lead to a negative behavioral intention to use the ridesharing services. A past study done by Giang et al., (2017) Subjective norm has positively influences the consumers' intention to use ride-sharing applications. Furthermore, Reyad et al.,(2019) find out Subjective norms are positively related to female citizens' intentions to use bike-sharing.

#### **2.7 Research Gap**

In considering recent studies done on ridesharing, most of them can be found under the foreign context rather than the local context. When it comes to the Sri Lankan context, there are only two published studies found related to the ridesharing concept. Out of them, a study has shown that the applicability of ridesharing using Para transit



(Jayasinghe & Sivakumar, 2014), and the other one discussed a step to reduce traffic congestion in Sri Lanka (Sandaruwan et al., 2019). Therefore, the researcher identified the contextual gap by referring to the literature.

As well as, the current literature regarding ridesharing services more focused mainly on developed countries rather than emerging economies (Islam et al., 2019). Further, most previous research on online transport services focused mainly on technology adoption (Nguyen et al., 2015 as cited in Loan & Hung, 2019) and taxi service without paying enough attention to motorbike service (Khairani & Hati, 2016; Isradila & Indrawati, 2017 as cited in Loan & Hung, 2019). And also not much published past studies are available based on the gender difference in the context of ridesharing services (Sharma, 2019).

Furthermore, there are few studies find out under the consumer intention to using ridesharing services. However, there are no any publish studies find out under the consumers' intention towards motorbike based ridesharing service.

Therefore, there is still a knowledge gap about the users and providers' intentions, benefits, challenges, and background of ridesharing services in emerging economies like Sri Lanka.

## **2.8 Summary**

As the second chapter of the study, the literature review provides an insight into the literature on existing research context. The researcher's review of recent studies about Concept of Sharing Economy, Ridesharing service, Motorbike based ridesharing services and Consumer intention are presented through this second chapter. Then the researcher discussed about the theoretical models based for the current study such as TAM model and also about the six independent variables which found as the determinants of intention to use motorbike based ridesharing services like perceived ease of use (PEOU), perceived usefulness (PU), perceived risk, personal innovativeness, environmental awareness and subjective norms. The research gap is also presented at finally. The upcoming third chapter discusses the methodology of the research study.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

The purpose of this chapter is to present the methodological detail of the study. This chapter covers the research site, conceptualization and operationalization, research approach, research design, sample design, the source of data, data collection procedure, data analysis and presentation methods, time frame, and Finally, a summary of the chapter.

#### **3.2 Research Site and the Rationale for Site Selection**

Sri Lanka is undergoing rapid urbanization as a developing country, and it increases the need for mobility. Therefore people use several transportation modes to fulfill their mobility and passengers who primarily use public transport modes (busses and trains) as their transportation mode are always face major issues related to safety, comfort, and quality of transportation. As per the result of those issues, people move to use a higher number of private vehicles, and its effect to create heavy traffic congestion and higher demand for parking space in major cities in Sri Lanka.

Colombo has become one of the heavy traffic congestion and environmental pollution city in Sri Lanka due to its economic value. In 2004 average traffic speeds within the Colombo Metropolitan Region (CMR) have around 20 km/hr (Kumarage, 2004), and in

2012 average traffic speeds between locations for Petta are five Kilometers per hour (Fernando & Fernando, 2016). It clearly shows how continuously increasing traffic congestion in the Colombo district, Sri Lanka.

### 3.3 Conceptualization and Operationalization

#### 3.3.1 Conceptual Framework

The conceptual framework developed by researchers by referring to existing literature and it shows the relationship between the independent variable and the dependent variable in this study.

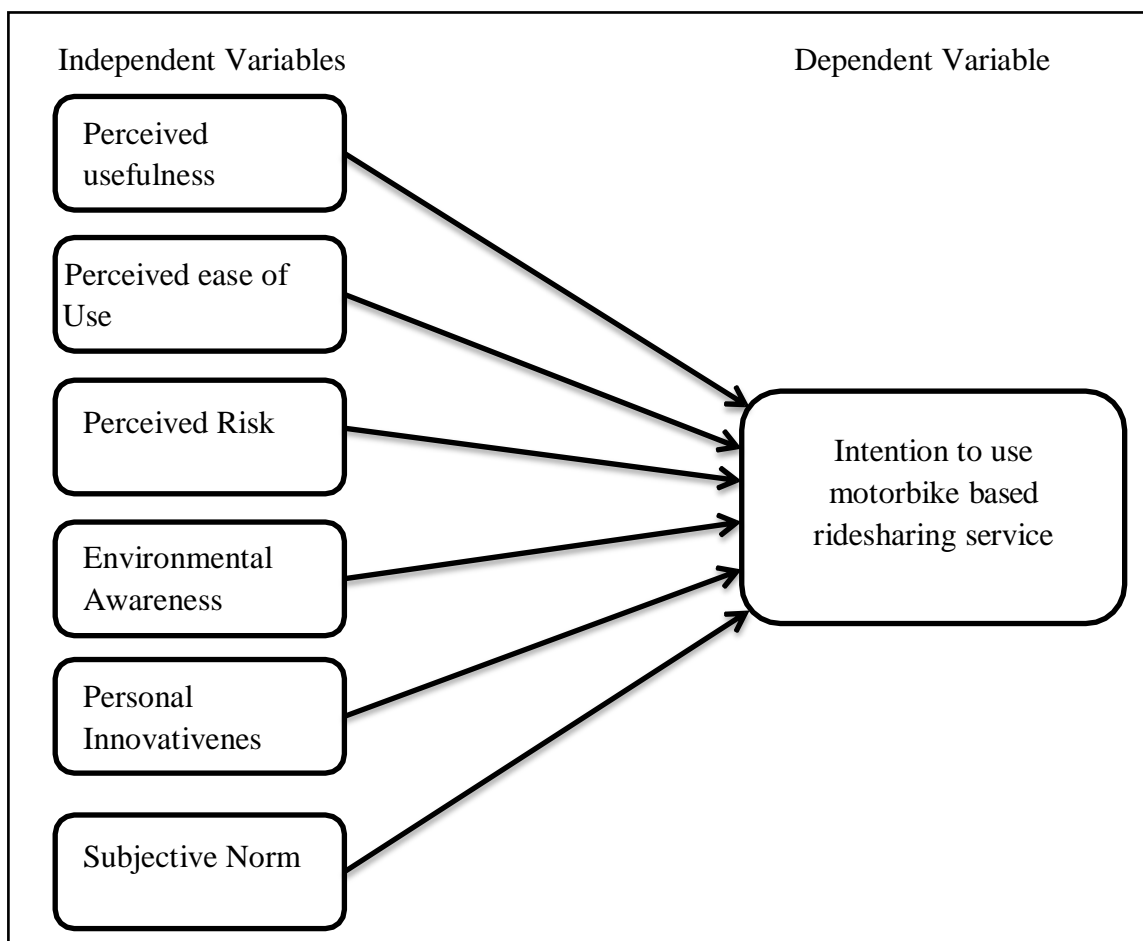


Figure 3.1 Conceptual Framework

Source: (Developed by Researcher, based on literature 2020)

#### 3.3.2 Rational for Hypothesis Development

##### Perceived Usefulness

As a backdrop of the literature, showed that the perceived usefulness dimension is the largest effect on intention to use ride-sharing services (Wang et al., 2018). Further Lai, (2014) founded PU dimension has a direct effect on customers' behavioral intention to use a smart bike-sharing system. Moreover, a study found that there is a significant impact of PU on behavior intention toward sharing economy (Liu & Yang, 2018). In contrast, a study was done by Ardra and Rejikumar (2017) in Kochi, identified PU does not impact on the intention to use the ridesharing service of Uber. However, the authors argued the number of questions based on this variable is low or respondents have been misinterpreted when responding maybe effect to this result. Also, this can be different in the Sri Lankan context. Hence, the researcher formulated the hypothesis as:

**H<sub>1A</sub>:** Perceived Usefulness impact on motorbike based ridesharing service usage intention of women consumers who are in the age category of 18-39 years in Colombo district, Sri Lanka.

### **Perceived Ease of Use**

Liu & Yang (2018) have reported that a positive relationship exists between the perceived ease of use dimension and behavioral intention in sharing economy. In their study, Ardra & Rejikumar (2017) revealed the PEOU dimension was the most contributing variable towards the consumers' adoption intention of the ridesharing service of Uber. Furthermore, a study of "Investigation on Factors Affecting Behavioral Intention to Use Bike-sharing in Nanning" proved PEOU has a significant impact on behavior intention to sharing services (Liang, 2019). Therefore, based on the same logic researchers developed the second hypothesis as:

**H<sub>1B</sub>:** Perceived ease of use impact on motorbike based ridesharing service usage intention of women consumers who are in the age category of 18-39 years in Colombo district, Sri Lanka.

### **Perceived Risk**

Researchers identified perceived risk dimension has a significant negative impact on adoption usage intention to technology-based services (Thakur & Srivastava, 2014). It

was confirmed by several authors in the literature in different contexts. In the sharing economy, literature explored the perceived risk has a negative and significant effect on users' intention to participate in the sharing services (Lee et al., 2018). In the ridesharing context, Wang et al. (2018) have reported perceived risk has a statistically significant negative effect on intention to use ridesharing services. Moreover, A past study was done by Mittendorf (2017) identified the perceived risk of the ridesharing service of Uber significantly affect the user's intention to create an Uber account. Thus, researchers proposed the third hypothesis as:

**H<sub>1C</sub>:** Perceived risk impact on motorbike based ridesharing service usage intention of women consumers who are in the age category of 18-39 years in Colombo district, Sri Lanka.

### **Personal Innovativeness**

Current literature identified personal innovativeness dimension is relevant to the consumers' participation in collaborative consumption in the travel context (Tussyadiah, 2015). Ridesharing studies also have confirmed the personal innovativeness positively associated with consumers' intention to use ride-sharing services (Wang et al., 2018). Further, a study of "consumers mobile payment service intention in India" (Thakur & Srivastava, 2014) founded Personal innovativeness is a construct in adoption usage intention at the early stages of the innovative service. As well as Aldás-Manzano et al. (2009) provided evidence for consumer innovativeness has a major role in the consumers' intention of using technology-based services. Therefore, the researcher conveyed the fourth hypothesis as:

**H<sub>1D</sub>:** Personal innovativeness impact on motorbike based ridesharing service usage intention of women consumers who are in the age category of 18-39 years in Colombo district, Sri Lanka.

### **Environmental Awareness**

According to the findings of Tussyadiah (2015) protect the environment as the driver of collaboratively consumption the resources. Moreover, Wang et al. (2018) explored the

environmental awareness dimension is an effect on consumers’ intention to use ride-sharing services. Furthermore, electric vehicle studies also have confirmed that environmental awareness directly influenced the consumers’ intentions (Okada et al., 2019). As well as relating to the service industry, the study revealed environmental awareness significantly impact on customers’ intention to use eco-friendly services (Han et al., 2011). Hence, the researcher formulated the hypothesis as:

**H<sub>1E</sub>:** Environmental awareness impact on motorbike based ridesharing service usage intention of women consumers who are in the age category of 18-39 years in Colombo district, Sri Lanka.

### **Subjective Norm**

Existing literature shows Consumers’ subjective norms are effects on individuals’ intention to consume collaboratively (Roos & Hahn, 2019). In the bike-sharing context, researchers identified subjective norms have a significant impact on women users’ behavioral intention toward bike-sharing (Reyad et al., 2019). Further, Giang et al. (2017) revealed subjective norm has positively influenced the intention to use ride-sharing applications. A study done by Fleischer and Wahlin (2016) revealed subjective norm dimension is an impact on consumers behavioral intention toward the ridesharing service of Uber. As well as subjective norm directly and significantly impact consumers’ behavioral intention towards adopting new technology-based services (Kaushik et al., 2015). Based on current literatures the researcher developed the following hypothesis as:

**H<sub>1F</sub>:** Subjective norm impact on motorbike based ridesharing service usage intention of women consumers who are in the age category of 18-39 years in Colombo district, Sri Lanka.

### **3.3.3 Conceptualization**

Table 3. 1: Conceptualization

Variables	Definitions	Source
<b>Behavioral Intention</b>	How people are willing to try, how much of an effort they are planning to exert to use or not use the	(Wang et al., 2018)

	ridesharing service of motorbike based ridesharing service.	
<b>Perceived Usefulness</b>	Consumer idea about that using a ride-sharing service is useful to obtain their goals	(Wang et al., 2018)
<b>Perceived Ease of Use</b>	Consumer idea about that using a ride-sharing service is not too difficult.	(Wang et al., 2018)
<b>Perceived Risk</b>	Financial, product performance, social, psychological, physical, or time risks in the pursuit of a desired outcome of using service of motorbike based ridesharing.	(Featherman and Pavlou, 2003; Wang et al., 2018)
<b>Personal Innovativeness</b>	Person tends to adopt new things such as new service motorbike based rideharing earlier than others.	(Rogers 1995; Wang et al., 2018)
<b>Environmental Awareness</b>	Knowledge of and concern about the impact of human behavior on the climate and environment.	(Schuitema et al. 2013; Wang et al., 2018)
<b>Subjective Norm</b>	Perceptions that significant referents desire the individual to perform or not perform a behavior.	(Taylor & Todd, 1995)

Source: (Developed by the researcher based on the literature, 2020)

### 3.3.4 Operationalization

Table 3. 2: Operationalization

<b>Variables</b>	<b>Items</b>	<b>Measure</b>	<b>Source</b>
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<b>Behavioral intention (Dependent)</b>	1. Plan to use motorbike based ride-sharing services. 2. Intend to use motorbike based ride-sharing services 3. Predict to use motorbike based ride-sharing services as long as there is access to it	5 point Likert Scale ranging from 1(strongly disagree to 5 (strongly agree)	(Wang et al., 2018)
<b>Perceived usefulness</b>	1. Using motorbike based ride-sharing services would enable to get destination more quickly 2. Using motorbike based ride-sharing services would improve commute performance 3. Using motorbike based ride-sharing services would make tasks easier 4. Using motorbike based ride-sharing services can mitigate traffic congestion 5. Using motorbike based ride-sharing services can reduce greenhouse gas emission and energy consumption	5 point Likert Scale ranging from 1(strongly disagree) to 5 (strongly agree)	(Wang et al., 2018)
<b>Perceived ease of use</b>	1. Motorbike based ride-sharing services would be easy 2. Motorbike ride-sharing services would be simple 3. Motorbike based ride-sharing services would have no problems	5 point Likert Scale ranging from 1(strongly disagree) to 5 (strongly agree)	(Wang et al., 2018)
<b>Perceived risk</b>	1. Personal information will be shared or sold to others when entering the motorbike ride-sharing services platform 2. Motorbike based ride-sharing	5 point Likert Scale ranging from 1(strongly	(Wang et al., 2018)



	<p>sharing services platform collect too much personal information</p> <p>3. Motorbike based ride-sharing with strangers through the same ridesharing platform is not safe</p> <p>4. Sharing a motorbike with strangers by using ride-sharing services can't ensure personal and property safety</p>	disagree) to 5 (strongly agree)	
<b>Personal innovative-ness</b>	<p>1. Look for ways to experiment with new thing/technology</p> <p>2. The first person to try the new thing/technology</p> <p>3. Like to experience a new thing/technology</p>	5 point Likert Scale ranging from 1 (strongly disagree) to 5 (strongly agree)	(Wang et al., 2018)
<b>Environmental awareness</b>	<p>1. Potential environmental impact of my actions when making many of my decisions</p> <p>2. Concerned about wasting the resources of our planet</p> <p>3. Describe myself as environmentally responsible</p> <p>4. Willingness to be inconvenienced to take actions that are more environmentally friendly</p>	5 point Likert Scale ranging from 1 (strongly disagree) to 5 (strongly agree)	(Wang et al., 2018)
<b>Subjective norm</b>	<p>1. People who influence my behavior would think that I should use the motorbike based ride-sharing services</p> <p>2. People who are important to me would think that I should use the motorbike based ride-sharing service</p>	5 point Likert Scale ranging from 1 (strongly disagree) to 5 (strongly agree)	Taylor & Todd, 1995 as cited in (Chen et al., 2007)

Source: (Developed by the researcher based on the literature, 2020)

### **3.4 Philosophy Guidance**

#### ***3.4.1 Research Philosophy and Paradigm***

The study was done by Saunders et al. (2009) defined the research philosophy as a system of beliefs and assumptions about the development of knowledge. The research paradigm helps to outline research philosophy. Cohen et al. (2007) defined the research paradigm as a broad structure that including perception, belief, and awareness of the different theories and practices used to conduct research (Cohen et al. 2007 as cited in Žukauskas et al., 2013). There are mainly three types of research assumptions to distinguish research philosophy namely ontology, epistemology, and axiology. Among the other assumptions epistemology concerned with existing knowledge and how people can communicate knowledge with others (Saunders et al., 2009). Epistemology has two subsets such as positivism and anti-positivism (Holden & Lynch, 2006) and the positivism paradigm relates to the philosophical stance of the natural scientist. As well as positivist paradigm researchers believe that there is an objective truth and use existing theory to develop hypotheses and, results can be generalized to the whole population of the study. Therefore, the researcher conducts on the current study in the positivism paradigm.

#### ***3.4.2 Research Approach***

Past studies revealed two major types of research approaches known as inductive and deductive are applied in scientific investigations (Saunders et al., 2009). Inductive approach reasoning to observe specific phenomena and on this basis arrive at general conclusions, and deductive approach reasoning to test a theory and hypotheses for logically derived the conclusion (Sekaran & Bougie, 2017). In this study, the researcher developed a model based on the model developed by Wang et al., (2018) on factors affecting consumers intention to use ridesharing service. Therefore, the researcher conducted this study based on the deductive approach.

### ***3.4.3 Research Purpose***

The overall purpose of this explanatory study was to investigate the factors effects on women consumers“ who are in the age category of 18-39 years' intention to using motorbike based ridesharing service in the Colombo district, Sri Lanka. (Yin, 1981) and the basic purpose of explanatory studies is to explain why phenomena occur and to forecast future occurrences. Hence, the present study is based on the explanatory purpose.

### ***3.4.4 Research Strategy***

Different research strategies can be applied for exploratory, descriptive, and explanatory studies (Yin, 2003 as cited in Fleischer & Wahlin, 2016). In their study, Saunders et al. (2009) mentioned “no research strategy is inherently superior or inferior to any other”. As well as authors“ revealed research strategy is most important factor for enabling the researcher to achieve the research objectives and also answer the research question and in addition to research objectives, question the research strategy choice depends on several factors such as existing knowledge and time, and other resources (Saunders et al., 2009).

In the deductive approach, the survey strategy is a common and popular method among researchers and also it was a cost-effective method and easy to conduct and analyze with statistical tools (Saunders et al., 2009). Otherwise, the researcher conducted the current study in a short time frame. Therefore, the researcher used a survey strategy for the current study.

### ***3.4.5 Research Method***

According to Saunders et al. (2009), there are two types of research choices known as the mono method and multiple method. A multiple method studies can be divided as multimethod research (multiple qualitative or quantitative methods) and mixed-method research (integration of quantitative and qualitative methods) (Creswell and Plano Clark, 2007 as cited in Azorín & Cameron, 2010). A mono method research uses a single data collection technique and analysis procedure. In contrast multiple method research use more than one data collection technique and analysis procedures. In the current study, the researcher uses only the questionnaire survey and quantitative analytical method to collect and analyze the data. Hence, the researcher conduct the current study based on the mono method.

### ***3.4.6 Time Horizon***

When data are collected just once, for days or weeks or months to answer a research question, such studies are called as one-shot or cross-sectional studies (Sekaran & Bougie, 2017). In this study, the researcher gathers data at once from the target respondents. Therefore the current study is a cross-sectional research.

## **3.5 Sample Design**

### ***3.5.1. Population of the Study***

The women consumers“ who are in the age category of 18-39 years in Colombo district are considered as the population of the study. However, there is no information regarding the population of women who are in the age category of 18-39 years in Colombo district. Hence, the population of the current study can be considered as unknown population.

### ***3.5.2 Sampling Method***

In their study, Sekaran & Bougie (2017) addressed two major types of sampling design known as probability sampling and non-probability sampling. In this study, the research population is unknown and Saunders et al. (2009) revealed, the non-probability sampling technique is the way on conduct to research when impossible to identify a specific sample frame. Therefore, the researcher used non-probability sampling design in the current study.

As well as the researcher used a convenience sampling method under the non-probability sampling method to gathered data. Convenience sampling involves the haphazard selection of the sample that is most easy to obtain for the researcher (Saunders et al., 2009).

### ***3.5.3 Sample size***

A study done by Arda & Rejikumar (2017) in women consumers“ intention of using the ridesharing service of Uber in Koch city, has been used 186 as the sample size to collect data. As well as, Fleischer & Wahlin (2016) conducted their analysis of the Swedish generation Y consumers“ intention to use the Uber services based on 189 validity responses as the sample size of the study. The current study also carries out base on the women consumers ridesharing intention in Colombo and the population considers as an

unknown population. Therefore, the researcher collected 264 responses as the sample size of this study.

### **3.6 Source of data**

When the researcher collected data by interviewing people, observation, or by administering questionnaires to individuals in the first hand for the specific purpose are known as primary data (Sekaran & Bougie, 2017). In the current study, the researcher used primary data sources and also used structured questionnaires as a printed version and also Google form to gathers primary data.

### **3.7 Unit of Analysis**

Sekaran and Bougie (2017) defined the unit of analysis is a level of aggregation of the data collected during the subsequent data analysis stage. The current study unit of analysis is the individual level and researcher looking at the data gathered from each individual and treating each response as an individual data source.

### **3.8 Data Collection Method**

#### **3.8.1 Questionnaire**

. In the current study, the researcher has developed and distributed a self-administered questionnaire to collect primary data. The questionnaire consists of two parts such as demographic information of respondents and, 24 Likert scale items that were developed by Wang et al. (2018); Chen et al. (2007) to measure dependent and independent variables.

### **3.9 Data Collection procedure**

The researcher selected advance level students, housewives and employees of several organizations to collect data regarding women consumers" in the age category level in 18-39 intention toward motorbike based ridesharing service such as ACL Cable factory, LB Finance head office, ESOFT Metro Campus in Colombo district. Also these students and employees are combination from different geographical locations, different family backgrounds, different religious backgrounds, different social and cultural backgrounds, different genders, and different educational levels in Colombo district.

### 3.9 Validity

Generally, validity tested is used to measure the accuracy of the measurement, or concept of what is being tested. In the quantitative studies, validity determines whether the research truly measures that which it was intended to measure or how truthful the research results. (Joppe 2000 as cited in Golfashani, 2003). In the present study, the researcher used the KMO and Barlett's test to measure the validity of the measuring instrument.

### 3.10 Reliability

The extent to which results are consistent over time and an accurate representation of the total population under study is referred to as reliability (Joppe 2000 as cited in Golfashani, 2003). There are several methods used for examined internal consistency, one of the most famous internal consistency reliability tests is Cronbach's coefficient alpha (Saunders et al., 2009). In the current study, the measuring instrument was adapted from the studies that were done by Wang et al. 2018; Chen et al. 2007.

Table 3. 3: Cronbach's Alpha value for the Scale

<b>Independent Variables</b>	<b>Cronbach' alpha value</b>	<b>Source</b>
<b>Behavioral intention</b>	0.86	(Wang et al., 2018)
<b>perceived ease of use</b>	0.91	
<b>perceived usefulness</b>	0.84	
<b>perceived risk</b>	0.84	
<b>personal innovativeness</b>	0.80	
<b>environmental awareness</b>	0.84	
<b>Subjective norm</b>	0.97	(Chen et al., 2007)

Source: (Developed by the researcher based on the literature, 2020)

### 3.11 Data presentation and analysis tools

The researcher used Pie Charts, Percentage Bar Charts to present the demographic information of the questionnaire.

In the current study, the researcher used descriptive statistics and inferential statistics to analyze the data. Under the descriptive statistics, the researcher used mean and standard deviation, and also multiple regression analyses are used to examine the hypotheses under the inferential statistics.

### **3.13 Chapter Summary**

The third chapter covered the methodology in which the present study is carried out. The present study is based on the positivist paradigm and the researcher conducts the study with the explanatory purpose. Also, the study is based on the deductive approach and the researcher uses the mono method by using a single data collection technique and a consistent analytical procedure. Also, the researcher uses the survey strategy for the study and this study is a cross-sectional one. The researcher distributed 264 of a self-administered questionnaire based on convenience sampling method under the non-probability sampling methods. At last, the researcher discussed about the measuring instruments based for the study and final data presentation and analysis tools as well.

## CHAPTER FOUR

### DATA ANALYSIS AND DISCUSSION

#### 4.1 Introduction

The first part of the chapter presents the demographic information of the sample and next part of the chapter, a comprehensive analysis has been made on the findings of the study regarding factors affecting women consumers' motorbike based ridesharing intention.

#### 4.2 Sample Characteristics

In surveys, it is advisable to collecting demographic factors regarding the sample and it helps to describe the sample characteristics (Sekaran & Bougie, 2017). Also in this study, the researcher has collected some demographic factors such as educational level, monthly income level, and the ridesharing experience (Appendix C). The researcher distributed 300 questionnaires to the sample (Appendix D) and would be able to collect only 264 questionnaires and the analysis was done base on this 219 questionnaires because of deleting unusual observations (questionnaires not filled in correct manner). Therefore the effective response rate is 73%. Table 4.1 shows the sample characteristics of the respondent.

Table 4. 1: Sample profile



Factor		Frequency	Percentage
<b>Educational level</b>	Less than to O/L	07	3.2%
	Up to O/L	37	16.9%
	Up to A/L	85	38.8%
	Undergraduate	51	23.3%
	Graduate	39	17.8%
<b>Monthly income</b>	Less than to 10,000	31	14.2%
	10,001 - 20,000	35	16.00%
	20,001 - 30,000	88	40.2%
	30,001 - 40,000	36	16.4%
	More than 40,000	29	13.2%
<b>Ridesharing experience</b>	Yes	157	71.7
	No	62	28.3

Source: (Survey data, 2020)

According to table 4.1, the majorities (38.8%) of the respondents have an education level up to A/L and the fewest respondents (3.2%) have an education level less than to O/L. When considering the education level 79.9% of respondents have at least up to A/L educational qualification from the whole sample. Further majority of the respondents (40.2 %) are between 20,001 - 30,000 LKR monthly income levels and a small number of respondents (13.2%) are between More than 40,000 LKR monthly income levels. Moreover, more than two-thirds (71.7%) of respondents have ridesharing experience and less than one-third of respondents (28.3%) haven't any ridesharing experience from the whole sample.

#### 4.3 Descriptive Statistics

Through the descriptive statistics, variables can be described and compared numerically. There are two aspects of descriptive statistics, namely the central tendency and the dispersion (Saunders et al., 2009). Central tendency provides a general impression of values that could be seen as common or middling in the sample and population data.

There are three ways of measuring the central tendency to know as mode, median, and mean (Saunders et al., 2009).

How the values are dispersed around the central tendency known as dispersion (Saunders et al., 2009) and, the range, the variance, and the standard deviation are the three measurements of using measure the dispersion (Sekaran & Bougie, 2017). Table 4.2 represents the descriptive statistics of all the variables (Appendix E).

Table 4. 2 Mean and standard deviation of variables

<b>Variable</b>	<b>Mean</b>	<b>Standard Deviation</b>
<b>Women consumers’ behavioral intention to using motorbike based ridesharing services</b>	1.75	0.664
<b>Personal Innovativeness</b>	3.67	0.589
<b>Perceived Ease of Use</b>	2.77	0.898
<b>Perceived Usefulness</b>	3.61	0.602
<b>Perceived Risk</b>	4.14	0.678
<b>Subjective Norm</b>	1.65	0.685
<b>Environmental Awareness</b>	3.64	0.509

Source: (Survey data 2020)

Following the results of Table 4.2, the mean value and the standard deviation of the dependent variable of Women consumers’ intention to using motorbike based ridesharing service is 1.75 and 0.664 respectively. Since, the mean value is very less and, it also justified the research problem with the results of the final survey. As well as, the mean value of personal innovativeness, perceived ease of use, perceived usefulness, perceived risk, Subjective norm, environmental awareness are 3.67, 2.77, 3.61, 4.14, 1.65, 3.64 in order and standard deviation values are within the range of 0.509 to 0.898. It indicates the independent variables and dependent variable have deviated within the range of 0.509 to 0.898 around mean values.

## 4.4 Reliability and Validity Analysis

### 4.4.1 Reliability

The reliability of a measure indicates the extent to which it is without bias (error-free) and hence ensures consistent measurement across time and the various items in the instrument (Sekaran & Bougie, 2017). According to Field, (2009) Cronbach's Alpha is the most common measure of scale reliability and, the value of Cronbach's Alpha is 0.7 range is acceptable and over 0.8 is considered good to ensure the reliability (Sekaran & Bougie, 2017). Table 4.3 shows the results of the reliability analysis.

Table 4.3: Results of Reliability Test

Variable	Cronbach's Alpha	No of items	Comment
<b>Women consumers' behavioral intention to using motorbike based ridesharing services</b>	0.927	3	Accepted
<b>Personal Innovativeness</b>	0.703	3	Accepted
<b>Perceived Ease of Use</b>	0.894	3	Accepted
<b>Perceived Usefulness</b>	0.811	5	Accepted
<b>Perceived Risk</b>	0.878	4	Accepted
<b>Subjective Norm</b>	0.865	2	Accepted
<b>Environmental Awareness</b>	0.738	4	Accepted

Source: (Survey data 2020)

As per Table 4.3, the overall Cronbach's Alpha values of all variables are greater than the acceptable level of Cronbach's Alpha (0.7) and, it can be concluded that the scale is reliable in this context (Appendix F). Further, Cronbach's Alpha value of statement 3 of Environmental Awareness (0.741) is more than the overall Cronbach's Alpha value of 0.738. Field (2009) stated if the item deleted values of Cronbach's alpha is greater than the variable overall Cronbach's alpha, then researchers can delete the item to increase the reliability of the variable further. Therefore, item 3 of environmental awareness is deleted to improve the reliability furthermore. Table 4.4 represents the reliability of the variable after removing the item.

Table 4.4: Reliability of the variable after removing the item 3

<b>Variable</b>	<b>Cronbach's Alpha</b>	<b>No of items</b>	<b>Comments</b>
<b>Environmental Awareness</b>	0.741	3	Accepted

Source: (Survey data 2020)

As given in Table 4.4, after deleting the item, the overall Cronbach's Alpha value of Environmental Awareness has increased up to 0.741 (Appendix F). Therefore, it can be concluded that the measuring instrument is reliable.

#### **4.4.2 Validity**

validity refers to whether the measuring instrument measures what it purpose to measure (Field, 2009). Validity is measured through the KMO and Bartlett's Test and, the values of the test should be greater than 0.5 to ensure the validity (Kaiser, 1974 as cited in Field, 2009). Furthermore, Kaiser (1974) recommended values of validity test in 0.5 to 0.7 are average, 0.7 to 0.8 are good, and 0.8 to 0.9 are great and above 0.9 are excellent (Kaiser, 1974 as cited in Field, 2009). Therefore the researchers run the KMO and Bartlett's Test to confirm whether these measuring instruments are validated at the Sri Lankan context. Table 4.5 shows the KMO and Bartlett's Test values of all variables.

Table 4.5 KMO and Bartlett's Test values of all variables

<b>Variable</b>	<b>KMO and Bartlett's Test value</b>	<b>P-value</b>
<b>Women consumers' behavioral intention to using motorbike based ridesharing services</b>	0.743	0.000
<b>Personal Innovativeness</b>	0.674	0.000
<b>Perceived Ease of Use</b>	0.747	0.000
<b>Perceived Usefulness</b>	0.800	0.000
<b>Perceived Risk</b>	0.795	0.000
<b>Subjective Norm</b>	0.500	0.000
<b>Environmental Awareness</b>	0.710	0.000

Source: (Survey data 2020)

As per the Table 4.5, since all the values of KMO & Bartlett's were greater than 0.5 and all the variables are in the acceptable level (Appendix G). Therefore, it can be concluded that measuring instruments is validated in the present context.

#### 4.5 Test of Normality

Field (2009) has stated that, normality test means checking whether the data are normally distributed or not. Hence, the researcher used Skewness and Kurtosis to check the normal distribution of the data sample. According to Field (2009), If the values of Skewness and Kurtosis are closed to Zero, it can be argued that the data are normally distributed. As well as Garson (2012) stated that the value of Skewness and Kurtosis should be within the range of +2 to -2 when the data are normally distributed. Table 4.6 Presents the Skewness and Kurtosis value of the dependent variable.

Table 4. 6 Skewness and Kurtosis

Variable	Descriptive	Statistics
<b>Women consumers' behavioral intention to using motorbike based ridesharing services</b>	Skewness	0.843
	Kurtosis	0.958

Source: (Survey data 2020)

According to the Table 4.6, Skewness (0.843) values are within the range of +1 to -1 and Kurtosis (0.958) values are within +3 to -3. Therefore, the researcher can conclude that the dependent variable is followed a normal distribution (Appendix H).

#### 4.6 Correlation Analysis

Correlation is a relationship between two variables, and Correlation Coefficient measures the strength and direction of the relationship between two numerical variables. This coefficient can take value between -1 to +1. A value of -1 represents a perfect negative correlation. Conversely, the value of +1 indicates a perfect positive correlation (Field, 2009). The output P-value of the correlation test is lower than 0.05 is considered that the relationship is statistically significant (Saunders et al., 2009). The researcher used

Pearson's Correlation Coefficient (r) for measures the correlation. Table 4.7 represents the results of the correlation analysis.

Table 4. 7: Results of Correlation Analysis

<b>Dependent Variable</b>	<b>Independent Variable</b>	<b>P-value</b>	<b>Correlation Coefficient (r)</b>
<b>Women consumers' behavioral intention to using motorbike based ridesharing services</b>	Personal Innovativeness	0.985	-0.001
	Perceived Ease of Use	0.159	0.096
	Perceived Usefulness	0.949	0.004
	Perceived Risk	0.000	-0.360
	Subjective Norm	0.000	0.566
	Environmental Awareness	0.305	0.070

Source: (Survey data 2020)

According to Table 4.7, output-values of Perceived Risk (0.000) and Subjective Norm (0.000) are less than the critical p-value (0.05). Therefore it can be concluded that there is a correlation between Perceived Risk, Subjective Norm dimensions, and women consumers' who are in the age category of 18-39 years intention to use a motorbike based ridesharing service in Colombo district at a 95% confidence level. Furthermore, it can be seen that the positive correlation between SN (0.566) dimension and women consumers' behavioral intention to using motorbike based ridesharing services dimension. As well as can be seen a negative correlation between PR (-0.360) and women consumers' behavioral intention to using motorbike based ridesharing services dimension.

As per table 4.7, since the output p-values of Personal Innovativeness (0.985), Perceived Ease of Use (0.159), Perceived Usefulness (0.949) and, Environmental awareness (0.305) are higher than the critical p-value (0.05). Therefore it can be concluded that there is no correlation between Personal Innovativeness, Perceived Ease of Use, Perceived Usefulness, Environmental awareness with the women consumers' behavioral intention to using motorbike based ridesharing services who are in the age category of 18-39 years in Colombo district at 95% confidence level (Appendix I).

#### 4.7 Regression Analysis

Regression is a statistical measure used to examine the strength of the relationship between two or more variables (Garson, 2012). Field (2009) stated regression Analysis is a way of predicting an outcome variable from one predictor variable or several predictor variables. There are two types of regression analysis, known as simple regression and multiple regression. Simple regression analysis is used to examine one independent variable is hypothesized to affect one dependent variable and in the multiple regression analysis is used more than one independent variable to explain variance in the dependent variable (Sekaran & Bougie, 2017).

Since the study involves six independent variables namely personal innovativeness, perceived ease of use, perceived usefulness, perceived risk, subjective norms, environmental awareness, and their impact on the dependent variable of women consumers" who are in the age category of 18-39 years intention to use a motorbike based ridesharing service in Colombo district. In the current study, the researcher used a backward elimination method to get the coefficient of multiple regression. Since it shows all the predictors at the beginning and then it optimizes the significance by deleting the most insignificant variables. The analysis was based on 201 respondents because the other respondents were rejected due to unusual observations and large residuals.

Table 4.8 shows the model 4 as the multiple regression results which generate perceived usefulness, perceived risk, and subjective norm as the most significant variables while removing all other variables of personal innovativeness, perceived ease of use and, environmental awareness because of its insignificance.

Table 4.8: Regression Output

Model	Variable	P-Value	Regression coefficient
01	Constant	0.002	1.042
	Personal innovativeness	0.495	0.43
	Perceived ease of use	0.505	-0.024
	Perceived usefulness	0.014	0.154

	Perceived risk	0.000	-0.215
	Subjective norms	0.000	0.518
	Environmental awareness	0.667	0.025
<b>02</b>	Constant	0.000	1.115
	Personal innovativeness	0.430	0.049
	Perceived ease of use	0.509	-0.024
	Perceived usefulness	0.014	0.153
	Perceived risk	0.000	-0.215
	Subjective norms	0.000	0.519
<b>03</b>	Constant	0.000	1.097
	Personal innovativeness	0.484	0.043
	Perceived usefulness	0.018	0.143
	Perceived risk	0.000	-0.213
	Subjective norms	0.000	0.519
04	Constant	0.000	1.168
	Perceived usefulness	0.003	0.162
	Perceived risk	0.000	-0.209
	Subjective Norms	0.000	0.520

Source: (Survey data 2020)

According to the model 1, of Table 4.8, it includes all the independent variables. As per the output in model 1, the output p-values related to personal innovativeness (0.495), perceived ease of use (0.505), environmental awareness (0.667) are greater than the critical p-value (0.05). Therefore, it can be concluded that personal innovativeness, perceived ease of use, environmental awareness are insignificant in the model 1.

In model 2, of Table 4.8, the most insignificant variable of environmental awareness has been eliminated. According to the model 3, in Table 4.8, the insignificant variable of perceived ease of use was removed.



As per the model 4 of Table 4.8, the most insignificant variables of personal innovativeness (0.578) perceived ease of use (0.581), environmental awareness (0.484) were eliminated. Furthermore, the p-value related to the perceived usefulness (0.005), perceived risk (0.000), and Subjective norms (0.000) which indicate values less than the critical p-value of (0.05). Therefore, perceived usefulness, perceived risk, and subjective norms were significant at a 95% confidence level in the model 4. Hence, the researcher used model 4 for the rest of the analysis (Appendix J).

#### **4.8 Results of the Hypotheses Testing**

**H1A:** Perceived usefulness impact on motorbike based ridesharing service usage intention of women consumers who are in the age category of 18-39 years in Colombo district, Sri Lanka.

As per the p-value related to the variable perceived usefulness is 0.003 and which indicates a value less than the critical p-value (0.05). Therefore, there is enough evidence to reject  $H_{0A}$ (Perceived usefulness does not impact on women consumers" who are in the age category of 18-39 years intention to use a motorbike based ridesharing service in Colombo district). Therefore, it can be concluded that Perceived usefulness positively impacts on motorbike based ridesharing service usage intention of women consumers who are in the age category of 18-39 years in Colombo district, Sri Lanka at a 95% confidence level.

**H1B:** Perceived ease of impact on motorbike based ridesharing service usage intention of women consumers who are in the age category of 18-39 years in Colombo district, Sri Lanka.

Since the P-value related to the variable Perceived ease of use is 0.581 which indicate a value greater than the critical p-value (0.05), there is not enough evidence to reject  $H_{0B}$ (The Perceived ease of use does not impact on women consumers" who are in the age category of 18-39 years intention to use a motorbike based ridesharing service in Colombo district,). Therefore, it can be concluded that Perceived ease of use does not impact on Colombo district women consumers" who are in the age category of 18-39 years, intention to use a motorbike based ridesharing service at a 95% confidence level.

**H<sub>1C</sub>:** Perceived risk impact on motorbike based ridesharing service usage intention of women consumers who are in the age category of 18-39 years in Colombo district, Sri Lanka.

Since the p-value relates to the Perceived risk (0.000) is less than a critical P-value(0.05). Therefore, there is enough evidence to reject H<sub>0C</sub> (The perceived risk does not impact on women consumers" who are in the age category of 18-39 years intention to use a motorbike based ridesharing service in Colombo district). Therefore, it can be concluded that Perceived risk negatively impacts on motorbike based ridesharing service usage intention of women consumers who are in the age category of 18-39 years in Colombo district at a 95% confidence level.

**H<sub>1D</sub>:** Personal innovativeness impact on motorbike based ridesharing service usage intention of women consumers who are in the age category of 18-39 years in Colombo district, Sri Lanka.

As per the p-value related to the Personal innovativeness (0.484) which indicate a value greater than the critical p-value (0.05), therefore there aren"t enough evidence to reject H<sub>0D</sub> (The personal innovativeness does not impact on women consumers" who are in the age category of 18-39 years intention to use a motorbike based ridesharing service in Colombo district). Therefore, it can be concluded that personal innovativeness does not impact on Colombo district women consumers" who are in the age category of 18-39 years, intention to use a motorbike based ridesharing service at a 95% confidence level.

**H<sub>1E</sub>:** Environmental awareness impact on motorbike based ridesharing service usage intention of women consumers who are in the age category of 18-39 years in Colombo district, Sri Lanka.

Since the output related to the Environmental awareness (0.578) is greater than the critical p-value(0.05), Therefore, there there aren"t enough evidence to reject H<sub>0E</sub> (The Environmental awareness does not impact on women consumers" who are in the age category of 18-39 years intention to use a motorbike based ridesharing service in Colombo district). Therefore, it can be concluded that the environmental awareness does

not impact on motorbike based ridesharing service usage intention of women consumers who are in the age category of 18-39 years in Colombo district at a 95% confidence level.

**H<sub>1F</sub>**: Subjective norm impact on motorbike based ridesharing service usage intention of women consumers who are in the age category of 18-39 years in Colombo district, Sri Lanka.

As per the p-value of Subjective norms (0.000) is less than the critical p-value (0.05), there is enough evidence to reject H<sub>0F</sub> (The Subjective norms does not impact on women consumers“ who are in the age category of 18-39 years intention to use a motorbike based ridesharing service in Colombo district). Therefore, it can be concluded that Subjective norms positively impact on motorbike based ridesharing service usage intention of women consumers who are in the age category of 18-39 years in Colombo district at a 95% confidence level.

#### 4.9 Assessing the Goodness of Fit of the model

In the regression analysis, the line of best fit is important to assess how well the line fits with the actual data (Field, 2009). In the multiple linear regression, Goodness of fit can be recognized through the adjusted R squared value (adj. R<sup>2</sup>) and, in the simple linear regression, it is determined by using R squared value (R<sup>2</sup>). The coefficient of determination can take on values between 0 to +1. It shows the proportion of the variability of the dependent variable that can be explained through the model (Saunders et al., 2009). Table 4.9, represents the output of the goodness of fit of the model.

Table 4.9: Goodness of the fitted model

Model	Adjusted R square
04	0.513

Source: (Survey data 2020)

As per the Table 4.9, since the adjusted R square value is 0.513, it can be concluded that 51.3% of variation of Women consumers“ motorbike based ridesharing intention can be able to explain through the fitted regression line.

#### 4.10 Analysis of Variance (ANOVA)

Analysis of variance explains whether the overall model is significantly good and predicts the dependent variable. According to Sekaran and Bougie (2017), ANOVA helps to analyze the significant mean differences among more than two groups.

Table 4.10 Analysis of Variance

<b>Model 04</b>	<b>Sum of squares</b>	<b>Df</b>	<b>Mean square</b>	<b>F</b>	<b>Sig.</b>
<b>Regression</b>	36.761	3	12.254	71.3	0.000
<b>Residual</b>	33.856	197	0.172		
<b>Total</b>	70.617	200			

Source: (Survey data 2020)

As per the results of ANOVA in Table 4.10, since the output p-value (0.000) is less than the critical p-value (0.05) of model 4. Therefore, there is enough evidence to reject  $H_0$  (Fitted model is not significant). Therefore, with a 95% level of confidence, it can be concluded that the fitted model is significant.

#### 4.11 Multicollinearity Effect

Multicollinearity exists when the independent variables in a multiple regression model are highly unacceptable intercorrelated. The multicollinearity effect can be identifying through the Variance Inflation Factor (VIF) and Tolerance values. The common rule of thumb is if the largest VIF value is greater than 10 and the tolerance value below 0.1, then there is a high multicollinearity effect and need to concern about that ( Myers, 1990 as cited in Field, 2009).

Table 4.11 Multicollinearity effect

<b>Model</b>	<b>Variable</b>	<b>Statistics</b>	
		<b>VIF</b>	<b>Tolerance</b>
<b>04</b>	PU	1.237	0.809
	PR	1.574	0.635
	SN	1.306	0.766

Source: (Survey data 2020)

According to the results in Table 4.11, the VIF value of perceived usefulness, perceived risk, and subjective norms are 1.237, 1.574, and 1.306 respectively. Therefore, VIF values of all the predicted variables are less than 10. Furthermore, tolerance value of perceived risk (0.809), perceived usefulness (0.635), subjective norm (0.766) are above 0.2. Therefore, it can be safely concluded that the predictor variables are not free from the problem of multicollinearity.

#### **4.12 Measure of Model Adequacy**

Some assumptions should be fulfilled to generalize a Research's findings on a sample to its population and, that test of assumptions is known as the Test of Model Adequacy. According to Berry (1993), to draw a conclusion about a population based on a regression analysis done on a sample, several assumptions must be true.

##### ***4.12.1 Test of Normality of Residuals***

Field (2009) stated, residuals in the regression model should be normally distributed. Therefore, the researcher tested the normality of residuals through skewness and kurtosis.

Table 4.12: Normality of residuals

<b>Variable</b>	<b>Descriptives</b>	<b>Statistics</b>
<b>Residuals</b>	Skewness	0.31
	Kurtosis	-0.72

Source: (Survey data 2020)

According to Table 4.12, skewness value was in the acceptable range of -1 to +1 and, the kurtosis value was in the +3 to -3. Therefore, the researcher can conclude that the residuals are followed a normal distribution.

##### ***4.12.2 Test of Randomness of Residuals***

The residual terms in the regression model should be uncorrelated with each other and it can be tested with the Durbin Watson test (Field, 2009). The DW test value is 2 or close to 2 represents that the residuals are uncorrelated. Table 4.13, shows the result of the DW test.

Table 4.13: Results of Durbin-Watson Coefficient

Model	Durbin Watson Statistics
04	1.847

Source: (Survey data 2020)

According to table 4.12, the Durbin-Watson Statistics value is (1.847) and the value is close to zero. Therefore it can be concluded that the residuals are randomly distributed.

#### 4.12.3 Homoscedasticity

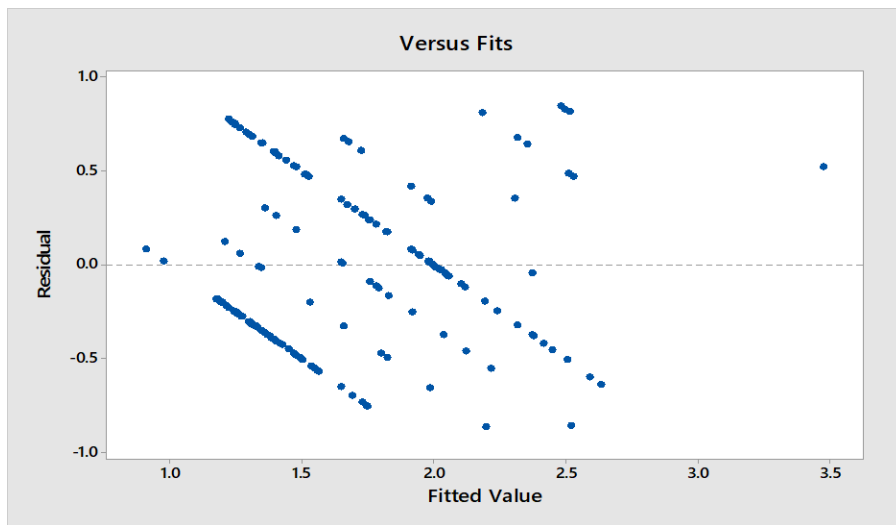


Figure 4.1: Residuals versus Predicted value graph

Source: (Survey Data, 2020)

Field (2009) stated, homoscedasticity means there should be a similar variance among residuals at each level of the independent variables. As per the behavior of scatters in figure 4.1, there is no pattern visualized. Therefore, it can be concluded that there is a constant variation of residuals and homoscedasticity situation.

#### 4.12.4 Error Mean

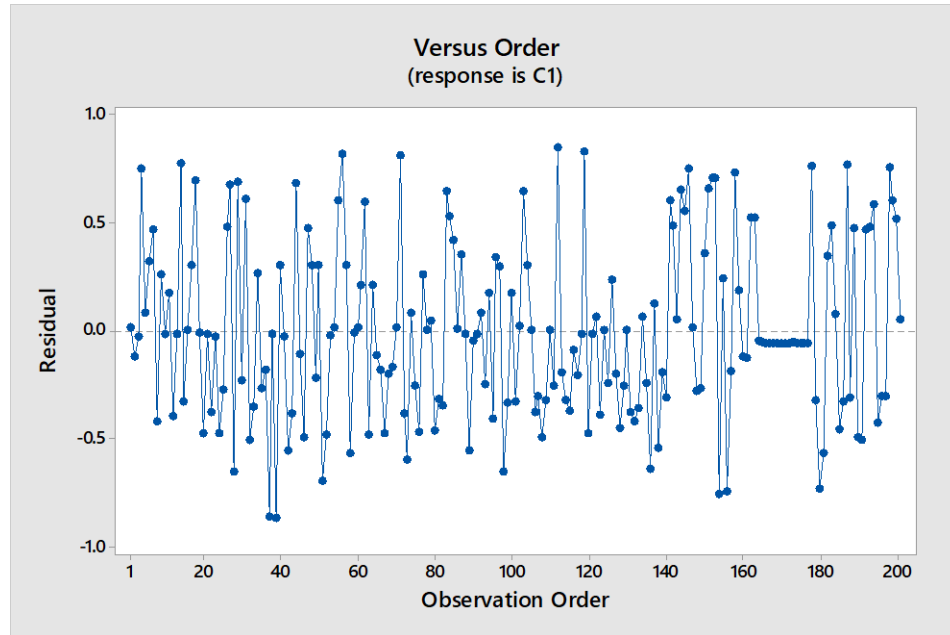


Figure 4.2 Residuals vs. Observation Order

Source: (Survey Data, 2020)

As per the behavior of residuals in Figure 4.2, the mean residuals are within the range of +1 to -1. Therefore, it can be concluded that the error means are very close to zero.

#### 4.13 Influential Observation

The influential observation represents the range of standardized residuals and, the accepted range of standardized residuals are should be within -2 to +2.

According to the boxplot in figure 4.3, the standard residuals of the regression model are plotted within the acceptable range of +2 to -2. Therefore, it can be concluded that there were no influential observations in this model.

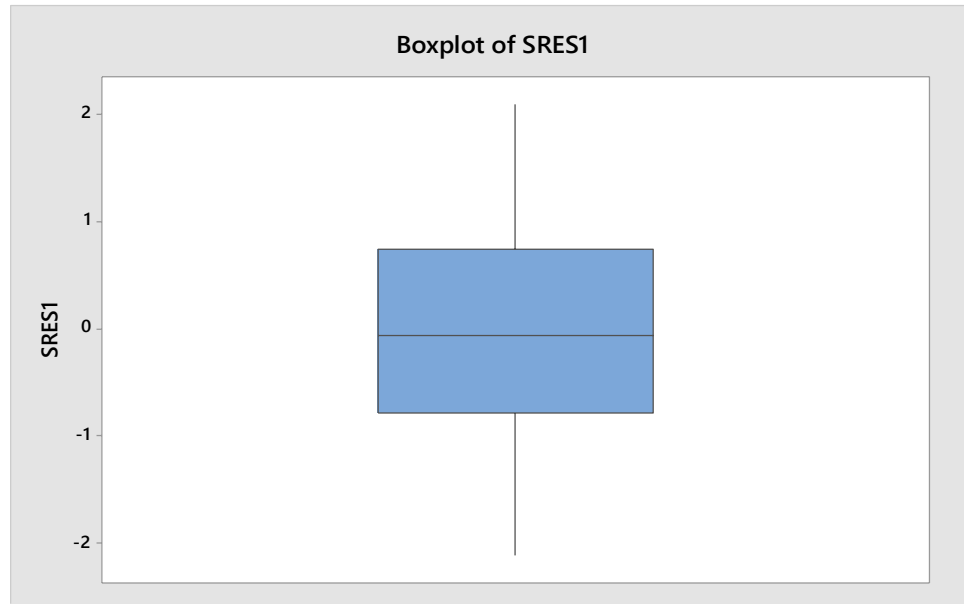


Figure 4.3: Plot of Standardized Residuals

Source: (Survey Data, 2020)

#### 4.14 Developing the fitted regression model

$$Y_i = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon_i$$

$Y_i$  = Women consumers' intention

$\beta_0, \beta_1, \beta_2, \beta_3$  = Regression Coefficients

$X_1$  = Perceived Usefulness (PU)

$X_2$  = Perceived Risk (PR)

$X_3$  = Subjective Norms (SN)

$\epsilon_i$  = Random error term

The researcher developed a fitted regression equation based on the result of the final multiple regression model of the current study.

**Women consumers' intention to using motorbike based ride sharing service = 1.168 + 0.162 Perceived Usefulness - 0.209 Perceived Risk + 0.520 Subjective Norms**



As per the final regression model, the constant ( $\beta_0$ ) is 1.168 which means that the women consumers' motorbike based ridesharing behavior intention is increased by 1.168 while all the other independent variables (Perceived Usefulness, Perceived Risk, Personal Innovativeness) are keeping as constants.

Furthermore, when Perceived Usefulness is increased by 1 unit, it is expected to increase the women consumers' motorbike based ridesharing behavior intention by 0.162 units while keeping other variables are as constants.

Moreover, when Perceived risk is increased by 1 unit, it is expected to decrease the women consumers' motorbike based ridesharing behavior intention by 0.219 units, by keeping other variables are as constants.

As well as, women consumers' motorbike based ridesharing behavior intention can be increased by 0.52 units if Subjective Norms increasing by 1 unit while keeping other variables are as constants.

#### **4.15 Discussion**

The current study was conducted to find out the factors impact of women consumers' intention to use a motorbike based ridesharing service in Colombo district, Sri Lanka. The researcher developed hypothesis based on Extended Technology Acceptance Model with the variables of perceived ease of use and perceived usefulness of the basic TAM model. Although perceived usefulness has an impact on women consumers' intention to use a motorbike based ridesharing service and perceived ease of use did not impact to such kind of behavior in present context.

The researcher developed six hypotheses, and three were rejected. It was revealed through the findings that perceived usefulness, perceived risk, and subjective norm have an impact on women consumers' who are in the age category of 18-39 years intention to use a motorbike based ridesharing service. Moreover, results of regression analysis find out personal innovativeness, perceived ease of use, and environmental awareness have not impact on women consumers' who are in the age category of 18-39 years intention to use a motorbike based ridesharing service. The strongest predictor for the women consumers' intention to use the motorbike based ridesharing services in the present study

was the Subjective norm ( $\beta=.52$ ), and the Perceived Usefulness ( $\beta=.162$ ) was the weakest determinant of intention to use the motorbike based ridesharing service.

Perceived usefulness showed the individual's perceptions of using a ridesharing service are useful for achieving their transportation purposes. (Wang et al., 2018), found that PU has a positive relationship with women consumers' intention to use a motorbike based ridesharing service. Furthermore, a study revealed that the PU of the ridesharing service of Uber positively influences the peoples' intention to use the ridesharing services (Fleischer & Wahlin, 2016). Moreover, a study was done by Liu and Yang (2018) found that there is a significant positive impact of PU on behavior intention toward sharing services. According to the finding of the current study, the researcher found that PU has a positive ( $\beta=.162$ ) impact on women consumers' behavioral intention to use a motorbike based ridesharing service in the Sri Lankan context. Therefore, it can be concluded if women consumers feel a ridesharing service is useful, they will choose motorbike based ridesharing services for their transportation purposes.

In a ridesharing context, perceived risk represents the potential negative consequences when consumers perceived using ride-sharing services. Wang et al. (2018) found that perceived risk has a negative relationship on intention to use ridesharing services. Further, Lee et al. (2018) found the perceived risk has a negative and significant impact on users' intention to participate in the sharing services. Furthermore, Mittendorf (2017) identified the perceived risk of the ridesharing service of Uber, negatively affect the user's intention to create an Uber account. According to the finding of the current study the researcher found that PR has a negative ( $\beta= -.209$ ) impact on women consumers' behavior intention to using motorbike based ridesharing services in the Sri Lankan context. It can conclude the Sri Lankan women Consumers are nervous and worried about their information safety, property safety, and physical security when using ridesharing services through online and offline platforms.

The subjective norm describes an individual's perceptions about whether people who are important to them would approve or disapprove certain behavior. A study revealed subjective norm positively impacts consumers behavioral intention toward the ridesharing service of Uber (Fleischer & Wahlin, 2016). As well as, Reyad et al. (2019)

identified subjective norms have a significant positive impact on women users' behavioral intention toward bike-sharing In the bike-sharing context. Moreover, a past study was done by Giang et al. (2017) revealed SN has positively influenced the intention to use ride-sharing applications. According to the regression analysis results, the researcher found that SN has a high positive ( $\beta=.520$ ) impact on women consumers' ridesharing behavior intention in the Sri Lankan context. It shows that women consumers' in Sri Lanka regard themselves as influenced by other people's opinions when choosing whether or not to use the motorbike based ridesharing services.

Perceived ease of use represents the individual's perception of using a ride-sharing service is not too difficult. However, a study revealed that perceived ease of use positively impacts consumers behavioral intention toward the ridesharing service of Uber (Fleischer & Wahlin, 2016). The researchers revealed the PEOU was positively impacts towards the consumers' adoption intention of the ridesharing service of Uber (Arora & Rejikumar, 2017). According to the finding of the study, the researcher found that PEOU has not an impact on women consumers' motorbike based ridesharing behavioral intention in the Sri Lankan context. This finding is supported by the findings of Wang et al. (2018) and they found no any significant relationship between PEOU and consumers' behavioral intention. because recently ridesharing services are popular among Sri Lankan consumers and motorbike based ridesharing services are not much. It indicates women consumers' don't believe this innovative service using is easy for them and, they did not choose motorbike based ridesharing merely for the ease of use.

Individual tends to adopt new technology, new products, and service before used some others represent a personal innovativeness. Wang et al., (2018) find out personal innovativeness positively associated with consumers' intention to use ride-sharing services. As well as a past study of "consumers mobile payment service intention in India" (Thakur & Srivastava, 2014) identified PI is a positive impact on adoption usage intention at the early stages of the innovative service. In contrast, the findings of the current study, the researcher found that PI has no any impact on the women consumers' motorbike based ridesharing behavioral intention in the Sri Lankan context. The reason can be attributed to the fact that the women consumers make their decisions to use MBRS

based mainly on the subjective norms and usefulness of MBRS and without considering their own curiosity or desire for novelty.

Environmental awareness represents knowledge and concerns about the environmental impacts of human behavior and, Wang et al., (2018) identified EA has a relatively small relationship between consumers' intention to using ridesharing services. Furthermore, in their study, Han et al. (2011) revealed environmental awareness positively impact on customers' intention to use eco-friendly services. In contrast, the findings of the present study, the researcher found that EA has no any impact on the women consumers' intention to using motorbike based ridesharing services in the Sri Lankan context. This may be due to several reasons. Most of Sri Lankan consumers love the environment and when buying a product they focus on whether it is eco-friendly. However, they do not seem to care much about purchasing certain services. Otherwise, the environmental protection role of ride-sharing is not so popular and therefore they did not choose MBRS merely for the environmental concern.

## **CHAPTER FIVE**

### **CONCLUSION**

#### **5.1 Introduction**

Through this chapter, the researcher demonstrates the path that used to achieve the six research objectives and both theoretical and practical implications of the present study. Also, the researcher gives suggestions for future researchers with relevant to the selected research concept.

#### **5.2 Conclusion**

Since the Ride-sharing service recently entered the Sri Lankan transportation sector, less attention has been paid by the scholars to find a researchable area under this concept. For the present study, the researcher strived to find the consumers' ride-sharing intention for the motorbikes in the Colombo District through the preliminary survey and the results showed that the women consumers who are in the age category of 18-39 years have less intention to using motorbike based ride-sharing services. Based on the results of the pilot survey, the researcher found different factors that impacted the consumers' ride-sharing intention by considering the previous studies done by different researchers. According to that, the six research objectives were developed by the researcher to identify whether, perceived ease of use, perceived usefulness, perceived risk, subjective norms, personal innovativeness, and environmental awareness have an impact on motorbike based ridesharing service usage intention of women consumers' who are in the age category of 18-39 years in Colombo district, Sri Lanka.

In considering those six research objectives, the researcher framed the conceptual framework and then, did the data collection for the final survey. The final results of the survey have proved that from the above-mentioned six factors, only three factors have impacted the women consumers' motorbike ride-sharing intention in the Colombo District, Sri Lanka.

As per the results of the correlation analysis, only two factors which are Perceived Risk and Subjective Norms have an association with the women consumers' motorbike ride-sharing intention while the remaining four factors which identified as Personal Innovativeness, Perceived Ease of Use, Perceived Usefulness, and Environmental Awareness do not correlate under the present context. Further, the researcher has found that the correlation between perceived risk and the women consumers' intention towards motorbike based ridesharing was a negative one and the Subjective norm has a positive one.

After considering the Regression analysis, it can be seen that the women consumers' motorbike ride-sharing intention is impacted by the Perceived usefulness as positively, Perceived risk as negatively, and the Subjective Norms as positively of the selected respondents in the current context.

So, it is identified that Personal innovativeness, Perceived ease of use, and Environmental awareness do not impact the women consumers' motorbike ride-sharing intention in the Colombo District, Sri Lanka.

### **5.3 Implications of the Study**

The researcher exhibits the implications of the present study in both a theoretical and practical way.

#### **5.3.1 Theoretical Implications**

In considering the world context, the studies based on the ride-sharing intention are very limited and only a few scholars have focused on the development of the theories for the particular concept. As well, in the world, and also Sri Lankan context, there was no research study has been found under the concept of motorbike based ride-sharing intention by the researcher. Therefore this study will assist future researchers to find more

factors that impact the consumers' motorbike based ride-sharing intention in Sri Lanka. Moreover, the researcher added a new factor as Subjective Norms which impacts the consumers' motorbike based ride-sharing intention in addition to the Extended Technology Acceptance Model (TAM) developed by Wang et al., (2018). So, the results of this study will contribute to the scholars who have an interest to study the motorbike-based ride-sharing intention of both Sri Lankan and world context.

### ***5.3.2 Practical Implications***

Since there is very little attention on providing motorbike based ride-sharing services in Sri Lanka, the companies which existed under this sector will be able to take new techniques in providing their services following the results of this study. Because the consumers' intention in motorbike based ride-sharing change with different factors and the companies can apply the work practices by considering those factors which support to improve the women consumers' motorbike based ride-sharing intention. On the other hand, such companies can take a look at the factors which reduce the motorbike based ride-sharing intention of consumers and they should try to overcome those factors.

According to the findings, Sri Lankan motorbike based ridesharing service providers are failed to indicate the MBRS is a safe transport medium for their women consumers. Therefore, service providers should develop perfect security policies to increase the overall safeguarding of women's consumer privacy, financial, and personal security.

As a result of the study, Sri Lankan women are highly sensitive to how think people who are important to them when they using motorbike based ridesharing service. Therefore, service providers need to change peoples' perceptions regarding MBRS in a good way.

Moreover, government and service providing companies should step up publicity about the benefits of MBRS for individuals, society, and the environment to increase the women consumer's positive perception of this eco-friendly transportation mode.

### **5.4 Suggestions for future researchers**

First, the researcher suggests to the future scholars to find more about women consumers' motorbike based ride-sharing intention not only in the Colombo District also in other districts in Sri Lanka. Because ridesharing services are more popular among different

places in Sri Lanka. Second, in the present study, the researcher applied questionnaires for the data gathering. But future scholars can use the interview method to take ideas in qualitatively about women consumers' motorbike based ride-sharing intention. Third, this research is based on the extended Technology Acceptance Model and future researchers can extend the model by finding other factors such as price which impacts the motorbike-based ride-sharing intention of the women consumers.



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[http://aisel.aisnet.org/ecis2015\\_rip%5Cnhttp://aisel.aisnet.org/ecis2015\\_rip/19](http://aisel.aisnet.org/ecis2015_rip%5Cnhttp://aisel.aisnet.org/ecis2015_rip/19)
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## Appendix

### Appendix A: Pilot Survey Questionnaire (English)

#### Pilot Survey Questionnaire

I am a fourth-year undergraduate of management faculty at the Sabaragamuwa University of Sri Lanka. This pilot survey questionnaire is to examine the **intention of using motorbike based ride-sharing services** in the Colombo district, Sri Lanka.

Ridesharing services (Ex: - UBER, PICK ME) have been launched and operated in Sri Lanka in the last decade through a mobile phone application. The Pilot Survey Questionnaire aims at examining the consumer's intention to use a motorbike ride-sharing service, the latest addition to these services. Your honest response would be greatly appreciated. However, you are assured that any information provided will be treated as confidential and will not be disclosed to another person.

thank you.

**Please answer all questions ( Mark the “√” in front of your answer )**

1) Gender

Male

Female

2) Age category

18 - 28

29 - 39

40 - 50

50 - above

3) Educational level

Up to grade 8 Up to

Up to A/L

Graduate

UP to O/L

Undergraduate

4) The ridesharing Experience

Yes

No

5)

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I plan to use motorbike ride-sharing services					
I intend to use motorbike ride-sharing services					
I predict that I will use motorbike ride-sharing services as long as I have access to it					

**Appendix B: Pilot Survey Questionnaire (Sinhala)**

**පරීක්ෂණ ප්‍රශ්නණාවලිය**

ශ්‍රී ලංකා සරඟුමුඛ ගුවන්වාහන සේවාවක් නිමා කිරීමේදී, ව්‍යාපෘතියේ නිමා කිරීමේදී මෙම ප්‍රශ්නණාවලිය භාවිතා කරමින් වාර්ෂිකව කාර්යක්ෂමතාවයන් සහ ගනුදෙනුමටා කගක .ඒ. . වක  
 ටාටා, ටාටා ටේ ප්‍රොසෙඩ් පර්යේෂණය ටේ "වරක් කර "

"ඔබ ටේ ටාටා රමිකේෂප් ක්‍රියාත්මක කිරීමේදී වත් සිටී .

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(Ex:- UBER, PICK ME) .

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කාරුණිකවකර සියලුම ප්‍රශ්න දෙනවා විචිත්‍ර රුද පයය . (ඔබගේ විචිත්‍ර රුද පයය "ඒ" දෙකුණු ගයොද්)

"ඒ" ටොටර

01. ස්වයංසේවක දැනුම ප්‍රශ්න:

- රසායනික භාරතව වටිනාකම
- වටිනාකමක් රසායනික භාරත කල්පිත
- උරුම භාරත කල්පිත
- 
- 

02. මාසික වැටුප් වටිනාකම (රුපියලින්):

- 10,000 ට වඩා  10,001 – 20,000
- 10,000 ට වඩා  30,001 – 40,000
- 20,001 – 30,000
- 40,000 ට වඩා වැඩි

03. (Ex: - UBER, PICK ME) ?

“ ”

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01						
02						
03	ඵඵ ඵඵ					

## Appendix C: Final Survey Questionnaire (English)

### Final Survey Questionnaire

I am a fourth-year undergraduate of management faculty at the Sabaragamuwa University of Sri Lanka. This pilot survey questionnaire is to examine the **intention to use motorbike based ride-sharing services** in Colombo district, Sri Lanka.

Ridesharing services (Ex: - UBER, PICK ME) have been launched and operated in Sri Lanka in the last decade through a mobile phone application. The Pilot Survey Questionnaire aims at examining the consumer's intention to use a motorbike ride-sharing service, the latest addition to these services. Your honest response would be greatly appreciated. However, you are assured that any information provided will be treated as confidential and will not be disclosed to another person.

thank you.

**Please answer all questions ( Mark the “√” in front of your answer )**

1. Educational level

Up to grade 8 Up to  Up to A/L  Graduate   
UP to O/L  Undergraduate

2. Monthly salary level (Rs):

Less than 10,000   
10,001–20,000   
20,001 – 30,000   
30,001–40,000   
More than 40,000

3. The ridesharing Experience

Yes  No

**Part “B”**

No	Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
4	If I heard about a new thing/technology, I would look for ways to experiment with it					
5	Among my peers, I am usually the first one to try the new thing/technology					
6	I like to experience a new thing/technology					
7	If I wanted to use ride-sharing services, it would be easy to me					
8	If I wanted to use ride-sharing services, it would be simple to me					
9	If I wanted to use ride-sharing services, I would have no problems					
10	Using ride-sharing services would enable me to get to my destination more quickly					
11	Using ride-sharing services would improve my commute performance					
12	Using ride-sharing services would make my tasks easier					
13	Using ride-sharing services can mitigate traffic congestion					
14	Using ride-sharing services can reduce greenhouse gas emission and energy consumption					
15	I’m concerned that my personal					

	information will be shared or sold to others when enter the ride-sharing services platform					
16	I'm concerned that ride-sharing services platform collects too much personal information about me					
17	I'm concerned that use ride-sharing with strangers through a same ridesharing platform is not safe					
18	I'm concerned that share a car with strangers by using ride-sharing services can't ensure my personal and property safety					
19	People who influence my behavior would think that I should use the motorbike based ride-sharing service					
20	People who are important to me would think that I should use the motorbike based ride-sharing service					
21	I consider the potential environmental impact of my actions when making many of my decisions					
22	I am concerned about wasting the resources of our planet					
23	I would like to describe myself as environmentally responsible					
24	I am willing to be inconvenienced in order to take actions that are more environmentally friendly					
25	I plan to use motorbike ride-sharing					





02. ආසන්න වැටුප් ආදායම (රුපියලේ):

- 10,000 ට වඩා අඩු
- 10,001 – 20,000
- 20,001 – 30,000
- 30,001 – 40,000
- 40,000 ට වඩා වැඩි

03. ME) ?

(Ex: - UBER, PICK

"බී" වෘත්ත

අංකය	ඵර සවකස	රදිසා ඵ ඵ කඵලේ	ඵ ඵ කඵලේ	ඵඵරඵඵඵරඵ	ඵ ඵ ලේ	රදිසා ඵ ඵ ලේ
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**ඔබ දැකුවු ද්‍රව්‍ය ගණයේ ගයට ස්ථර කිසි...!**

**Appendix E: Descriptive Statistics**

**Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
BI	219	1.000	4.000	1.75038	.664057
PI	219	1.667	5.000	3.67884	.589454
PEOU	219	1.000	4.333	2.77017	.898772
PU	219	1.200	5.000	3.61187	.602476
PR	219	2.000	5.000	4.14041	.678114
SN	219	1.000	4.000	1.65753	.685080
EA	219	2.000	5.000	3.64688	.509956
Valid N (listwise)	219				

**Appendix F: Reliability Analysis**

**Reliability of Consumers' behavioral intention**

**Reliability Statistics**

Cronbach's Alpha	N of Items
.927	3

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
BI1	3.54	1.855	.812	.926
BI2	3.49	1.847	.892	.864
BI3	3.47	1.782	.852	.894

**Reliability of Personal innovativeness**

**Reliability Statistics**

Cronbach's Alpha	N of Items
.703	3

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Cronbach's Alpha if Item Deleted
PI1	7.52	1.645	.555	.565
PI2	7.79	1.485	.534	.606
PI3	7.36	2.129	.503	.651

**Reliability of Perceived ease of use****Reliability Statistics**

Cronbach's Alpha	N of Items
.894	3

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Cronbach's Alpha if Item Deleted
PEOU1	5.50	3.297	.795	.847
PEOU2	5.58	3.236	.812	.832
PEOU3	5.58	3.502	.770	.868

**Reliability of Perceived usefulness****Reliability Statistics**

Cronbach's Alpha	N of Items
.811	5

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
PU1	14.50	6.031	.624	.767
PU2	14.55	5.891	.624	.766
PU3	14.51	5.691	.667	.753
PU4	14.32	6.153	.574	.782
PU5	14.36	6.645	.504	.801

### Reliability of Perceived Risk

#### Reliability Statistics

Cronbach's Alpha	N of Items
.878	4

#### Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
PR1	12.41	4.371	.721	.851
PR2	12.51	4.068	.728	.851
PR3	12.36	4.276	.807	.819
PR4	12.42	4.510	.706	.856

### Reliability of Subjective Norms

#### Reliability Statistics

Cronbach's Alpha	N of Items
.865	2

#### Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
SN1	1.69	.555	.763	.

SN2	1.63	.511	.763	.
-----	------	------	------	---

**Reliability of Environmental Awareness**

**Reliability Statistics**

Cronbach's Alpha	N of Items
.738	4

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
EA1	11.16	2.077	.557	.664
EA2	11.08	1.791	.641	.608
EA3	10.94	2.340	.407	.741
EA4	11.22	1.998	.523	.683

**Reliability of Environmental awareness after deleting item**

**Reliability Statistics**

Cronbach's Alpha	N of Items
.741	3

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
EA1	7.30	1.237	.588	.637
EA2	7.22	1.129	.557	.670
EA4	7.36	1.158	.560	.664

**Appendix – G: Validity Analysis**

**Validity of Consumers' behavioral intention**

**KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.743
	Approx. Chi-Square	535.678
Bartlett's Test of Sphericity	df	3
	Sig.	.000

### Validity of Personal Innovativeness

#### KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.674
	Approx. Chi-Square	121.528
Bartlett's Test of Sphericity	df	3
	Sig.	.000

### Validity of Perceived Ease of Use

#### KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.747
	Approx. Chi-Square	387.215
Bartlett's Test of Sphericity	Df	3
	Sig.	.000

### Validity of Perceived Usefulness

#### KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.800
	Approx. Chi-Square	344.143
Bartlett's Test of Sphericity	Df	10
	Sig.	.000

### Validity of Perceived Risk

#### KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.795
	Approx. Chi-Square	478.484
Bartlett's Test of Sphericity	Df	6
	Sig.	.000



## Validity of Subjective Norms

### KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.500
Approx. Chi-Square		189.185
Bartlett's Test of Sphericity	Df	1
	Sig.	.000

## Validity of Environmental Awareness

### KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.710
Approx. Chi-Square		200.217
Bartlett's Test of Sphericity	df	6
	Sig.	.000

## Appendix – H: Normality of Dependent Variable

### Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
BI Valid N (listwise)	219	1.000	4.000	1.75038	.664057	.843	.164	.958	.327

## Appendix – I: Correlation Analysis

### Correlations

	BI	PI	PEOU	PU	PR	SN	EA
Pearson Correlation	1	-.001	.096	.004	-.360**	.566**	.070
Sig. (2-tailed)		.985	.159	.949	.000	.000	.305
N	219	219	219	219	219	219	219

PI	Pearson	-.001	1	.238**	.480**	.234**	-.084	.187**
	Correlation							
	Sig. (2-tailed)	.985		.000	.000	.000	.214	.005
PEOU	N	219	219	219	219	219	219	219
	Pearson	.096	.238**	1	.299**	.058	.040	.087
	Correlation							
PU	Sig. (2-tailed)	.159	.000		.000	.396	.552	.201
	N	219	219	219	219	219	219	219
	Pearson	.004	.480**	.299**	1	.410**	-.118	.130
PR	Correlation							
	Sig. (2-tailed)	.949	.000	.000		.000	.082	.054
	N	219	219	219	219	219	219	219
SN	Pearson	-.360**	.234**	.058	.410**	1	-.471**	.036
	Correlation							
	Sig. (2-tailed)	.000	.000	.396	.000		.000	.599
EA	N	219	219	219	219	219	219	219
	Pearson	.566**	-.084	.040	-.118	-.471**	1	.020
	Correlation							
EA	Sig. (2-tailed)	.000	.214	.552	.082	.000		.770
	N	219	219	219	219	219	219	219
	Pearson	.070	.187**	.087	.130	.036	.020	1
EA	Correlation							
	Sig. (2-tailed)	.305	.005	.201	.054	.599	.770	
	N	219	219	219	219	219	219	219

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

## Appendix J: Multiple Regression Analysis

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error				Beta	Lower Bound	Upper Bound	Tolerance
1	(Constant)	1.042	.338		3.085	.002	.376	1.708		
	PI	.043	.063	.041	.684	.495	-.081	.167	.680	1.472
	PEOU	-.024	.036	-.036	-.668	.505	-.095	.047	.861	1.161
	PU	.154	.062	.158	2.480	.014	.032	.276	.607	1.647

2	PR	-.215	.056	-.240	-3.827	.000	-.326	-.104	.625	1.599
	SN	.518	.049	.599	10.561	.000	.422	.615	.764	1.308
	EA	.025	.059	.022	.431	.667	-.091	.142	.946	1.057
	(Constant)	1.115	.292		3.822	.000	.539	1.690		
	PI	.049	.061	.046	.790	.430	-.073	.170	.709	1.411
	PEOU	-.024	.036	-.035	-.662	.509	-.095	.047	.861	1.161
	PU	.153	.062	.157	2.476	.014	.031	.275	.607	1.646
3	PR	-.215	.056	-.240	-3.835	.000	-.326	-.105	.625	1.599
	SN	.519	.049	.600	10.604	.000	.423	.616	.765	1.307
	(Constant)	1.097	.290		3.781	.000	.525	1.668		
	PI	.043	.061	.041	.702	.484	-.077	.162	.724	1.381
	PU	.143	.060	.147	2.390	.018	.025	.261	.647	1.547
	PR	-.213	.056	-.237	-3.803	.000	-.323	-.102	.629	1.591
	SN	.519	.049	.600	10.618	.000	.423	.615	.765	1.307
4	(Constant)	1.168	.271		4.304	.000	.633	1.703		
	PU	.162	.053	.166	3.028	.003	.056	.267	.809	1.237
	PR	-.209	.056	-.232	-3.756	.000	-.318	-.099	.635	1.574
	SN	.520	.049	.601	10.653	.000	.424	.616	.766	1.306

a. Dependent Variable: BI

#### Variables Entered/Removed<sup>a</sup>

Model	Variables Entered	Variables Removed	Method
1	EA, SN, PEOU, PI, PR, PU <sup>b</sup>		Enter
2		EA	Backward (criterion: Probability of F-to-remove >= .100).
3		PEOU	Backward (criterion: Probability of F-to-remove >= .100).
4		PI	Backward (criterion: Probability of F-to-remove >= .100).

a. Dependent Variable: BI

b. All requested variables entered.

#### Model Summary<sup>a</sup>

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.723 <sup>a</sup>	.523	.509	.416560	
2	.723 <sup>b</sup>	.523	.511	.415689	
3	.722 <sup>c</sup>	.522	.512	.415093	
4	.722 <sup>d</sup>	.521	.513	.414559	1.847

a. Predictors: (Constant), EA, SN, PEOU, PI, PR, PU

b. Predictors: (Constant), SN, PEOU, PI, PR, PU

c. Predictors: (Constant), SN, PI, PR, PU

d. Predictors: (Constant), SN, PR, PU

e. Dependent Variable: BI

#### Model Summary<sup>e</sup>

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.723 <sup>a</sup>	.523	.509	.416560	
2	.723 <sup>b</sup>	.523	.511	.415689	
3	.722 <sup>c</sup>	.522	.512	.415093	
4	.722 <sup>d</sup>	.521	.513	.414559	1.847

a. Predictors: (Constant), EA, SN, PEOU, PI, PR, PU

b. Predictors: (Constant), SN, PEOU, PI, PR, PU

c. Predictors: (Constant), SN, PI, PR, PU

d. Predictors: (Constant), SN, PR, PU

e. Dependent Variable: BI

#### ANOVA<sup>a</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	36.954	6	6.159	35.494	.000 <sup>b</sup>
	Residual	33.663	194	.174		
	Total	70.617	200			
2	Regression	36.921	5	7.384	42.734	.000 <sup>c</sup>
	Residual	33.696	195	.173		
	Total	70.617	200			
3	Regression	36.846	4	9.211	53.461	.000 <sup>d</sup>
	Residual	33.771	196	.172		
	Total	70.617	200			
4	Regression	36.761	3	12.254	71.300	.000 <sup>e</sup>
	Residual	33.856	197	.172		
	Total	70.617	200			

- a. Dependent Variable: BI
- b. Predictors: (Constant), EA, SN, PEOU, PI, PR, PU
- c. Predictors: (Constant), SN, PEOU, PI, PR, PU
- d. Predictors: (Constant), SN, PI, PR, PU
- e. Predictors: (Constant), SN, PR, PU

**Excluded Variables<sup>a</sup>**

Model	Beta In	t	Sig.	Partial Correlation	Collinearity Statistics			
					Tolerance	VIF	Minimum Tolerance	
2	EA	.022 <sup>b</sup>	.431	.667	.031	.946	1.057	.607
	EA	.021 <sup>c</sup>	.419	.675	.030	.947	1.057	.629
3	PE	-.035 <sup>c</sup>	-.662	.509	-.047	.861	1.161	.607
	OU							
4	EA	.028 <sup>d</sup>	.557	.578	.040	.989	1.011	.635
	PE	-.029 <sup>d</sup>	-.553	.581	-.039	.880	1.136	.633
	PI	.041 <sup>d</sup>	.702	.484	.050	.724	1.381	.629

- a. Dependent Variable: BI
- b. Predictors in the Model: (Constant), SN, PEOU, PI, PR, PU
- c. Predictors in the Model: (Constant), SN, PI, PR, PU
- d. Predictors in the Model: (Constant), SN, PR, PU