TALLINN UNIVERSITY OF TECHNOLOGY

School of Business and Governance

Department of Business Administration

Cyprien Chia Chiatoh

FACTORS MOTIVATING AND HINDERING THE USE OF THE RIDE-SHARING ECONOMY PLATFORM BY CLIENTS-RESIDENTS WITHIN THE CITY OF DOUALA AND YAOUNDÉ

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I hereby declare that I have compiled the thesis independently.

All works, important standpoints and data by other authors have been properly referenced and the same paper has not been previously presented for grading.

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Cyprien Chia Chiatoh ……………………………

(Signature, date)

Student code: 177662TVTB

Student email address: chiatohcyprien@gmail.com

Supervisor: Liis Ojamäe, PhD:

The paper conforms to requirements in force

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ABSTRACT

There is a significant swift development in the information and communication technology sector worldwide whose effects on significant economies have been viewed as disruptive in the already existing traditional economic models. The most impact and change in ICT is most seen in the transportation industries, specifically within the urban transport industry (Taxi services) most referred to as ride-sharing economy or demand economy. Such economic practice in ride-sharing is gradually making its way to developing countries altering the business environment within which they operate, fluctuation in the employability of the population and service users and residents.

This paper scrutinises the ride-sharing economy platforms within developing countries; specifically in the two largest cities of Cameroon, namely Douala and Yaoundé. The report looks into the factors that would motivate and hinder the use of a ride-sharing platform on clients-residents within such an emerging market. The details of the framework offer a demographic understanding to which ride-sharing platforms thrive within the population. Consequently, the following conclusions are reached: ride-sharing offers low incentive cost to clients-residents, high safety and security option to the female gender as compared to male and affordable affordance to clients-residents within these two cities.

The conclusion holds that most clients-residents focus on three values on the choices of their transport network and as well such value holds as the determinant of the motives and barriers to the use of ride-sharing platforms. Namely, transport preferences, the safety of the transport network and affordability of the system. Such values hold a difference of importance to both gender groups but are of equal importance to both respondents familiar or unfamiliar to the ride-sharing platforms.

Keywords: Ride-sharing, Economy platform, demand economy, collaborative economy, CEMAC, Developing countries (DC), transport sector, Peer-to-Peer (P2P), Douala, Yaoundé

INTRODUCTION

For the past decade, the sharing economy has exponentially increased (Miller 2016, 149; Marchi & Parekh 2016). This has changed the way of business interaction and people in today's world. The idea of sharing economy is based on collaborative consumption and monetisation of excess capacity (Dredge & Gyimothy, 2015). This has popularised global brands such as Uber, Lyft, Bolt, BlaBla car and Airbnb among many others, thereby leveraging their ability to offer a convenient, reliable and lower price to the customer (Bornman & Wessels, 2019; Altinay & Taheri 2019). Its main characteristics are the use of online peer-to-peer (P2P) economic platform for-profit service provision.

The aim of this thesis is to researches on ride-sharing platforms in developing countries (DC). Specifically, the objectives of this thesis are to research user expectation by clients-residents of the cities of Douala and Yaoundé towards ride-sharing platforms through the factors that will motivate or hinder the use of ride-sharing. It is often problematic in defining ride-sharing because the terms are commonly slackly used in both the academic and practitioner literature, the fast evolution of the area and the conceptual overlapping between the mode of transport (US Department of Transportation, shared Mobility 2016). According to the Journal of Transport Review, ride-sharing is typically for hire services where participants order a ride using an online or mobile platform. (Craig, Susan & Sharon, 2018). Critics to such a definition argue that actual sharing does not occur since passengers, in general, are lone travellers except for UberPOOL. Nonetheless, sharing can also be referred to as the sharing of the drivers' private vehicle with a passenger in a more open taxi-like system (Amey, Attanucci, & Mishalani, 2011).

According to Vaughan and Daverio (2016, 6), the largest sector among the collaborative economy (Transport, accommodation, finance, professional services, etc.) by revenue was P2P transportation, mainly ride-sharing. Fortune's list of unicorns publication of 2017, out of 25 companies, four are providing ride-sharing services, including the world leader in this domain Uber with 69 billion dollar valuation (Newcomer, 2016). The value-added ride-sharing offer to clients-residents of specific geographical locations are the cost to users, security compared to

traditional taxi services, availability and accessibility of such technological innovation. Very little literature and information systems have been written exploring such a platform and its effects in developing countries in terms of client-residents perspective. Now is the ideal time to look into such countries, where massive efforts and infrastructural investments are engaged regularly to create a perfect business environment. Following the prominence of the transport sector, conclusive searches have shown that ride-sharing platforms have steadily grown and are still growing. Contrary Cohen et al. (2016) argue that the ride-sharing platforms have generated a consumer surplus of at least 2.9 billion dollars, which could easily be expatiated to developing countries. The Journal of Management published that ICT is an enabler of broad-based economic development, which has given rise to poverty reduction through the accessibility of simple communication systems like smart-phones (Farrokh, 2010). The Economics of Innovation & New Technology further supports this idea that ICT can foster Innovation and reduce poverty through an empowering wealth of information to an economic agent in developing countries. (Ayoub, 2011). Initial literature reviews of ride-sharing platforms have varying search results and on search engines like Google scholar with almost little or nothing on motives to entry in developing countries. Therefore, comprehensive research will be of many contributions to this area of the economy.

Transportation within the cities of Douala and Yaoundé remain very disorganise and bureaucratic. It becomes only challenging to measure the nature of the transport market as well as its competitiveness. Principal road axes pre-date back to independence and cost in maintenance are impeded with increase bureaucratic responsibilities that spread through multitude of offices, local and national institutions which negatively affects planning operation and maintenance of transport networks for effective and efficient quality service. The proportion of the market share of various actors within the transport sector is substantial which is dominated by informal mode of transportation network by moto-taxi commonly called "Okada" at 54% of market share due to the low acquisition cost and high demand (Piet 2006). Taxi and private car represent only 20% and 19% respectively of the market share mostly because taxi service is semi-regulated with high safety and security risk to not only clients-residents but to the driver themselves most often because of the nature of the vehicles and the "surcharge" translated as overload which is a practice where vehicles that have a carriage capacity of 5 persons are overloaded to carry seven persons. And lastly, the high-cost incurred in owning a car combine with increase corruption of road regulatory officials discourage clients-residents from owning private cars. Only a fraction of percentage of market share is occupied by the public transport sector, which is very unreliable and unsafe for clients-residents of these two cities (Cameroon National Household Survey 2001)

Accordingly, this study looks at the main motivations and barriers of the expected use of transport platforms: Research questions are;

- What are the incentives cost to clients-residents?
- How available and accessible is the technology to clients-residents?
- Would ride-sharing offer a better sense of security and safety to female clients-residents compared to male clients-residents in terms of quality of service, conditions of the vehicle and the user identifier?
- Will ride-sharing reduce frictional and time-wasting to clients-residents?
- Would ride-sharing increase trust in the transport sector?
- What will be the payment method in the absence of existing direct payment methods?

A quantitative research method will be used in the collection of data necessary in achieving the aim of this paper. Mainly, it will be a case study research philosophy approach. The sample frame will be residents of cities of Douala and Yaoundé falling within the target group of active citizens and university students within the age of 18-40 years old. Gender specification will be necessary here to analyse different expectations of security and safety in their choice of use of the ride-sharing app. Reason for such a target group is because, within the population age group, this is the target group who can afford the use of a smart-phone, post a reasonable answer to the author's research questions and are easily accessible to the ride-sharing app. Finally, the sample frame is the highest representative of the population in these cities, well educated. In contrast, the ageing population happens to have little or no education, and are mostly found in villages or countryside. A convenience sampling thus is fit to apply in this paper. A survey will be designed and distributed through social channels like Facebook and personal academic institution contact. The most likely problem that arises in the course of data collection will be accuracy in respondent honesty like in age or gender. Furthermore, recent findings by the author came to show that access to the internet network has become restrictive or limited and expensive due to political factors.

This research thesis consists of three chapters and starts with the description of the theoretical framework necessary to aid the author of this paper in his research, which is the Affordance theory (AT), Bygstad, Munkvold & Volkoff (2015); Gibson (1979); Leonardi (2011). Provides a useful lens to guide preliminary understanding of actors' lived experience and expectation of disruption in the traditional transport industry in which they operate. And the Unified Theory of Acceptance and use of technology (UTAUT) Venkatesh et al. 2003 which explains that four key constructs are the direct determinant of usage behaviour and intention on clients-residents perspectives. In the

second chapter, the methodological framework of this research is covered. In this chapter, the author will discuss the research methods used, followed by the research design. This area will discuss the chosen sample and method applied. Questionnaire content is also explained in this chapter. The third chapter of this research paper is the empirical part. In the first part of this second chapter, data is provided about the country Cameroon. Furthermore, additional secondary information is discussed in the transport sector of the country. Then follow a market competition analysis of the transport sector. The last section in this chapter covers an analysis of events from the based survey and identification of critical entities and interrelationship. Suggestions drawn from the research report are reported. This research will end with a conclusion, where the main findings are discussed.

The author of this research expresses enormous gratitude towards all respondents contributing to this research paper, all professors that have provided the knowledge and guidance to arrive at this academic curriculum and the most fantastic supervisor for the encouragement, advice and support received during the research process.

1. Theoretical Background

The theoretical part explains the theory of Affordance and Unified theory of acceptance and use of technology, the sharing economy, the ride-sharing economy in developing countries and ride-sharing economy in the transport sector of developing countries. The first section explains how the Affordance theory and Unified Theory of Acceptance and Use of Technology facilitate how ride-sharing applications can disrupt the traditional taxi industry in developing countries. Subsequently, explains user intention to use an information system and after that user behaviour. The next sections give an overview of the sharing economy and proliferation, which is a broad term with many ramifications in different economic sectors. The third part looks into the ride-sharing economy in developing countries, which is our area of interest. The last part of this chapter seems mainly on how ride-sharing affects the transport sector.

1.1. Theoretical Approach to understanding User motivation

1.1.1. Affordance Theory

Extensive research has been conducted in developed countries on the context of the effect of digital technology on traditional industries, yet, overlooked in developing countries providing explanations of the same effects of digital technology on traditional industries. To address this, the modified version of Bygstad et al. (2015) Affordance Theory-based analysis framework sheds more light through the guidance of preliminary knowledge of the actors' lived experiences of effects on traditional industries in which they function. Walsham (2006) expresses that in an information system analytical research, the choice of a particular theory is subjective and relies on whether the study finds the theory relevant or not. The standard definition of affordance is a resource or support that the environment offers and animal (Gibson 1979). Additionally, the Cambridge Dictionary adds that Affordance can also be used or the purpose that a thing can have, that people notice as part of the way they see or experience. However, Affordance, in this case, highlights the viewpoints of the actors' towards the environment or merely the objects in the background to perform actions (Hafezieh & Eshraghian 2017; Norman 1988). The initial concepts

and principles have greatly been revised in most information system research to understand the management of a work-life boundary with mobile technologies (Cousins & Daniel 2015), and social media, institutional innovation and affordances (Zheng, Royal, & Kingdom 2014), e-hailing platform for delivering disruption in an emergent access economy (Tan et al. 2017). Affordance can, therefore, be related to the context of car ride-sharing as relationships amongst participants' aptitude and output features to support their actions or functions. There is an invariable link in the change between Affordance and digital technology, and the applications of ICT keeps adding to the knowledge and skills of professionals in daily practice. The Affordance theory explores the paradigm that incorporates the socio-technical perspectives offering much margin of specificity while simultaneously incorporating the social and contextual elements. An in-depth understanding reveals how technology proactively supports the desired change; in this case, business practices to be more environmentally and economically sustainable (Seidel et al., 2013). Thus, three main affordances emerge to explain how ride-sharing affects the taxi industry in a developing country. These are the opportunistic affordance which involves available cars on the digital platform for clients-residents, security affordance for clients-residents, and affordable transportation for automatic billing.

Opportunistic Affordance occurs when clients-residents pick a vehicle in the ride-sharing platforms rather than considering a traditional taxi service (Robert 2018). The opportunity cost of such a choice is all related benefits incur if the regular taxi is used. In the case of our research, the fact of Uber is present in over 66 countries including developing countries (Crunchbase Uber 2017), ride-sharing services are made possible via the mobile app available to clients-residents and drivers smart-phones in the palm of their hands. The digital platforms provide openness and transport information on clients-residents destinations, which matches potential drivers in close vicinity. The adequacy of concepts in developing countries is due to the inaccuracy of data from conventional urban transport like taxi services and the ambiguity of actually available taxi services and proximity to clients-residents. A 2017 studies from the Institute for Sustainable Futures found out that ride-sharing benefits have maximised the opportunity to clients in low-income earning communities in developing countries through the availability of several choices of services, option to be picked up in specific geolocation in the digital platform (Retama & Dominish 2017)

Security Affordance: The ride-sharing app provides a security function that enables clients-residents as well as drivers to identify themselves, in the case of Uber, an inclusive feature that provides pictures identifier of the driver (Robert 2018). This is most valid for developing countries

where often than not residents face security risk on daily bases of being robbed of their valuable possessions and fear of a tourist in a given economy that is also dependent on the tourism sector. Furthermore, Uber ride-sharing app provides an automated monitor of the speed limit, which ensures safety not only to residents but also drivers contrary to traditional taxi services. Considering that little or almost no regulation of road safety procedures in developing countries, the security affordance explains the motives client-residents lean on the most in the use of ride-sharing platforms. On clients-residents perspective, digital evidence is at their available reach to support any retrieval of items forgotten during the ride.

Affordable transportation occurs when a traveller opts for car ride-sharing instead of taxi service due to lower fare. Clients-residents ignore unfairly and overcharges of the traditional taxi services and use an affordable Uber car ride-sharing alternatively (Robert 2018). In developing countries, conventional taxi services inflate the cost of transportation, which impedes on the clients-residents cost of living. Affordable transportation, in this case, is ideal in the understanding of clients-residents preferred choice for ride-sharing platforms.

1.1.2. The Unified Theory of Acceptance and Use of Technology

In recent decades, massive advancement in information technology development has prompted the expansion into areas that most likely be characterised by new technology applicability and most efficiently targeted end-users. Patrick et al. 2002 in the Journal of Information & Management, underlined the sophistication of various information technology applications in specific task performance and specialised fields that offer consensual acceptance of the use of new technology. The unified theory of acceptance and use of technology (Venkatesh et al., 2003) gives a better theoretical framework in understanding the motives and barriers to the use of ride-sharing economy in developing countries. The basic concepts surrounding this model is that individuals in developing countries unfamiliar with ride-sharing platforms form different opinions and attitudes regarding this kind of ride-sharing system; a domino effect occurs since individual intention will be impacted on their senses to using this kind of platform and thus affect the actual platform itself. The question of "How and when" technology is used always constitutes a factor each time a new technology is presented to users (Patrick et al. 2002). The UTAUT suggests that performance expectancy, effort expectancy and social influence affects users' behavioural intentions to use ride-sharing platforms in developing countries.

Performance expectancy relates to how well individuals believe ride-sharing platforms help them in their daily commute. In developing countries, it is highly essential a reliable form of transportation that not only guarantees a faster journey from point A to B but also punctuality from and to destination for work and business purposes. More efficiently, clients-residents look into the instructiveness of the platform that includes the simplicity and speed of performance of a specific task. Understandably, clients-residents could easily reject any form of a ride-sharing platform that seems difficult to use through a complex interface on the app and slow performance in society that consists of variation in its population literacy. Furthermore, the geolocation feature used in most ride-sharing apps is a top determinant point for users in DC to accept such technological platforms that allow both actors to reach each other easily and accessible over the comparative advantage to the traditional form of transport.

Effort Expectancy relates to how easy clients-resident will find ride-sharing platforms that provide access and affordability of the internet. As with all technology, there exists a learning curve that is associated with the use of that technology (Patrick et al. 2002). From the graphics and design perspective, it is much easier and highly associable when new technologies, in this case, ride-sharing platforms in developing countries use a simple stylus graphic design that is easily recognisable. There is a variation in culture from DC to the next. Still, one common similarity is that each individual's attitude towards the formation of new technology is easily challengeable and hard accepted when the use and application of such technology require many efforts in understanding and implementation of the said technology. In the countries of Nigeria, South Africa and Cameroon, it was observed the highest motivation that Sky rock the fast-growing of the shared economy platform in these countries ("Jolancer" Nigeria, "1task1job" Cameroon and "Okazi" South Africa) wasn't the jobs or income advantage they offer but the easiness of use of such platforms that brought residents-clients of these areas to accept this form of technology (Dalberg, 2016).

Social Influence relates to how residents-clients would view the use of the ride-sharing platform in DC will affect their image within the society and how individuals around their entourage perceive that. The issue with this area is that there is a variation of influence from clients to clients. In DC, social influence measurement of the level of acceptance of any form of new technology will have conflicting data results. This is because, in DC, social influence on the individuals is highly present as some people turn to accepts ride-sharing platforms from peer pressure. The long-run effects of acceptance under the social influence are that this form of technology that is being

introduced quickly dies off and the negative impact felt by individuals will affect any future formation of ride-sharing that might potentially be more beneficial to clients-residents at large.

1.2. Ride-sharing Economy

Ride-sharing has multiple facets with several ways of transportation. It falls under the umbrella of the sharing economy. The sharing economy has several synonyms. According to Hamari, Sjöklint and Ukkonen (2015,1), it is referred to "collaborative consumption" and defined as "peer-to-peer-based activity of obtaining and sharing access to goods and services, coordinated via community-based online services" (Hamari et al. 2015, 1). Ride-sharing is not a new phenomenon but dates back to 1914 during the outbreak of World War I during recession time that drivers in San Francisco offered seats in their cars for the same price as regular taxi cab known as "jitney" (Dayen, 2014). This phenomenon didn't last long as new regulation was introduced, reducing the spread of ride-sharing jitney by 90% (Eckert & Hilton, 1972). It remains popular, though not frequent due to tight government regulation until the reverse at the outbreak of World War II due to massive campaigns that encourage drivers to take passengers into their cars (Cozza 2012). Coincidentally, carpooling promotion was in cooperation with oil and car companies (Amey 2011), and this has to be the most significant motor in changing consumer consumption attitudes towards ride-sharing. Government support for ride-sharing in the USA has been on the fluctuation periodically since 1974 during Iran oil embargo; ride-sharing was again encouraged (Cozza 2012). In the past decades, several countries had vibrant informal transport systems that pre-date ride-sharing apps (e.g. Rickshaws, auto-rickshaws, shared taxis, motorcycle taxi and informal bus systems) that do not conform to transport in design (Joseph, Jackie, & Nicola, 2016). While unorganised ride-sharing has existed in the past decades, ride-sharing became only famous in the recent decade with the entrance of Uber in the significant market in the USA that range from simple online boards to complex decision support systems that provide automated matching which could be organised through a centralised or decentralised platform that is either matching agencies or ride-sharing operators (Hosni, Sawaya, & Artail 2014; Furuhata, Dessouky, Ordonez, Brunet, Wang, & Koenig 2013; Stiglic, Agatz, Savelsbergh, & Gradisar 2015; Teubner & Flath 2015; Agatz, Erera, Savelsbergh, & Wang 2012; Wosskow 2014).

It is described as mobile or web platform companies that bring together individuals with underutilised assets with people who would like to rent them (Cusumano 2015, 32). These goods

and assets can be spare time for everyday tasks, cars to drive people around, additional rooms and other household items (Cusumano 2015, 32; Hamari et al. 2015. 3). Several literature reviews have identified two forms of ride-sharing which are being categorised as "On-demand ride services" and "taxi e-hailing."

On-demand ride services, also known as ride-sourcing, relates to where apps connect community drivers with clients-residents (Shaheen & Chan 2015, 3). Apps platforms allow the ability to request for a ride from privately owned vehicles with a non-commercial licensed driver. Using a smart-phone in-built GPS system, the clients-residents position is sent to the driver where charges distance fare is applied to which the app itself deduct 20%. Such platforms have two modes of payments; a credit card that has been pre-saved in the app already or cash payment to the driver directly. There is a variation in this form of compensation from country to country of which to some countries; cash payments are not allowed. Feedback is an essential component that permits both actors to deliver premium quality services actively. This is integrated into the rating system of the app that will enable clients to rate drivers and vice versa (Rayle, Shaheen, Chan, Dai & Cervero 2014, 2). It is not far too different from traditional taxi services in the sense that payment is based on distance travelled.

Nonetheless, the improvement in price, transparency, convenience, waiting time and travel time are far more advantageous in ride-sharing apps than regular taxi services. The availability of information has dramatically changed people's perception of the urban transportation system (Kalanick 2017, 111). This has encouraged a multimodal form of travel with public transport, thus bridging the gap of first and last-mile coverage (Kalanick 2017, 111). Lastly, the affordance benefit of this form of transportation is very high compared to regular taxi services and thereafter provides an alternative way of income to private drivers (Kalanick 2017, 111-112). World leader Uber, Europe leader Bolt, Lyft in the USA, Ola in India, and Didi in China are examples of companies that provide on-demand ride service.

The second form of ride-sharing is **taxi e-hailing** whereby licensed taxis use an app similar to on-demand ride services but with the main difference being that cars used in this case are licensed taxi drivers (Rayle et al. 2014, 2, 11). Call centre services are being replaced by app found drivers smart-phones. The most common example of an e-hailing taxi is Bolt, formerly known as Taxify. However, they are not anymore in this kind of platform and also Easy Taxi in Latin-America (Villig, Kotka & Roonemaa 2016). This form of ride-sharing shares the same benefits as that of on-demand services. As noted by He & Shen (2015, 94), using an app instead of calling or hailing

on the street reduces less waiting and searching time and exceptional convenience in electronic payment. Another matter that is convenient in this form of ride-sharing is regulation since all drivers are licensed drivers and thus have better regulation compared to on-demand ride services (He & Shen 2015, 94). Nonetheless, it is worthy to note that in the current market practices, the borders between the traditional and non-traditional services are constantly challenged and sometimes blurred (Fernandez, & Figueiredo 2018, 295) and often resulting in challenges to both marketers and academics.

There has been an ongoing argument within the Estonian society on the differentiation in terms "real-time ride-sharing" and "on-demand ride services" (Pau 2016). Other countries have questioned the legality of Uber and other similar services like it has been the case within individual EU member states (Lougher & Kalmanowics, 2016, 7). The argument unveiling such practice has been the idea that regular taxi services have many regulations to follow meanwhile drivers of the on-demand app have little or no regulatory organ thus creating an unfair competition which led to massive anti-uber protest like the case in France (News link, 2016). Uber, in some countries, have managed to combine on-demand ride service and real-time ride-sharing allow individuals to share a ride if both have similar destinations (Kalanick 2017; Rayle et al., 2014,2). In-depth review shows that e-hailing services are more straightforward and less confusing because of licensed drivers.

In contrast, most ride-sharing companies in the case of Uber, Didi and Ola provide both services under the term ride-sharing arise to cause more confusion and misunderstanding. The end balance in ride-sharing has led to a literature review that proposes the regulation of the ride-sharing economy without stifling innovation through the introduction of experimental regulations (Hannah, 2015). Graham et al. (2017, p. 140), suggest that 'a key feature of digital work platforms is that they attempt to minimise the outside regulation of the relationship between employer and employee. These issues are particularly severe when transactions cross national borders which have become unclear which jurisdictions' regulations apply to the work being transacted'.

Information system research has written plenty of literature that seeks to depict the merits and demerits of ride-sharing platforms from employability perspectives, clients-residents cost advantage, correlations with new car purchase and ride-sharing platforms and environmental impact of ride-sharing platforms. Alexander & Gonzalez (2015) show that a successful ride-sharing scheme could reduce congestion and related fuel consumption and emissions during peak travel periods, reduce parking costs for clients-residents and provide an alternate mode to private

car ownership. In 2016, the ride-sharing platform in China DiDi launched a driver-to-own program to provide drivers with a new car to register as drivers provided a deposit of 3000 US dollars at the time which led to a positive impact on car sales during that period (He 2016). To expand their presence in specific markets, most ride-sharing platforms, agree with the car dealers through flexible rental and financial leasing arrangements. Other IS research found out there is a negative impact of ride-sharing on public transport use (Clewlow & Mishra 2017). For developed countries, this can be interpreted as a negative development from the context where mobility poverty is less considered an issue. Still, for developing countries, this can be seen as the necessary booster to help the poor. In 2013, one researcher found that in the Soweto Township of South Africa that the average daily trip was one trip per person per day considering all forms of transportation (Case, 2013, pp. 1-88).

But in comparison to countries of Finland, Germany, Sweden and Switzerland, reports show that between 2.8 and 3.6 trips per person per day (Ahern et al., 2013). It can easily be deducted that public transportation hinders movement and accessibility in South Africa, the average low car ownership event accentuates even further. In such countries, thus, individuals' perception and reaction to ride-sharing possibilities differently.

The nature of the ride-sharing industry is likely going to change in the future with technological innovations like autonomous driving that are fast advancing and already being tested in the USA in cities like Pittsburgh (Chafkins 2016). However, there are still concerns in matters of equity and ride-sharing platforms nowadays. Firstly, there are always interest groups that seek to raise the cost value of ride-sharing either through barriers to entry or more significant benefits for partner drivers. The most obvious example is that of Uber that faced bans in several cities throughout the world. Such barriers adversely affect most consumers who are not given the possibility of ride-sharing options in given locations. Secondly, primary resistance to increased economic rewards for drivers has pushed many technological advance firms in collaboration with ride-sharing firms to increase their spending on research and development of autonomous vehicles whose results will be to replace drivers (Chafkins 2016). The impact of such autonomous vehicles will impact the nature of ride-sharing and consumers at large dramatically. From a client-resident perspective, the effect will mostly be felt in the drop of cost of ride-sharing and a decrease in congestion as such vehicles displace conventionally (Winston & Mannering 2013). The structure of the ride-sharing market in the long-run is hard to predict but what is certain is the change that is going to occur. However, this shift or impact isn't happening soon for such mode of transport require specific infrastructure to be well operation and isn't yet available for the near future.

1.3. Ride-sharing Economy in Developing Country

As stated by Todaro & Smith 2011, the simple division of the world into developed and developing countries is sometimes useful for analytical purposes, and many development models apply across a wide range of developing countries. This distinction must be made to lay the foundation of understanding the ride-sharing economy in developing countries. Ride-sharing has become a hot topic in research and the media, primarily because of the recent rise of platforms like Lyft and Uber. Yet shared taxis and paratransit services have played central roles in many African countries' transport systems for years (Joseph, Jacki, & Nicola 2016). As mentioned earlier, Information and communication technology (ICT) has always been a contributor and determinant of economic boom. Thus major developed countries have invested and continue to invest in their ICT infrastructure, including developing countries as well. The transformation of ICT has led to a shift in the economic market through the development of a new form of consumption services. The sharing economy has caused significant disruption in the business environment, including countries of the developing countries. The most seen effect is in the transport sector within urban transportation. In developed countries like the USA and Europe, access to information technology systems (mainly mobile phones and the Internet) occurs almost entirely through individual ownership and use. In developing countries, however, application of such access would exclude the vast numbers of those neither with the incomes nor the skills to operate the technology effectively. Uber has been in the forefront in the effective change, if not revolutionising, mobility in many cities around the world (Bhalla, 2018). It is part of the so-called sharing economy that markets itself as a technology, rather than a taxi company and as recently as 2013 extended its operations to several countries in Africa, such as South Africa. There are also several other 'ride-sharing' apps such as Lyft, and Taxify, which recently rebranded itself as Bolt, that operates globally as well. Bolt, whose headquarter is in Estonia, now has operations in Kenya and South Africa and an 'activation hub' in Nigeria (Barnes, 2018). Extensive literature can be found about ride-sharing platforms in developed nations of Western countries in terms of employability as well as clients-residents perspective (Y. Guo et al., 2019; Nelson D. Chan & Susan A. Shaheen (2012)). The benefits of ride-sharing offered to clients-residents of specific geographical locations are the cost to users of such platforms, security and safety compared to traditional taxi services, and the availability and accessibility of such technological innovation. Nevertheless, very little literature has been written exploring the proliferation of such platforms and its effects in developing countries in terms of client-residents' expectations in countries where such platforms haven't yet been established as well as user experience to some countries where such platforms already exist.

Ride-sharing and paratransit services have been features of Africa's motor transportation for many years. Various semiformal and informal arrangements provide affordable short and long-distance rides where private, and public transport is limited (Joseph, Jacki & Nicola 2016). These have emerged from local entrepreneurialism, and collaboration between passengers and between drivers and passengers. Recently, in the north and Subsaharan Africa, there has been massive interest in so-called peer-to-peer (P2P) ride-sharing systems, for-profit (e.g. Uber, Lyft). Some of these systems are already launched in Africa (e.g. Uber in Kenya, Nigeria, South Africa, Ghana, Uganda and Tanzania (Steven 2016). However, they are designed for a population that can access smart-phones, satellite navigation systems and location-based technologies. The proliferation of the ride-sharing economy in developing countries has been due to the simplicity and ease to penetrate the market economy of their countries. In most developing countries like in Africa, paratransit systems operate in such a way that several independent passengers share the same ride along part of a route. In Namibia, for example, a driver picks-up and drop-off a succession of clients-residents at many different destinations (Joseph, Jacki, & Nicola 2016). This shed light on the flagrant difference in recently developed ride-sharing platforms which use technology link systems between drivers and clients-residents. The idea behind such a platform is that they focus on the individual ride, offering one destination at a time contrary to the paratransit system that focuses on collective ride-sharing. Furthermore, ride-sharing services which are between drivers and clients-residents occur if drivers agree to drive to the specific location or destination which considering the security risk of certain areas might be inclined to decline by the driver. However, ride-sharing technology has enabled new ways of sharing transportation; for instance, UberPOOL, allows strangers to share the same ride resulting in a share of the cost of the journey. Though this form of transportation has proven its merit, it is still argued by actors of the transport networks that drivers of the dissatisfaction of such service include clients-residents who sometimes are not willing to share the same ride (Harry 2015; Lexus 2015; & Loni 2016). Other issues registered included high cost incurred (e.g. patrol. wear and tear), safety risks and effort involved constant check of the phone during direction change of destination or cancelled the trip. There is much contrast around the ride-sharing economy in developing countries in that it is the combination of the effort of residents and drivers without any mediation of a digital middleman.

The success of ride-sharing thus depends on the population of developing the ability to have access to smart-phones indeed. However, Jeffrey (2012) established that there exists some amount of non-commercial sharing of mobile phones among owners, family and friends in developing countries

and is a significant phenomenon in these countries. James (2011) further adds that it is a culture of sharing in many parts of developing countries. This relationship is substantiated through a micro survey data investigated in 2011 to estimate the actual number of phone users with ownership and those without privilege (James 2011). A good example illustrated in the survey is that if a developing country has a market penetration rate of 16-17 per cent, then a sharing rate of five users per owner would be enough to provide a 100 per cent access of the population. This is primordial to understanding the developing country cultural, demographic and affordance ability to new technology. In some developing countries like in Bangladesh, there exists a form of paid sharing (Jeffrey 2012).

2. Methodology

The methodology part of this bachelor's thesis explains the research method selected, as well as the purpose of the research. This part also describes the research design and formation of the questionnaire in addition to the sample selection.

2.1. Research Method

The current thesis examines the factors that motivate and hinder the potential use of ride-sharing economy platforms by clients-Residents within the cities of Douala and Yaoundé where this kind of service does not exist yet, for several reasons. First, urban transportation within the cities of Douala and Yaoundé represents 36 per cent of the city's national product (Cameroon National Institute of Statistics 2010). It is expected that this sector would help flatten the curve of unemployment, providing a more sustainable solution to employability and contribute to the progressive growth and development to the fast urbanisation of the cities of Doula and Yaoundé (The World Bank, 2018). Second, in the cities of Douala and Yaoundé, ride-sharing platforms are like a mirage to some who have heard about it either through news outlets or from others' experiences. It is only right to get a glance at clients-residents' expectations on ride-sharing platforms within these cities to better propose better suggestions for future ride-sharing platforms launching in any of these cities. This could also aid in changing future user behaviour towards online collaborative platforms. Third, it is reported that urban mobility remains a significant challenge for Douala and Yaoundé residents; thus such transport networks have become a substantial gridlock to the city's and economic development (The World Bank, 2018). This results in heavy congestion that impacts the daily life of residents, as well as the flow of trade and sometimes residents, take up to 3 hours to reach their workplace. Finally, with the emergence of a new market within the developing countries, with better ICT infrastructure under fast development, this research thesis will foster understanding of clients-resident expectations within other cities that are yet to see this form of the collaborative economy.

As mentioned earlier in the introduction, this thesis follows a case study approach, more precisely an explanatory case study approach. Shramm (1971) looks at the very essence of all case studies in that they try to illuminate a set of decisions, the "why" and "how" they were implemented and the "what" results from implementation. The relevance of such a method thus resides in the author's focus of contemporary events as opposed to historical events in analysis of both primary and secondary data collection for this thesis. Moreover, since this thesis investigates a modern phenomenon in understanding a real-world case, such understanding would likely involve necessary contextual conditions that hold more value to explain to the outcome of the study (Yin, & Davis, 2007). Thus the author embraces a realitivist perspective, thereby acknowledging multiple meanings with findings that are observers dependent (Leppäaho, Plakoyiannaki, & Dimitratos, 2015). Therefore, the case to be studied would be a clients-residents expectation within the cities of Douala and Yaounde within a specific socio-demographic of the population within these cities (Gavaravarapu, & Pavarala, 2014), furthermore, understanding the economic and transport development in those two cities is part of the context to throw more light on clients-residents expectations. The boundaries of the case study are delimited by the questions posed by the author in his survey, which covers only the urban transport sector service within these two cities. By adding an age demographic, the author of this thesis determines the scope of the data to be collected which will help distinguish data about ride-sharing platforms from external data to the case (Yin, 2018).

Mainly, the empirical context being studied here is clients-residents' expectations on ride-sharing platforms that would operate within the economic sphere of Douala and Yaoundé. To meet the objectives of this thesis, namely answering the research questions: What are the incentives cost to clients-residents? How available and accessible is the technology to clients-residents? Would ride-sharing offer a better sense of security and safety to female clients-residents compared to male clients-residents in terms of quality of service, conditions of the vehicle and the user identifier? Will ride-sharing reduce frictional and time-wasting to clients-residents? Would ride-sharing increase trust in the transport sector? What will be the payment method in the absence of existing direct payment methods? An online survey was used to collect data.

Economically, it is the hub of the economic boom within the country. Thus the understanding of motives and barriers to the use of ride-sharing platforms by clients-residents is a high input to the fast development of such a sharing economy. To support the use of this research method, previous studies on ride-sharing platforms were searched in case disruptiveness of ride-sharing. In the empirical research of Marianne, V., & Jennifer, B. (2018, 607-614), a quantitative method was

used to discover the economic, social and environmental impact of ride-sharing on the residents of the city of Cape Town, South Africa.

A modified version of Bygstad et al. 2015 of the Affordance theory and Venkatesh et al. 2003 of the Unified theory of acceptance and the use of technology as developed in the early literature of this thesis to measure user expectation, two main proposition is emitted as characteristic to a case study approach (Yin, & Davis, 2007).

- **Proposition 1** clients-residents who are familiar with the concept (ride-sharing platforms) will have opportunistic occurrences in choosing a ride-sharing app, security acceptance in accepting ride-sharing app and competitive, affordable cost in selecting a ride-sharing app.
- **Proposition 2,** clients-residents who are unfamiliar with the concept will have ambiguous expectations towards ride-sharing platforms in regards to performances, easiness to use the platforms and perception of the societal image towards ride-sharing platforms.

Though in the study of Bygstad et al. 2015, they used the affordance theory to support their findings where users' expectation was being analysed from the vantage point of opportunistic affordance, security affordance and affordable transportation, in this thesis, however, the clients-residents experience is almost absent or reduced to few numbers of respondents who have had the privilege to travel out of this two cities to other countries where ride-sharing platforms exist. Nevertheless, it remains valid in the authors' research. Affordance theory predicts that: those clients-residents who are familiar with ride-sharing platforms have a realistic expectation in grasping the opportunity in the use of ride-sharing platforms. Seemingly, clients-residents who are familiar with ride-sharing apps will perceive the security importance of the platforms and lastly, the affordability of the ride-sharing platform expectancy. Inversely, the Unified Theory of Acceptance and Use of Technology predicts that: clients-residents who are unfamiliar with ride-sharing platforms have realistic mixed expectations towards ride-sharing platforms in relation to performance expectancy that result in rejection if platforms do not reflect the expected outcome of clients-residents expectation. Moreover, clients-residents who are unfamiliar with the ride-sharing platform will have mixed expectation in terms of effort expectancy; if the learning curve appears to be difficult, ride-sharing platforms will not be acceptable to clients-residents of these cities, and lastly, the societal influence in the acceptance of ride-sharing platforms in the unfamiliarity influences the acceptance rate of ride-sharing platforms.

2.2. Data and Sample

Literature concerning the topics ride-sharing economy, the ride-sharing economy in developing countries and affordance theory and the unified theory of acceptance and the use of technology were collected. Due to this reason, articles involving the ride-sharing economy and ride-sharing economy in developing countries used in this research paper were mostly research in other cities and countries and nothing much within Cameroon.

Respondents with tertiary and secondary education background were included in the study to ensure respondents' ability to understand the concept of ride-sharing platform and to some extent, some familiarity. Respondents across the age spectrum have access to the internet, and the internet's "hottest" users fall within the age range of 16-35 which constitute a prime source of any future growth in ride-sharing platforms (Temkin, 2009). In previous studies, it was discovered that such age ranges are well versed with the use of online services and can easily access such services via multiple electronic devices in their possession (Forrester Research Report, 2011). The most significant differences observed between this age range (16-35) and older age range is that the former is the first generation to be raised with digital technologies immersed in every aspect of their social lives (Temkin, 2009). The target group of the research were 16-45 years old residents of the cities of Douala and Yaoundé with income earnings of 100,000FCFA-200,000FCFA (approximately 150-300 Euro). Though the cities of Douala and Yaoundé harbours the vast ethnically diverse population among all, nonetheless, respondents ethnicity was not exclusive to the survey since there is no central dominance of any ethnic group in contrast to the remaining eight cities of the country. Google Forms were used in carrying the survey.

The language used in the questionnaire was English (see Appendix 1) and French (see Appendix 2) since it provided respondents with an equal opportunity of interpretation of the content of the questionnaire and thus eliminate the possibilities of word nuances in meaning to the concepts. The questionnaire was pre-tested before sending out to potential participants. After being approved by the supervisor, the collection of the answer from the first respondents was carried out through university student unions of the University of Douala (SOS Solidarité) and the University of Yaoundé I Ngoa-Ekelle (NSU Yaoundé) via an official email request sent to the aforementioned student's organisations. Students union representatives responded to the questionnaire measuring how long it takes to finish and submit the responses, the level of understanding of the economy concept (ride-sharing economy) and level of easiness or difficulties of the questions. After the submission of the responses, participants were asked if any clarification was needed or

improvements to the questionnaire. The official questionnaire was then sent out via email to the students' unions representative who then distributed via university students' email and students' social media platforms (Facebook, Instagram and Whatsapp) to the university student body. This student body represents the internet's hottest user and falls mostly within the targeted demographic and thus increases the probability to maximise the number of respondents.

Furthermore, it was distributed through the authors' personal private social media platforms (Facebook, Instagram and WhatsApp) contacts of specific working-class groups. And lastly through friend relation with the possibility to distribute among other friends. The required amount of responses was decided to be between 200-500 all together, and the survey was determined to be open from 15.04.2020 until 28.04.2020. This collection period was considered to be suitable for research. Hyman and Sierra (2015, 5) state, collecting data can be carried out faster and at the same time accurate. The method used was convenience sampling since it is suitable for collecting data quickly from the target group.

For the questionnaire, regardless of language, the scales to measure each of the variables in the model was developed based on previous literature. First, respondents were asked to name their primary mode of transportation they regularly use for movement. This kind of approach has a limitation because it might cause most respondents to answer the questions by their most ideal mode of transportation in mind rather than their actual practical mode of transportation. Therefore, the author might fail to grasp the real cases where negative experience with respondents' transport mode was experienced and could result in a positive experience if ride-sharing were to apply. Despite such limitations, this method remains valid as it has been widely used in other studies to measure user expectation with cat sorting technique (Natalie et al. 2018) as it allows respondents the possibility to list possible expectations to a ride-sharing app.

Additionally, the lack of experience with ride-sharing platforms might generate absent meaningful perception about ride-sharing platforms (Kim & Stoel, 2004a), thus leading respondents to answer the questions without careful consideration. All variables were measured using four-point Likert scales (1 = very important, 4 = Least important), except for the preferred choice of either driving or using a ride-sharing app and demographic variables. However, the "I don't know" option was added, which is not measurable since it is not an actual opinion. The survey was set up in three sections: the first section was aimed to detect general background information on respondents primary mode of transportation. Furthermore, discovering whether there were preferences in these various modes of transport and the level of satisfaction by residents on their choice of transport. The duration of time spent during a one-way journey daily and the distance covered in kilometres

daily help build more insight into the possible motives and barriers to ride-sharing platforms in these cities. In the second section, the author first finds out respondents' awareness of ride-sharing platforms. Then follow the possibility to share experiences with any form of ride-sharing that some respondents' could have encountered in other countries to gain more insight to what that could mean to them if such a platform is launched in these cities. The core understanding of factors that might motivate ride-sharing apps was asked to respondents' as well as barriers to the use of ride-sharing platforms which include values like cost, safety, convenience, access to technology and internet, and privacy issues. A preferred choice was added last to understand whether residents if given a choice between using private cars as a mode of transport, public transport, or ride-sharing platforms what would they prefer. The last section tackles the area of demographic, which seeks to gentrify the number of respondents. In this point, preferential variation was investigated as each value holds a different priority based on genders, which is very commonly seen in DC where the disparity between male and female are pronounced at the level of education, employability and mobility.

Table 1. Sample Composition of the city of Douala and Yaoundé

Gender			Age				Socio-demographic
Male	Female	Not disclose	16-25	26-35	36-45	45 Above	70% have a tertiary education, 80% are employed in the secondary sector, half being female. 80% of participants have a high social media presence with easy access to new technology.
45.8%	52.7%	1.5%	44.9%	35.4%	18.5%	1.2%	

Table 1 shows the final composition of our sample of the city of Douala and Yaoundé. However, in actual reality, there is a variation between our final sample composition and the actual population. The percentage composition of the working population below 25 years of age is over-represented in our sample compared to the actual population of the two cities. The age group that is under-represented falls about 30 years of age. The reason for such disparity in representation is because youth starts working as early as 14 years old, thus a high percentage of the working class

and mostly in the secondary sector. Though the older age group have access to the internet, they most often than not find it difficult to use new technology. The total sample size was 343.

2.3. Analysis Method

The analysis method used in this thesis is a descriptive analysis technique including some inferential statistics methods like cross-tables, charts and testing (Chi-square test, ANOVA). The aim is to analyse our data by building a descriptive explanation of our case study (Yin, 2018). In our case, clients-residents expectations toward ride-sharing platforms, the theories used to develop the framework of this thesis lays the array of a descriptive analysis, where expectations of clients-residents familiar with the concepts slightly contrast expectations of clients-residents unfamiliar with the concepts. MS Excel is used for analysing all data from the surveys, including both descriptive and inferential statistical analysis. Chi-square test was carried out online on socscistatistics.com website.

3. The empirical part of the research

The empirical part covers the data collection in the country of Cameroon. Additionally, a piece of historical background information is provided about the transport network within the country to give an overview of competition analysis on the different actors within the market. Descriptive analysis providing charts and explanations are included in this part. The discussion and recommendations are provided, the empirical part of the research ending to the conclusions.

3.1. Background information on Cameroon

The present official name is the Republic of Cameroon. Formerly a German colony in the late 1800s named Kamerun, the Germans administered this territory as one of its trusted territories. With the loss of the First World War by the German, all German trusted territories were divided among western powers that included Cameroon which was divided between the British and the French. The French trusted territory known as "West Cameroun", gained its independence from France on 20 May 1960 and became the "La République du Cameroun". However, the British territory was known as "Southern Cameroon", through referendum join la Republique du Cameroun to become the Federal Republic of Cameroon with one president at its head but two governing systems with separate judicial systems, separate educational and political systems: common law system, the British educational system and political philosophy in the English part of Cameroon, whereas the civil law system, the French baccalaureate education system and french political philosophy in the French part of Cameroon. The official name of Cameroon has been changed on three occasions from Federal republic to the United republic and then the Republic of Cameroon. Though on paper the systems agreed upon unification of the two Cameroons are still in place, in practicality, this isn't the case because the dominant majority of the country is 70% French-speaking have assimilated the English speaking system into the French system which as a result of that, led to the current conflict going on in the country between the French and the English parts of the country.

Geographically, Cameroon is located in Central Africa, bordering Nigeria in the West, Chad in the North, the Central African Republic in the East and Gabon, Congo Republic and Equatorial Guinea in the South. Cameroon can be described as "Africa in Miniature" due to all the major geographical features of the continent that it exhibits: Mountains, desert, rain forest, savannah grassland and ocean coastland. Cameroon current population estimate by the World Population Review is

estimated at 26.55 million inhabitants (World Population prospects 2019; World Population Review 2020). However, this estimate is an extrapolation of the last population census of 2005, which was established at 17.5 million inhabitants (National Institute of Statistics Cameroon 2010). The country has ten cities with Yaoundé being the Capital and Douala the economic capital with the country's principal port in Douala. The inhabitants of Douala and Yaoundé constitute 55% of the country's population with a total of 230 different ethnicities where some ethnic groups are similar in culture but differ in languages. Nonetheless, it should be duly noted that English and French are the two official languages of the country.

A brief overview of the country's political system: Cameroon's constitution has undergone several changes since independence. The constitution of 1961, 1972 and 1996, which established a bicameral legislature although the second branch of the legislature was only formed as recently as 2013 (William 2015). Executive powers are given out to the president, who serves as head of state and head of the armed forces, who also appoints a prime minister and his entire cabinet. Legislatively, a bicameral parliament consisting of the National Assembly and the Senate acts as the law-making organ of the nation (*ibid*).

Economically, Cameroon is a member state of the Economic Community of Central African States (CEMAC) among other member countries of Chad, Gabon, Central Africa Republic, Congo and Equatorial Guinea, and forms the most substantial economic market in this economic zone holding 40% of its money supply (African Economic outlook 2020). After independence, much investment was made in educational infrastructure, selective industrialisation, farming diversification, rural infrastructure development and rural cooperatives, just to name a few. However, much has changed ever since following a change in the political system and administrative system of the country. The principal export commodity of the nation included cocoa, coffee, petroleum and cotton. According to the World Bank report (2018), Cameroon is a low, middle-income country with a GDP of US$1,429 in 2017 and Gross National Income per capita of US$1,330 in 2016 (The World Bank 2018). The country's financial systems have been mismanaged since independence and have been on constant critics by economic observers for the lack of transparency in its financial institutions (International Monetary Fund 2009). This has led to informal saving systems within communities where enforcement of rules and regulation is done through social pressure (The World Bank, 1986). Cameroon continues to have a high risk of debt distress, according to the IMF's assessment in November 2018, debt which was almost 39% of GDP in 2018, compared with 12% in 2007 (International Monetary Fund 2019).

3.2. History and Background information about the transport Sector

Due to its strategic location with other neighbouring countries, it positions itself as a crossing point to the landlocked countries of central Africa (Chad and the Central Africa Republic). Only as late as the 1990s, that very few literature reviews can be found about the transport sector of Cameroon. The nation's transport infrastructure pre-date back during the colonial era and post-independence upgrade about the transportation network linking major cities to rural areas at the time was not carried out since the post-colonial period was dominated by heavy investment in education and farming cooperation. Cameroon is the only CEMAC country that has four major transportation networks: road, rail, port and air transportation network. However, much emphasis will be on the road transport sector, which is the sector of the focus of this thesis paper.

Road transport network: Cameroon road infrastructure since colonialism has always been a reflection of its natural resource exploitation rather than population accessibility. It is only as early as the early 2000s due to fast urbanisation within the country's largest cities that major investments in its road infrastructure were made (Urban mobility project, 2018). This rapid urbanisation has been witnessed in other African major cities, which has become an insistent reality observed in the recent decade (Ongolo & Boniface, 2013). No aspect of Cameroon road transport network can be understood without a comprehensive understanding of Cameroon urbanisation in general (Urban Mobility project, 2018). The United Nation Statistics Division estimated that Cameroon has one of the highest rates of urbanisation in sub-Saharan Africa, with 56% of the population living in urban areas and urban growth estimated at 3.2%. It is estimated that, by 2050, 70% of Cameroonians will live in urban areas. (UN-World Statistics PocketBook, 2013). However, the country has failed in response to urban growth due to inadequate resources (Tamo, 1997) and poor institution governance (Canel et al. 1990). The transport sector in Cameroon is therefore affected by the institutional bureaucracy with responsibilities spread across a multitude of ministries, local and national institutions which negatively affects the planning, prioritisation, operation and maintenance of transport infrastructures. In 2010, the decentralisation framework law of 2004 combine with the new regime for local taxes and intergovernmental fiscal transfer gave way for a major investment of US$10 billion in the maintenance of existing road transport network and US$20 billion in construction of major road highways and secondary roads linking cities together this in connection with the World Bank development project (*ibid*). Because of the slow process

in development, the number of road users have exceeded the capacity of available roads and thus leading to heavy congestion, high transport costs within cities, and an increase in traffic accidents. In addition to the lack of roads, the poor quality of existing roads have become a big issue (*ibid*), Recent studies show that 50% of inhabited areas are accessible by road and walking became the first mode of transportation within the cities by 63% of the daily trip being done on foot (Carolina & Vivien 2011). But this has, however, become unsafe to pedestrians because of the chaotic, unregulated transport system that has developed on the side. As the cities expand, motorised modes of transport such as bus, minibus and taxi services have increased as well, thereby affecting traffic patterns and increasing congestion. Due to the bad condition of roads in the cities, bus service providers and taxi services feel discouraged to provide services for the loss of time and increased maintenance costs. The success of motorcycle taxis is partially due to their ability to provide service even with poor road conditions (Piet 2006). Two out of the eight regions of Cameroon have public transport systems namely Douala and Yaoundé which are mainly operated by private ventures like SOCATURE for the Douala Urban city and SOTUC for the Yaoundé city (Ongolo & Boniface, 2015). But due to the unreliability of this public transport in these big cities, people have turned to rely on moto-taxis though not safe for the public in general but represent a faster mode of transportation followed by the taxi services. In 2018 household travel surveys showed moto-taxis share up to 61% of all motorised trips (Cameroonian national household surveys 2001). Such form of transportation has been fostered by rising demand in the transport network, the low acquisition cost of motorbikes and the lack of a regulation mechanism in this transport sector (Piet 2006). Taxi services represent only 20% of vehicles registration nationwide, 19% in private car ownership and minibuses just 2%. The Cameroon government together with big city councils, recognised the need for improving its transport sector alongside urban transportation for the development of its economy at large. More recently, the Cameroon City Competitiveness Diagnostic and analysis of multimodal transport in Douala and Yaoundé and its political economy completed by the World Bank Group in 2018 as well as work was undertaken to develop a Sustainable Urban Mobility Plan, which is currently being carried out with financing from the French Development Agency (AFD), underlining the important issues and potentialities, such as improvement of the business model developed for each mode of transport (*ibid*). Indeed, Douala and Yaoundé high population density is an asset for the development of a multimodal transport system, connecting jobs and dwellers, including bus and minibus systems, and potentially a Bus Rapid Transit (BRT) while incorporating the informal transport and non-motorised modes for the last mile connectivity (*ibid*). The purpose of such a project is to address the heavy congestion big urban cities like Douala and Yaoundé faced by building the first mass transit public transport

system in the country. However, despite the adequate levels of road financing, rehabilitation and maintenance, activities are inadequately planned and ineffective in the efficiency and optimisation of the life cycle of road assets. The 2011 World Bank audit of the maintenance contracts financed by the country's road maintenance fund showed that only 45% of civil work scored good or fair in technical quality (World Bank 2011).

See Appendix 3 for more information on other transport modes in Cameroon

3.3. Market competition and Analysis of the transport sector

The transport sector within the cities of Douala and Yaoundé remain very versatile with informal and unregulated transport markets operating within these cities. Thus it becomes tough to measure the competitiveness of the Douala and Yaoundé transport market as minimal statistics exist to understand the real actor players within these markets. As mentioned earlier, the taxis and bus transport sector have some seemingly regulation but are affected by the institutional arraigments with responsibilities spread across a multitude of offices, local and national institutions which negatively affects the planning, prioritisation, operation and maintenance of transport networks for effective and efficient quality services. Public transportation in Douala and Yaoundé, which represents 2% of the transport market share is highly unreliable to which people depend on for long-distance travel since such distance is more costly if taken upon with a taxi. Because of such unreliability, it has paved the way for the proliferation of another form of transportation with moto-taxi (Cameroon Household Survey 2001). The actors of the public transport network in SOCATUR for the city of Douala and SOTUC for the city of Yaoundé. Contrary to what is in major Western cities, for example, Tallinn City where there are significant taxi company operating in a more regulatory platform (Tallink, Tulika, Amigo taxi, etc.), within the cities of Douala and Yaoundé there is no major player within the market, as most taxi operators are independent operators but under a taxi syndicate which only serves as a representative organ to the national authorities but can not enforce any regulation put in place for clients-residents safety. It is observed that most taxi operators if rules are really to be executed, then the number of taxis to be operational will be reduced by 45% for two reasons (Piet, 2006): Firstly, the physical condition of the cars that are used for transportation are mostly cars that have been banned from being on the roads of Western countries mostly because they have entered the end of their life cycle but are imported and used within these cities which undergo particular modification thus not only putting its clients-residents at risk but as well the drivers themselves *(ibid).* Secondly, it is common to carry more than one

client contrary to what is practised in modern cities to carry one client or in case of friends and family members to share a taxi. Taxi drivers practice what is commonly referred to as "surcharge" translated to English as "Overload" where a car that is destined for five-person carriage only fits in seven people in the car which only puts at risk its users and most especially female users that are prone to sexual harassment most often and theft *(ibid)*. Taxi sector represents only 20% of the market share. Clients-residents who have the means most often than not preferred to own their own vehicles which represent only 19% due to the fact that the cost of owning a private car is high (from maintenance to insurance) cripple with corruption from the road traffic regulators who target such a group of people. Moto-taxi locally referred to as "Okada" represent a higher proportion of the market share around 54%. The reasons for such a large percentage are numerous: firstly, such mode of transportation is least costly compared to other forms of transportation and is risk-free from theft is sometimes the case in taxi services. Secondly, this is the only form of transportation that can access specific untarred neighbourhoods or destinations that are furthest away from the city centre. (*ibid*). Thirdly, such modes of transportation can easily be accessible since they have a meagre acquisition cost and in constant high demand. Lastly, they are often very reliable in terms of timeliness and convenience. Still, they don't respond to the criteria of safety and security because most often, the riders are reckless and inexperienced. The remaining 5% of the market share is occupied by unregistered taxis called "clandos" which come from the word clandestine (Fodouop 1985) which are often driven by drivers with no drivers license who are frequent to road accidents.

3.4. Analysis of results

The questionnaire consisted of questions discovering various factors that could motivate and hinder ride-sharing platforms in the Cities of Douala and Yaoundé. The total number of participants resulting from the survey was 343 respondents, of which 308 responded to the English questionnaire, and 38 responded to the French questionnaire. The number of respondents under rejection was seven since they responded to having not lived in either Douala and Yaoundé. This was expected since responses were approached through various student unions and personal contacts, which they might happen not to have lived or lived in these cities.

From the survey results, the primary mode of transportation used by respondents in these two cities varies depending on the distance and time travel on a one-way trip. Figure 1 shows that 51% of the total respondents answered using the taxi as their primary mode of transportation. In

comparison, 32% of the total respondents answered using a motorbike as their primary mode of transportation. The least preferred mode of transportation remains private cars, which is consistent with the high cost attached to owning a car in these cities.
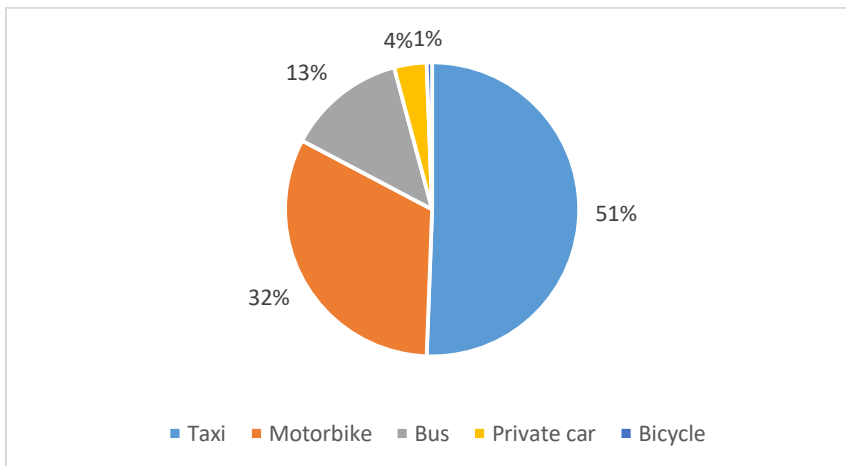

Figure 1. The primary mode of Transportation. n= 336
Source: authors' calculation

From the survey data, the three most popular criteria in terms of choice of transport were cost, safety and time for respondents in both language groups. Figure 2 shows that the answer option for cost was selected as being very important by 74% of overall participants. The least popular area from the predetermined options was privacy/independence for both questionnaires, which only got 18% of respondents viewing privacy/independence being a very important choice in choosing the form of daily transport mode.
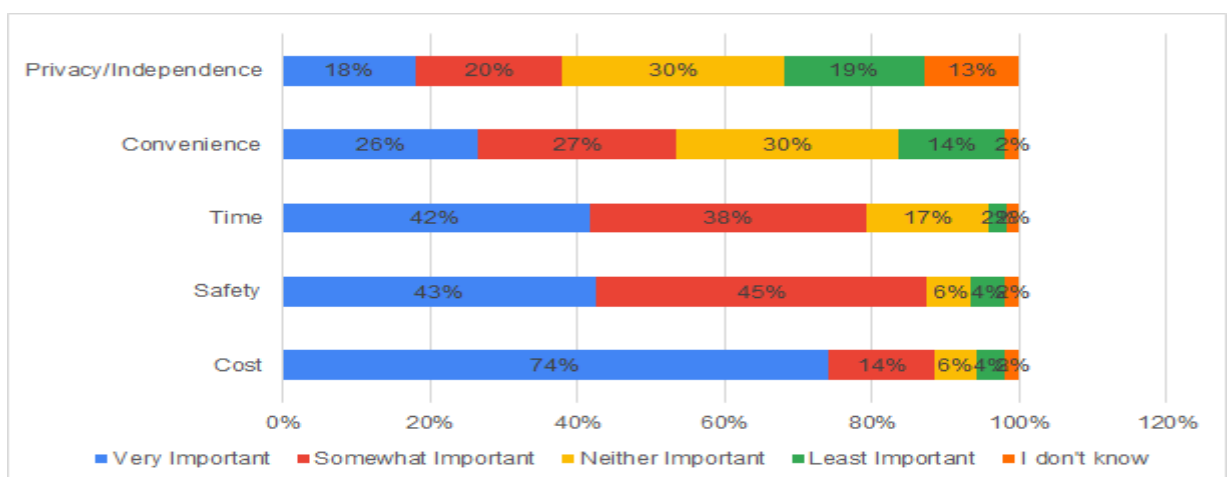
Figure 2. Level of importance in the choice of transport mode. n=336
Source: *ibid*

In understanding the distance participants could travel in a one-way journey, Figure 3 reveals that 40% of overall respondents travel approximately 4-5 km in one way travel. Additionally, 25% of total respondents travel about 2-3 km in one way travel which is in alignment with the fact that city urbanization plans for residents are clustered in the city centre due to high cost of city living but in city periphery and clients-residents travel longer distances for work at the city centre. Only 4% of overall respondents go less than 1 km in one-way travel which can be assumed for grocery purposes.
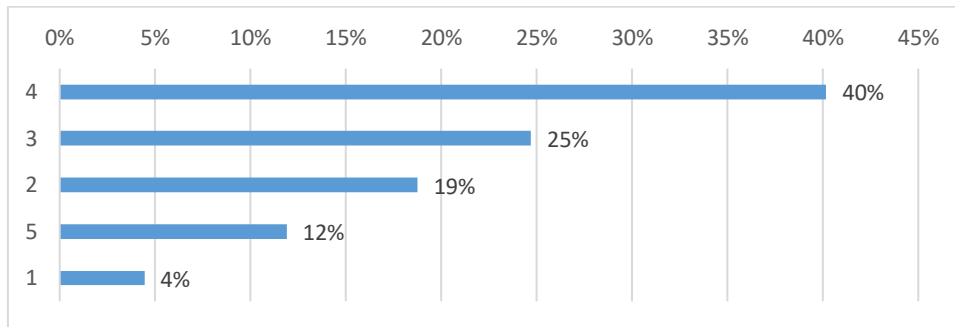
Figure 3. Distance travel on a one-way trip, km. n=336
Source: *ibid*

The duration of time spent in a one-way journey seems to be different, which suggest whether longer or shorter distance, the time spent seems longer as shown in figure 4, 54% of overall respondents answered spending up to 10-20 minutes in one-way travel which is due to the nature of poor road condition, heavy congestions and often the nature of transport of the vehicle. 27% of overall respondents answered spending up to 30 minutes on a one-way trip, thus confirming the importance for respondents to choose a faster transport mode. However, only 10% overall spend less than 10 minutes.
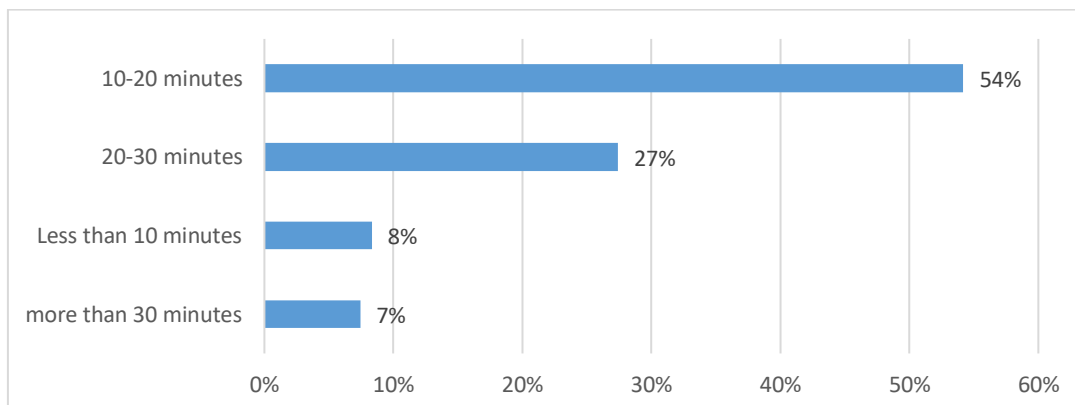
Figure 4. Amount of time spent on a one-way trip. No=336
Source: *ibid*

According to the survey results, comparing respondents primary mode of transport with the level of satisfaction of the transport mode, it shows that majority of respondent 26.2% of average taxi users are unsatisfied with their transport mode. Private care users, which totalises only 4% of respondents, seems to be satisfied with their mode of transportation. This suggests that private car user does not face clients-residents choice in terms of safety or cost. (See Figure 5)
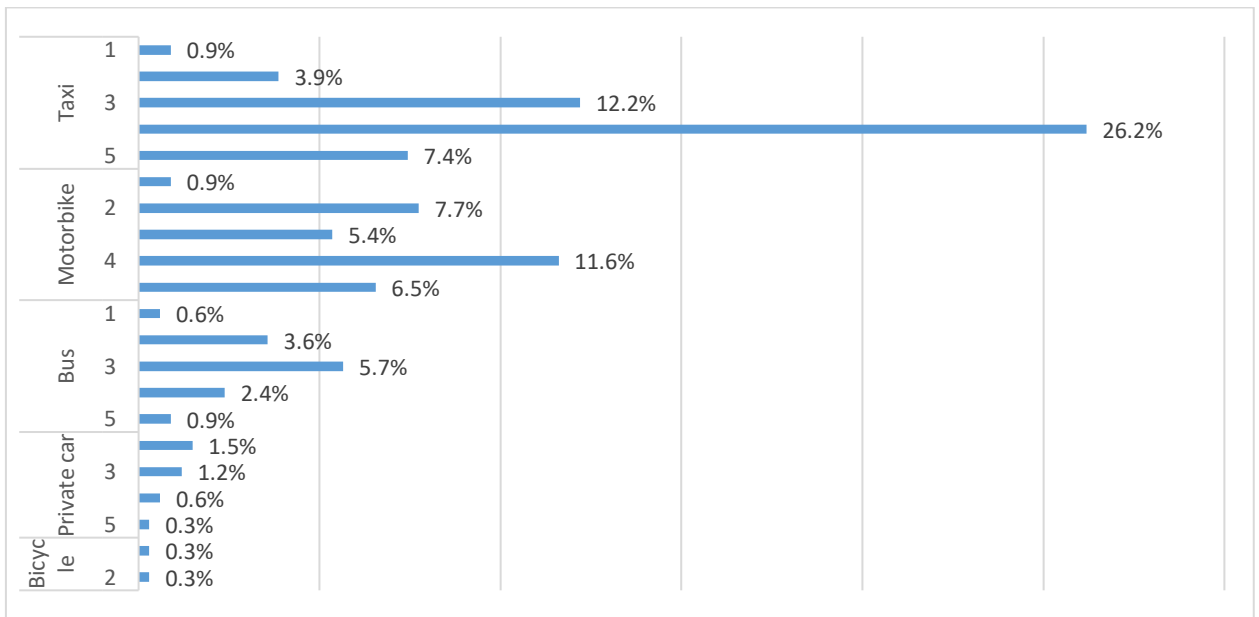
Figure 5. Comparison between the level of satisfaction and transport mode. n=336
Source: *ibid*

A crosstab was made to determine respondents' level of awareness of ride-sharing platforms and actual use of ride-sharing platforms. According to the results, 70% answered being familiar with the ride-sharing platform, Uber the number one leader in the market. 27% of overall participants expressed not being familiar with any ride-sharing app, which complies with any of those platforms has not yet been introduced in any of these cities. However, an overall majority, 77% of respondents' though being aware of ride-sharing platforms have no experience with the platforms (See figure 6).
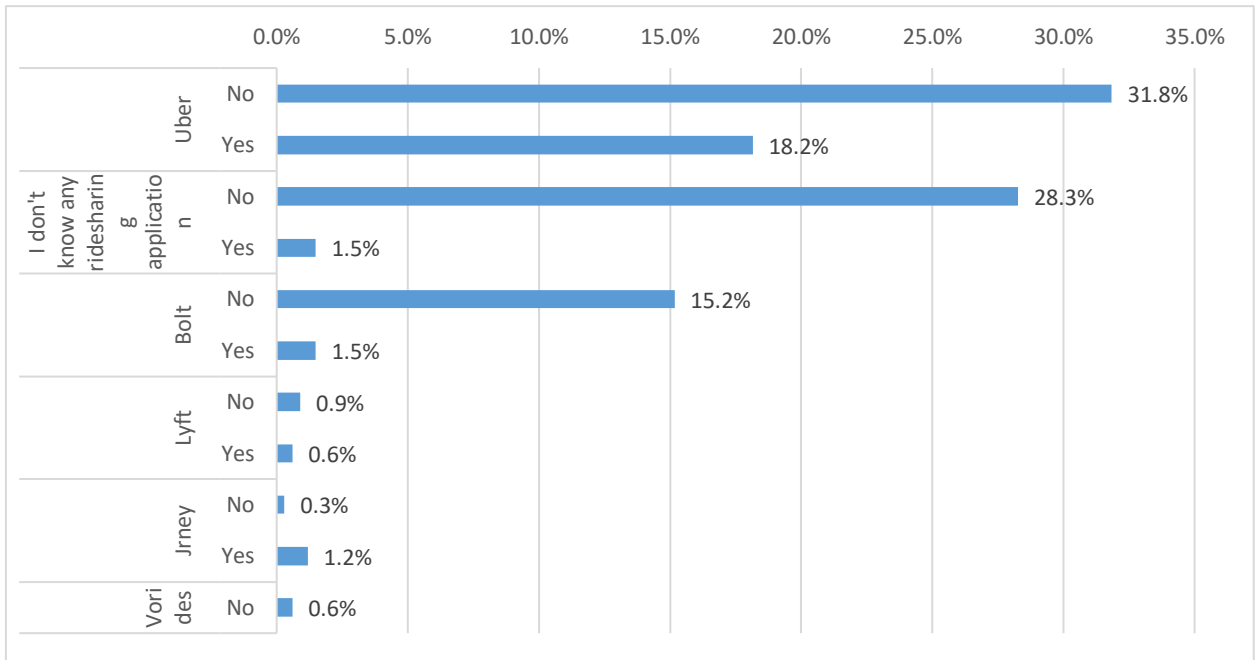
Figure 6. Awareness of the ride-sharing platforms Vs experience with ride-sharing platforms. n=336

Source: *ibid*

The author of this thesis is conducting a small comparison of the findings between genders and age demographic on the various factors that could motivate or hinder the use of ride-sharing platforms in these cities; top three factors are to be compared. The majority of the respondents, 177 were female, 154 were male, and five participants choose not to disclose their gender. The proportions of these are somewhat balanced.

A gender comparison between male and female was made to understand between both genders, which group was most familiar with ride-sharing platforms. 53% of females happened to be the most familiar with ridesharing apps as compared to 46% of male. (Figure 7)
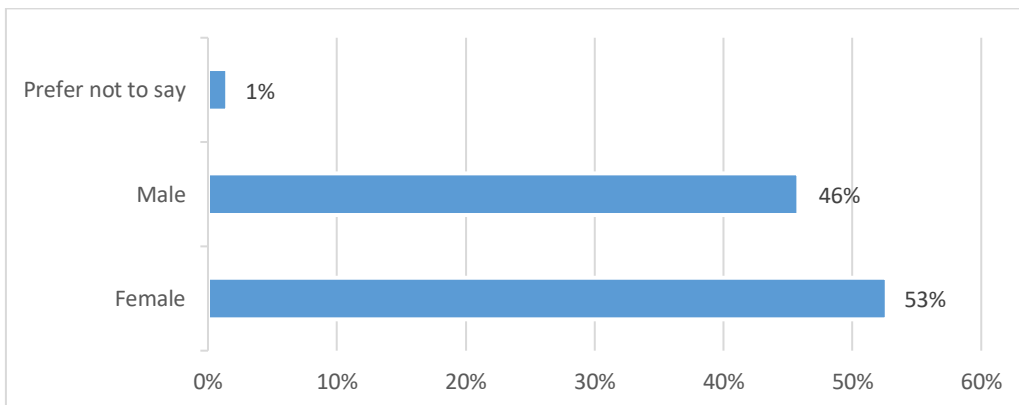
Figure 7. Comparison between genders' familiarity with the ride-sharing app. n=336

Source: *ibid*

In alignment with the previous, figure 8 shows, 76% of female respondents preferred taxi as their primary mode of transportation as opposed to 56% of male respondents preferring motorbike as a mode of transport. The least used mode of transport for both genders is private cars which are in accordance with the cost incurred in owning a car.
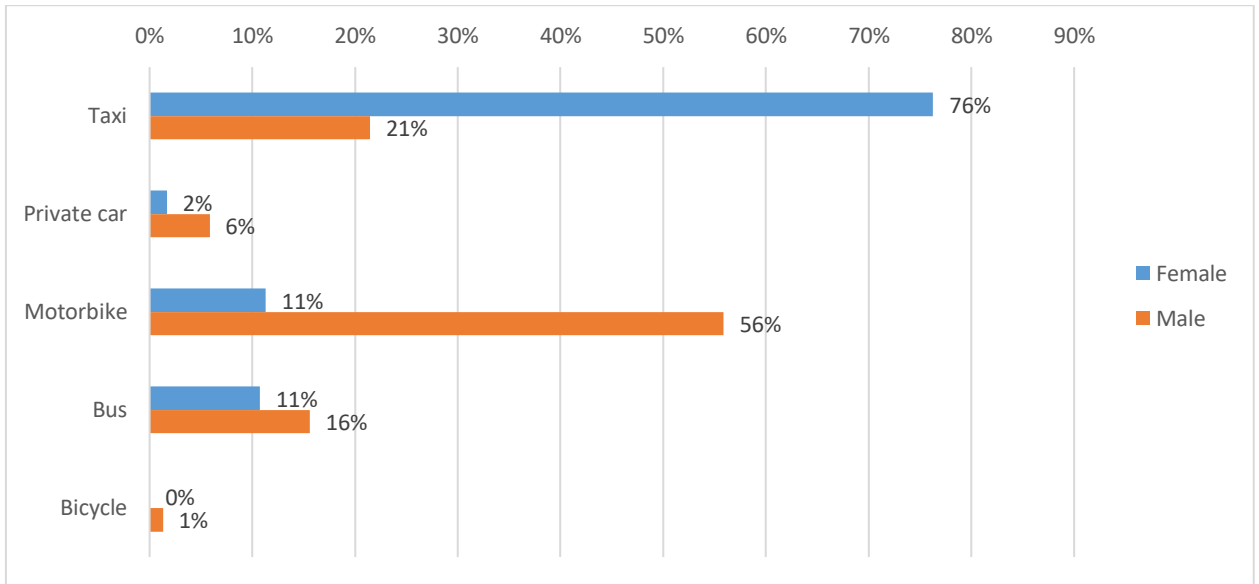
Figure 8. Comparison between genders' mode of transportation. n=331
Source: *ibid*

When comparing the results between ages demographic in regards to the choice of transportation, the Chi-Square test was used to determine whether there is any statistically significant difference between the age demographic and transport mode. The conclusion shows that there were statistically significant differences between the age group and transport mode as determined by chi-square test (chi-square =68.9206, $p<0.0001$ at $p<0.05$) (see appendix 4)

When comparing which factors would be the highest motivator by gender, 79% of female respondents viewed safety as the most critical factor. It is expected, as mention earlier, the nature of the transport network itself is unsafe for women than men (see figure 9). However, the ANOVA one-way factor was conducted to determine whether there is a difference between the estimation given by gender groups are statistically significant. Conclusion: there is no statistically significant difference as shown by one-way ANOVA test (F=1.9550, p=0.2219 at $p<0.05$) (see appendix 5). The author is of the opinion that safety perception is different between both groups, because while female safety in terms of harassment, male perceive safety in terms of road safety and nature of the cars.
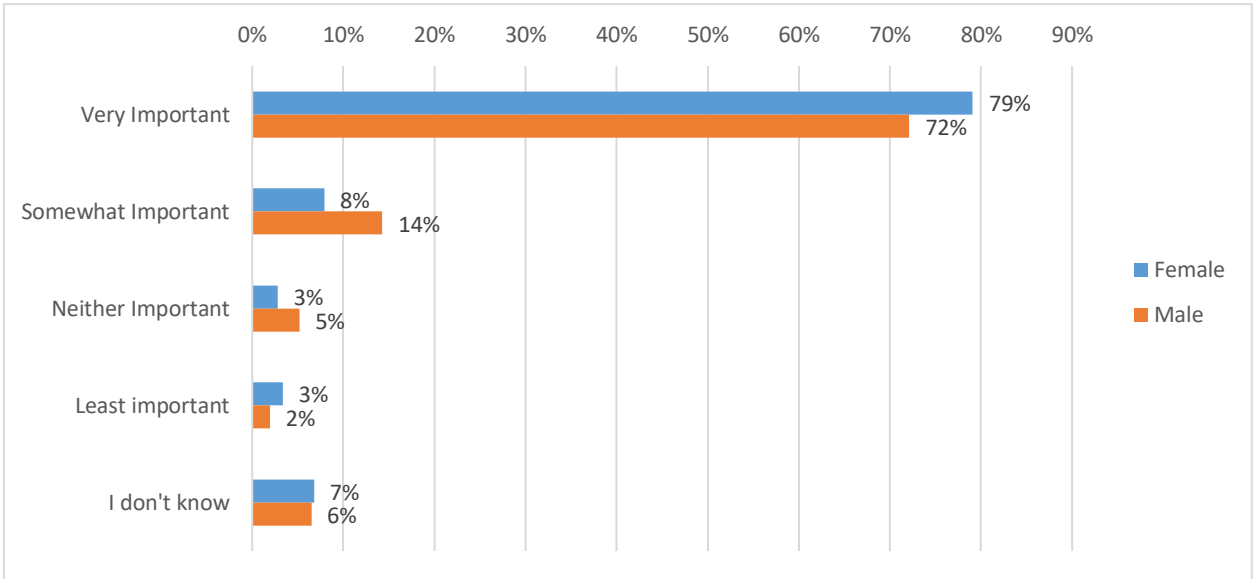
Figure 9. Comparison of safety between genders n=331

Source: *ibid*

However, cost had the same proportion of responses to both gender, 69% and 63% respectively, mainly because of the affordability expectation toward ride-sharing platforms.
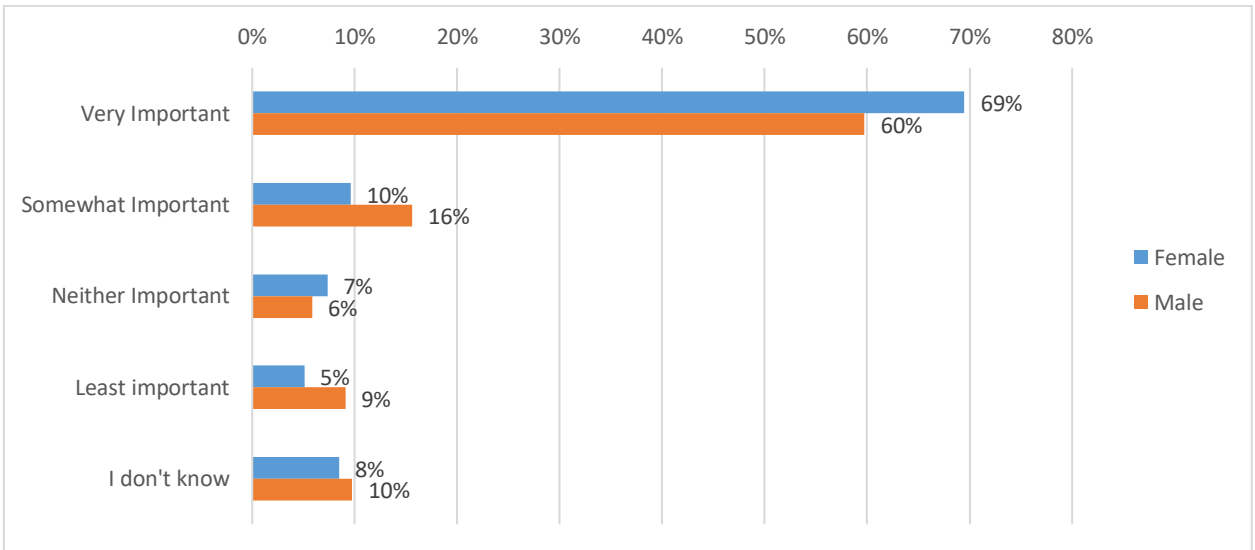

Figure 10. Comparison of cost between genders. n=331

Source: *ibid*

However, a look into respondents experience versus lack of experience with the ride-sharing platform, 48.5% of most respondents' inexperience with ride-sharing platform did value cost as an actual motivating factor for the use of ride-sharing platforms.
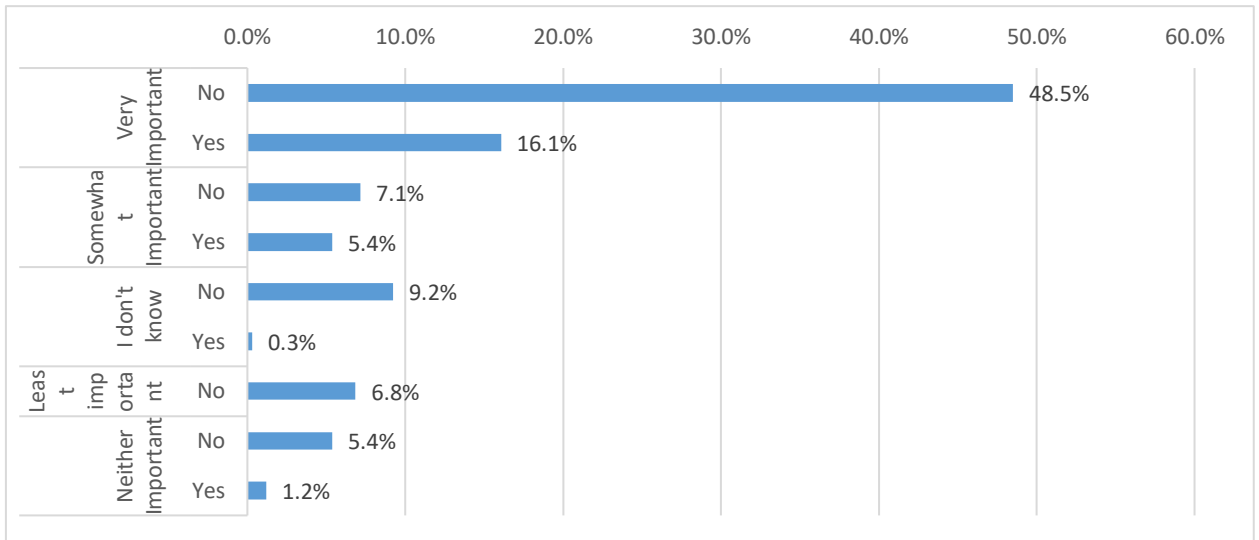
Figure 11. Comparison of experience vs inexperience on the value cost plays as a motivator to the use of ride-sharing platforms. n=336

Source: *ibid*

Both genders valued the ability to access the technology platforms as a motivator, which depict the notion of acceptance for such technology by the population of such group.
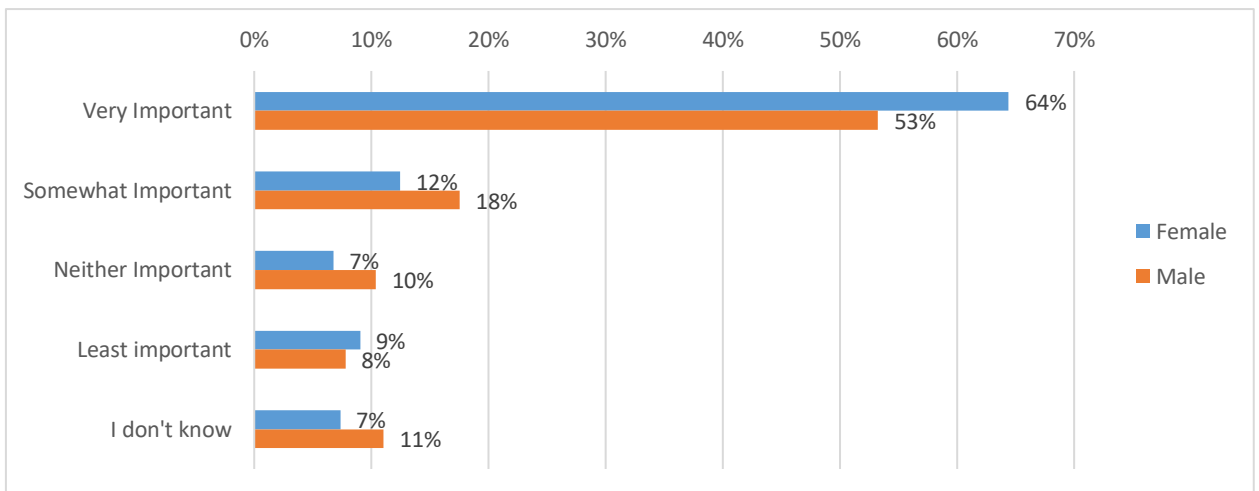
Figure 12. Comparison of access to technology between genders. n=331

Source: *ibid*

Adversely, 68.8% of respondents familiar with the ride-sharing app valued access to technology as a motivating factor. However, this percentage is of almost equal importance to respondents unfamiliar with the ride-sharing app. This suggests that both groups have the same viewpoints concerning the access of technology since this deals with respondents learning ability rather than the actual experience.
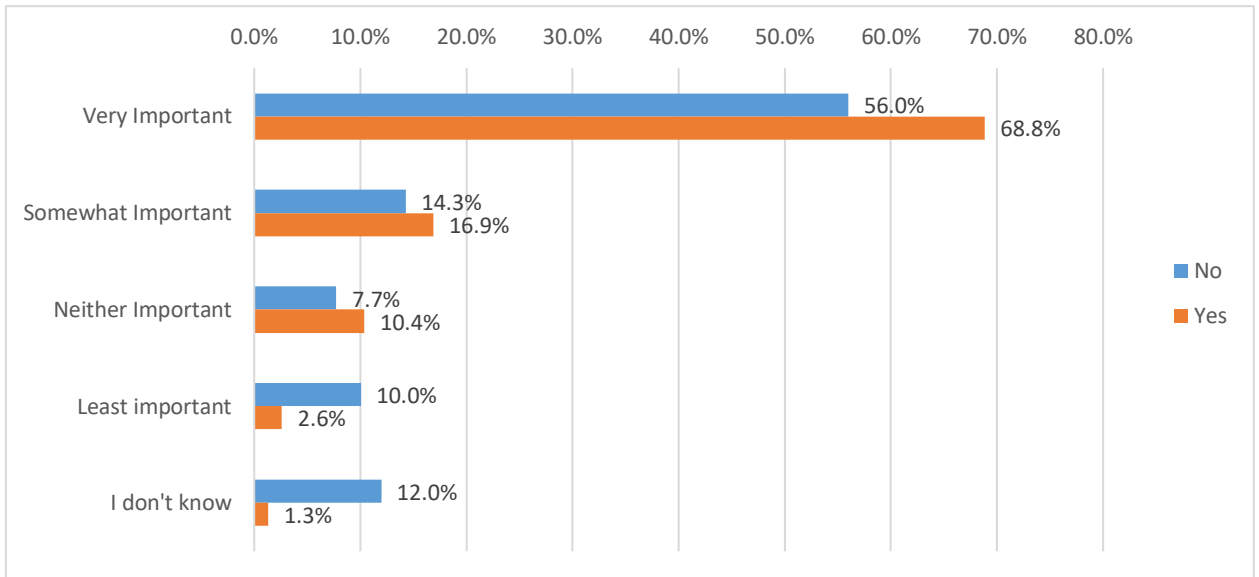
Figure 13. Comparison of familiarity vs unfamiliarity of access to technology as a motivating factor to the use of ride-sharing platforms. n=336

Source: *ibid*

However, the factors that could hinder the use of ride-sharing platforms hold differences of importance by gender. It is observed that the lack of cash payments was of equal importance as the most significant barrier for the use of ride-sharing platforms to both male and female, 76% and 80% respectively. ANOVA was conducted to determine the statistically significant differences between the mean of gender and cash payment. The results show that there is no statistically significant difference between gender group mean as determined by one-way ANOVA (f=0.03, p=0.86) (see appendix 6)
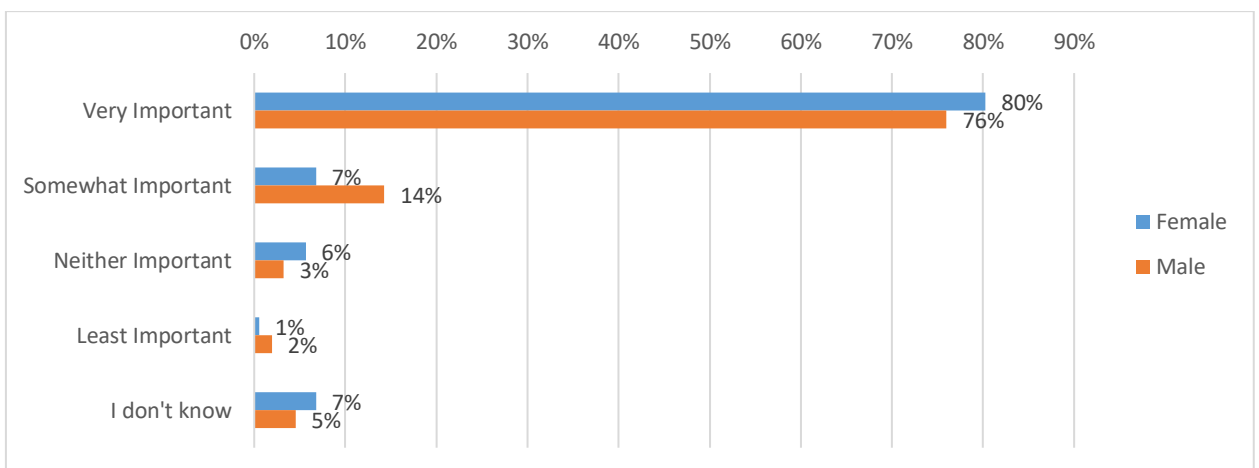
Figure 14. Gender comparison on lack of cash payment as a barrier factor to the use of the ride-sharing platform. No=331

Source: *ibid*

Nevertheless, the analysis shows that lack of safety again is very much more important to females than male at 67% for females which shows a priority need for a safer mode of transportation for the female group. Respondents explained in the open-ended question that ride-sharing app that lacks safety measures like driver identifiers systems, regulation on the type of cars to be used by drivers and transparency on actual cost is considered unsafe.
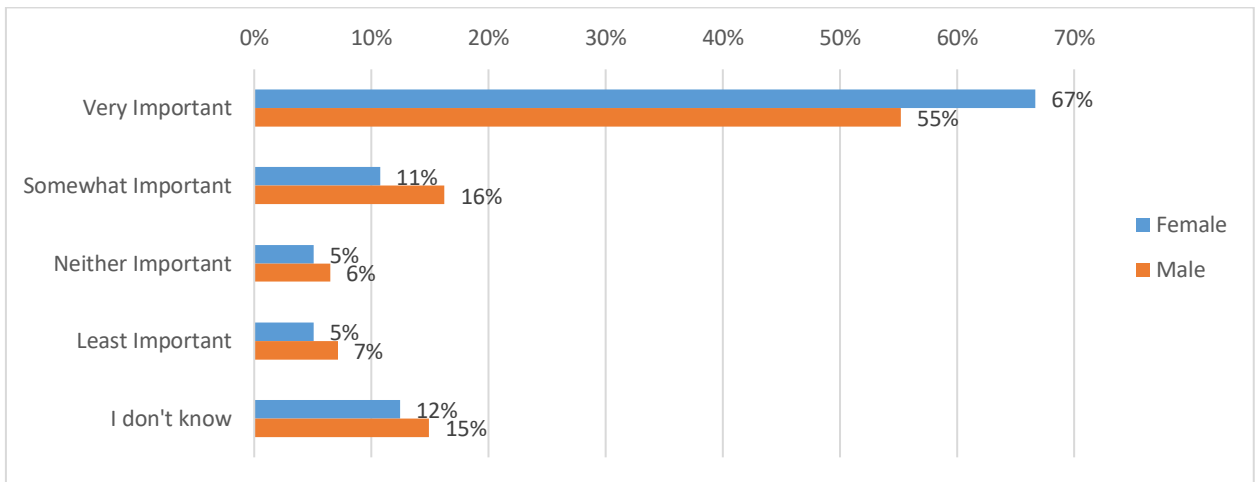

Figure 15. Gender comparison on lack of safety as a barrier factor to the use of the ride-sharing platform. n=331
Source: *ibid*

In the same light, those familiar versus unfamiliar with the ride-sharing app, show difference of opinion as to the role lack of plays into consideration as a factor hindering ride-sharing platforms. 55.7% of respondents unfamiliar with platforms value lack of safety as a significant factor that would impede the use of the ride-sharing app.
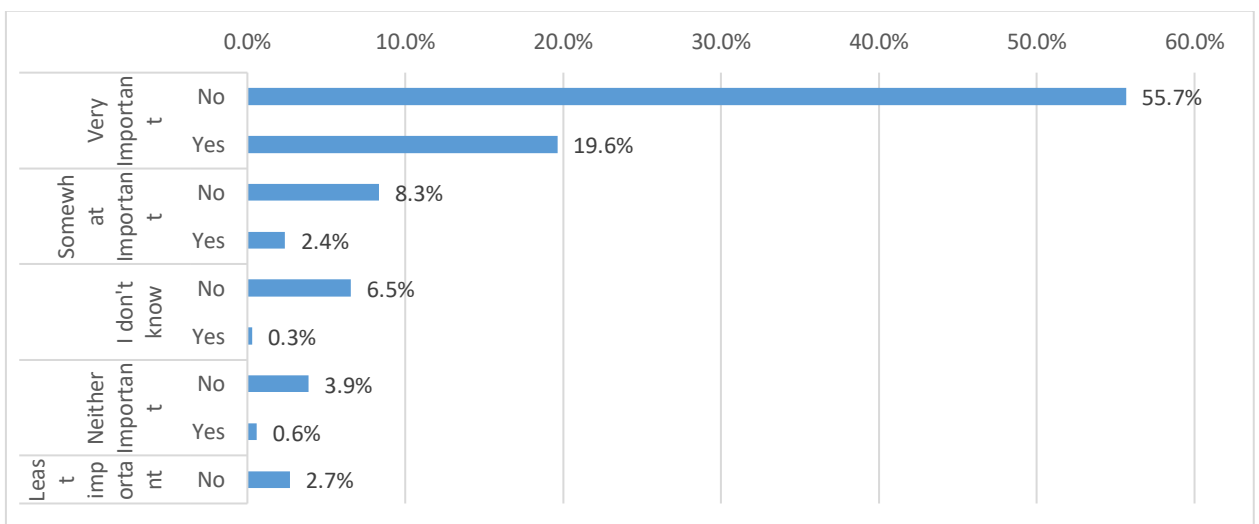
Figure 16. Comparison between familiarity and Unfamiliarity on the lack of safety as a barrier to ride-sharing platforms. n=336

Source: *ibid*

Figure 17 shows that the percentage of respondents familiar with ride-sharing platforms value the accessibility of the internet as a high factor to hinder the use of ride-sharing platform
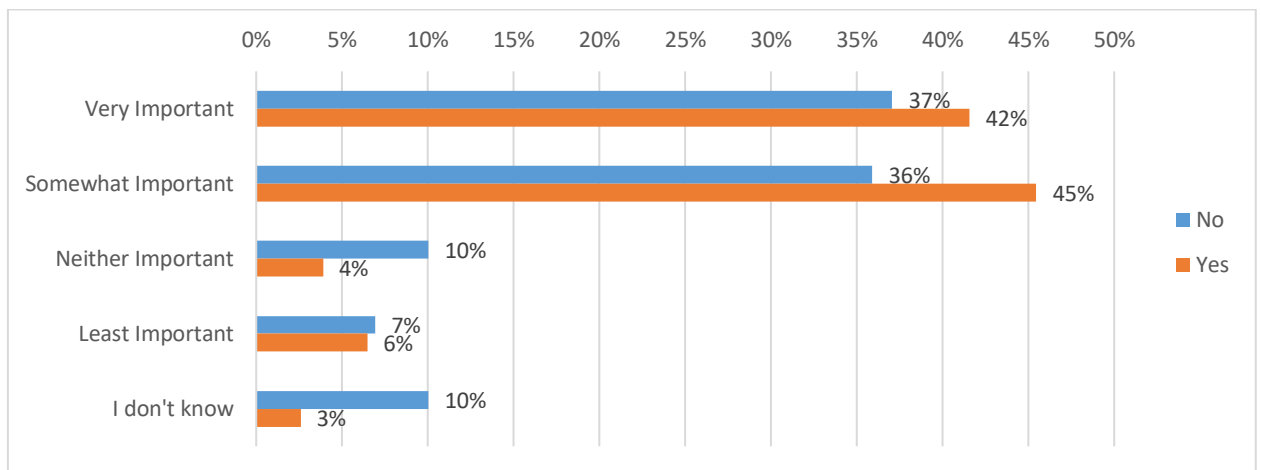

Figure 17. Comparison of Familiarity Vs Unfamiliarity on the difficulty to access the internet as barrier factor to the use of the ride-sharing platform. n=336

Source: *ibid*

3.5. Discussion and recommendations

The theoretical literature and practical part collected will be used to analyse the results and answer to questions posed at the beginning of the research. Lastly, the author will make a couple of suggestions for any future launch of ride-sharing platforms in these cities.

The first section of the theoretical part describes the various theories that aid in understanding user expectation toward ride-sharing platforms and compliments in answering the aforementioned research questions. These theories identify six main frameworks in analysing user expectation, namely; opportunistic affordance, security affordance, affordable affordance, performance expectancy, effort expectancy and social influence. The author concludes that there are three central values in regards to clients-residents expectation towards ride-sharing platforms, namely: clients-residents transportation preferences, the safety of the platforms and affordability of the network (Internet and Mobile Network). Majority of the respondents valued taxi as their primary

mode of transportation which implied, that more than half of the respondents are exposed to a longer duration in transport commuting, congestion of traffic due to nature of road and safety risk by kind of the car itself or overloaded users. Approximately 41% of respondents were not satisfied with their current mode of transportation, thus suggesting that their current choice of transportation was not the best alternative offered to them.

From overall results, at least 97% of the respondents know a form of ride-sharing mostly through news media, social media and friends. Of the total percentage, only 27% have at least used the platforms through encounters in different countries. This brings us to the research question "what are the incentive cost to clients-residents?" As mentioned earlier in the Affordance theory (AT) of Bygstad et al. 2015, the high rate of respondents' awareness of ride-sharing platforms offers an affordable alternative to the current transport mode. However, there are no statistically significant differences between transport mode and gender; the author believes that majority of female respondents' will have high incentive cost in choosing ride-sharing platforms in terms of the low safety risk, better convenience and low transport cost compared to other transport modes most probably due to the lack of experience of using the ride-sharing platform. This also suggests that respondents' familiar with the platforms will, therefore, have high expectations towards the ride-sharing app to be more cost-competitive among other transport modes. In the theory of Venkatesh et al. 2003, high-performance expectancy applies to respondents' familiar with the platforms. Nonetheless, it was expected that respondents' unfamiliar with the platforms would have ambiguous expectations towards ride-sharing platforms since they would not know what to expect from ride-sharing platforms excepts they experience them. However, according to the data collected, inexperience respondents with ride-sharing platforms have high expectancy in terms of cost incentive to the use of ride-sharing platforms.

Both gender groups considered access to technology as being a critical aspect of the use of the ride-sharing platform. This is in alignment with the research question "How available and accessible is the technology to clients-residents" Looking into the literature background information on respondents', majority of respondents' are highly educated and employed in the different work industry. Respondents' below the age of 35 have a high social media presence, thus suggesting that respondents' have easy access to technology since ride-sharing platforms are readily available for most smartphone users. This suggests that as it was mentioned in the Affordance theory of Bygstad et al. 2015 respondents familiar with the platforms will have an opportunistic affordance in using the ride-sharing platform since they are readily available and

access to respondents'. Considering that most transport modes are selected not out of best option, clients-residents will, therefore, have the opportunity in using the ride-sharing app as the best alternative where conventional urban transport seems to have failed. As described by Patrick et al. 2002, there exist a learning curve with the use of technology; clients-residents due to their educational background have natural learning ability with ride-sharing platforms. Effort expectancy relates to the easiness of use of ride-sharing platforms as suggested by the UTAUT of Venkatesh et al. 2003 as such align to the above statements. The author is of the opinion that respondents' unfamiliar with the platforms are not affected by the availability and access of the technology since it deals with respondents' learning ability with ride-sharing platforms as shown by statistics data of figures 13 and 16, as most respondents unfamiliar with the platforms hold the equal weight of response to those respondents familiar with the platforms.

43% of respondents' value safety as an essential reason for their choice in transport mode. However, 76% of female respondents use taxi as a transport mode. In the previous literature of Piet 2006, taxi is described as being unsafe by nature of the care, road and ride and unreliable in terms of timeliness most notably toward the female gender group. Looking into the research question whether ride-sharing platforms offer a better sense of security and safety to clients-residents, the author is of the opinion that ride-sharing platforms response to that question. This is supported by the security affordance framework of Bygstad et al. 2015, that suggests that ride-sharing platforms have inbuilt security function that provides vehicle type to be easily identifiable, a user identifier for both drivers and clients and feedback option that aid in upgrading user expectation. Considering the high level of insecurity of the cities themselves, these safety functions will be quite innovative to clients-residents of these two cities. This increase the high expectation of clients-residents who are familiar with the platforms as a ride-sharing response to their high expectations in terms of safety. Contributing to this analysis, the performance expectancy of Venkatesh et al. 2003, which explain that clients-residents familiar with the platforms all turn to have a high-performance expectancy, as they believe ride-sharing platforms thus offer the above security function. It is the authors' opinion that however, safety and security perception varies by gender since both gender groups have a different understanding of what is considered safe. However, clients-residents who are unfamiliar with the platform will have mixed expectations in terms of safety of the platform but unlikely due to the high percentage of participants' familiarity with the ride-sharing app the security affordance of the platforms remains high.

In contrast to the view of safety being a motivator, 61% of respondents agreed the very lack of safety alone would as well stand as a hinder factor to the use of the ride-sharing platform. Whether

either familiar or unfamiliar with the platforms, the lack of safety will cause clients-residents to reject the use of ride-sharing platforms since the platform do not bring any added value different from their already existing transport mode. One standard value considered as unsafe is the relatively low level of trust seems to be one crucial issue that lies partly in control of the platform company themselves in comparison to road condition, congestion levels, accessibility of internet – all very important hindering factors and out of control of the platforms.

From the overall results, approximately 81% of respondents spend between 10-30 minutes in a one-way trip, within which on average 65% of respondents travel at least 5km in the same one-way trip. In the transport literature framework, Canel et al. 1990, poor governance have resulted in the cities nature of roads and weak maintenance system. This has mostly contributed to the duration of time and long-distance travel by respondents in one-way commute. To answer the research question "Will ride-sharing reduce frictional and time-wasting to clients-residents"? The author is of the opinion that ride-sharing will reduce frictional tension to clients-residents of these two cities as it is the very functionality of the platforms itself that allows one user per ride except in the case of a pool-ride and reduce interactive communication between clients-residents and drivers, thus eliminating any future tension that arises from any misunderstanding. However, ride-sharing platforms do not decrease time wasting since by the nature of the road increase congestions and traffic delay. Frictional and time-wasting are not dependents on respondents' familiarity or unfamiliarity with ride-sharing platforms. Therefore, clients-residents expectation cannot be measured. Nonetheless, in the social influence framework of Venkatesh et al. 2003, clients-residents will perceive ride-sharing platforms as a positive social norm, and such technology will be readily acceptable by other users.

Of the research question, "will ride-sharing increase trust in the transport sector?" The author believes that the high expectation expressed by respondents high percentage of awareness (70%) of ride-sharing platforms suggest the increasing demand in an alternative transport mode and can be concluded that ride-sharing platforms will increase trust in the transport sector where traditional transport system have failed.

Approximately 65% of participants agreed that cost was the highest motivator towards the use of ride-sharing platforms and in overall, 78% of respondents said the lack of cash payment method is a barrier to the use of ride-sharing platforms. "What will be the payment method in the absence of existing direct payment methods"? It is the authors' opinion that the inferior banking system of

the country (International Monetary Fund, 2009) will make it difficult for any ride-sharing platforms to operate within these two cities if cash payments method is not added as a payment option. In the analysis of the open-end section where respondents' were given the option to express the vary opinion on the matter, it is concluded that majority of respondents' do not have a debit card because they use a small credit union for saving and these financial institutions operate only at a local level. As mentioned earlier in section 3.2, the very nature of the urban road within these cities affects the cost of transportation. However, the same roads do not constitute a barrier to any form of transportation. In the affordance theory of Bygstad et al. 2015, affordable transportation cost occurs since ride-sharing platforms offer lower fare by distance and availability of drivers, (Robert 2018a). The very much existence participants familiarity with the platforms will see the opportunity cost in terms cost in using ride-sharing platforms. Moreover, due to the social influence of other clients-residents user towards ride-sharing platforms, it will be perceived by other clients-residents in a positive way thus high acceptance of ride-sharing platform as predicted by the unified theory of acceptance and use of technology by Venkatesh et al. 2003. Nonetheless, affordable transportation cost has its setback. There very much inability to access the internet stand as a hinder factor to the use of ride-sharing platforms. 45% of overall participants said that the very much failure to access the internet would hinder their affordable means to use the platforms.

CONCLUSION

The research problem of this thesis was to clarify the possible factors that could motivate and hinder the use of ride-sharing platforms on by clients-residents within the cities of Douala and Yaoundé. As a result, this thesis was aimed at studying ride-sharing platforms in DC using a case study approach. The questions were formed, and results collected from the data as a purpose to provide answers to the research problem.

Although based on the literature analysis, one could expect differences between genders groups; the empirical analysis did not show any statistically significant differences. This could partly explain why there were differences of importance concerning the motivating factors and hinder factors to the use of the ride-sharing app.

It was discovered that there a majority of respondents general awareness of ride-sharing platforms. Awareness, however, differs from one respondent's to the next. Few respondents became aware of ride-sharing platforms through social media and news outlets. This means that such respondents would only have an expectation about the ride-sharing platform he/she read about leaving out other platforms that might be considered in operating in these two cities. Others respondents were only aware of ride-sharing platforms from word to mouth of friends thus would not actually grasp the full concepts of ride-sharing platforms. However, few respondents actually captured the real concepts of the ride-sharing platforms through their various experiences of ride-sharing platforms in other countries. Such respondents' expectation towards ride-sharing turn to be high, as they will value the opportunity cost of using such a transport option, reliability and safety these ride-sharing platforms offer.

It was also discovered that respondents focused mainly on three values to determine not only their choice of transportation but also in outlining the motives and barriers to the use of ride-sharing platforms. These values include transport preference, safety and affordability of network (Internet and mobile network). Majority of female respondents' value taxi as the best option for them though as outline by Piet 2006, this transport mode is unsafe to female than male. This might suggest that another transport mode is more dangerous to female than male due to the reckless driving of the drivers and high unreliability to arrive at the destination on time. Safety holds a higher value to female respondents' compared to male respondents as they are more exposed to other forms of gender violence. However, this value also appears to vary between genders. Lastly, the low

minimum income wage within these cities, respondents expressed extreme concern in terms cost of affordability of the platforms. The theory part of the research paper explained previously mentioned affordable affordance as a precursor to respondents' expectation towards ride-sharing platforms.

Finally, the results mentioned above and discussions were summarised and set of suggestions for any future ride-sharing platforms that will be operational within these cities:

- Raising a comprehensive awareness campaigned by the future actor of the sector to level the understanding of ride-sharing platforms by providing demonstrating features of the next app, most notably for users above the age of 35. The age group below 35 easily understand the functionality of the ride-sharing app. Through such campaigned awareness, issues that arise from the viewpoint of unsafety of ride-sharing app such as low level of trust can be addressed since such factor is at the control of the ride-sharing company unlike unsafe road and traffic that remains to the control of the city authority.

- Strategic orientation of the drivers in terms of convenience to increase respondents' user experience as most drivers are all inexperience with such platforms. Through such adjustment, ride-sharing platforms benefit on a comparative advantage over existing transport mode demonstrating a high level of professionalism not only to the drivers themselves but as well to clients-residents of these cities.

- The creation of an alternative payments method. This can be achieved by platforms collaboration with the local financial institution and telecommunication networks. This will increase trust in ride-sharing platforms and eliminate friction between clients-residents and drivers.

- The creation of an internal regulation system for drivers that will enforce ride-sharing platforms rule of conduct and use by drivers, in this effects response to clients-residents' concerns in terms of safety.

Taking into account recent development of the COVID-19 pandemic, a look into the application and effect ride-sharing platforms would have on clients-residents mobility in these cities, it is of the authors' observation that adversely to other countries where considerable mobility restriction is set in place to limit the spread of the virus, however, ride-sharing platforms will best fit to operate in such cities and contributes to the reduction of the range of the virus compared to the existing transport mode. This is explained by the transport literature of Piet 2006, that existing transport

mode in the taxi is of such that most taxi carries above their carriage capacity, thus exposing many residents to the virus infection. However, if existing ride-sharing mode were to apply, the ride-sharing company would provide a restriction on pool ride allowing a single rider and addition would provide transparent separator between passenger seats and driver as it is observed in cities like Tallinn, Helsinki and Paris.

Thus, it is hoped that the aim of the thesis is achieved. Further analysis and practical implementation of the given suggestions would be the next step. The author would propose that any given ride-sharing platforms that wish to operate within these cities, should incorporate within their operation strategy, a strong enforcement organ to regulate any rule-breaking. Without such, ride-sharing platform will not differ from other transport modes. Additionally, massive improvements have been made in these cities road infrastructure network. These two cities serve as an example of development to other neighbouring cities within the CEMAC zone. Thus, any business model can easily be replicated to the nearby city.

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APPENDICES

Appendix 1. Questionnaire English

Section 1 of 3

Factors Motivating and Hindering Ride-Sharing Economy Platform by clients-Residents within the city of Douala and Yaoundé

Dear all,

I am Cyprien Chia, a bachelor student from Tallinn University of Technology studying International Business Administration. I am researching about ride-sharing platforms in Cameroon in the city of Douala and Yaoundé specifically on the factors that will motivate or hinders clients-residents on the use of ride-sharing platforms in these two cities. Ride-sharing is a service that arranges one-way transportation on short notice through an online app platform that links the driver of a car to clients or passenger via GPS location. An example of a ride-sharing platform is Uber, Lyft, Bolt and Chidi.

The information will help researchers to gain a deeper understanding of clients and residents level of experience with Ride-sharing platforms. The ultimate goal of the research is to develop a set of recommendations for future ride-sharing platforms and enhance the client-residents experience in the cities of Douala and Yaoundé

The questionnaire Consist of 14 questions and answering takes approximately 7-10 minutes. This questionnaire is anonymous and completely confidential. All the answers are kept private in regards to the research. Your participation is highly appreciated and I am grateful for your time.

1. What is your primary mode of Transportation whether for work or other *

○ Bus

○ Private-Care

○ Motorbike

○ Bicycle

○ Taxi

○ Other...

2. How important are the following aspects for you in choosing the of transportation? *

	Very Important	Somewhat Imp...	Neither Import...	Least Important	I don't know
Cost	○	○	○	○	○
Safety	○	○	○	○	○
Time	○	○	○	○	○
Convenience	○	○	○	○	○
Privacy/Indepe...	○	○	○	○	○

3. How long is your travel distance in most days? (One-Way travel). Choose from a scale of 1-5, 1 *
being below 1km and 5 being above than 6km.

	1	2	3	4	5	
Below 1 km	○	○	○	○	○	Above 6 km

4. How long is your time travel in most days? (One-way travel). Choose from a scale of 1-5, 1 *
being below 10 minutes and 5 being above 30 minutes.

○ Less than 10 minutes

○ 10-20 minutes

○ 20-30 minutes

○ more than 30 minutes

5. How satisfied are you with your current mode of transportation? Choose from a scale of 1-5, 1 *
being very satisfied and 5 being dissatisfied.

	1	2	3	4	5	
Very satisfied	○	○	○	○	○	Dissatisfied

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Ride-Sharing application

Description (optional)

6. Are you familiar with any online ridesharing applications? Select which of the following platforms you're aware of. *

○ Uber

○ Lyft

○ Bolt

○ Jrney

○ I don't know any ridesharing application

○ Other...

7. If you are familiar with the above ridesharing application, have you ever used one of them?

○ Yes

○ No

If YES please share your thoughts on the above experience:

Long-answer text

8. What could be the possible reasons why you might want to use ridesharing app? *

	Very Important	Somewhat Imp...	Neither Import...	Least important	I don't know
Cost	◯	◯	◯	◯	◯
Time savings	◯	◯	◯	◯	◯
Convenience	◯	◯	◯	◯	◯
Socialising asp...	◯	◯	◯	◯	◯
Safety	◯	◯	◯	◯	◯
Adventure	◯	◯	◯	◯	◯
Others	◯	◯	◯	◯	◯
Easy access of ...	◯	◯	◯	◯	◯

9. What could be the possible barriers for your use of ridesharing app? *

	Very Important	Somewhat Imp...	Neither Import...	Least Important	I don't know
Lack of safety	○	○	○	○	○
Unreliable	○	○	○	○	○
Unavailable for ...	○	○	○	○	○
Lack of flexibility	○	○	○	○	○
Lack of privacy...	○	○	○	○	○
Difficulty to acc...	○	○	○	○	○
Difficulty to acc...	○	○	○	○	○
Others	○	○	○	○	○
Lack of cash pa...	○	○	○	○	○

If OTHERS, please explain:

Long-answer text

10. If you could have the choice, would you prefer to drive a private car, use public transport, or use ridesharing? *

○ Drive

○ Ride-sharing

○ Public transport

Please explain your choice above

Long-answer text

Demographic

Description (optional)

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11. Gender: *

◯ Female

◯ Male

◯ Prefer not to say

---

12. Age: *

◯ 16-25

◯ 26-35

◯ 36-45

◯ 46-above

---

13. Do you currently live in Douala or Yaoundé? *

◯ Yes

◯ No

---

14. Have you lived in Douala or Yaoundé? *

◯ Yes

◯ No

Appendix 2. Questionnaire French

Section 1 of 3

Facteurs Motivant et entravant la plateforme d'économie de covoiturage par les clients-résidents de la ville de Douala et Yaoundé

Chers tous,

Je suis Cyprien Chia, un étudiant en licence de l'Université de technologie de Tallinn, étudiant en administration des affaires internationales. Je fais des recherches sur les plateformes de covoiturage au Cameroun dans la ville de Douala et Yaoundé spécifiquement sur les facteurs qui motiveront ou gêneront les clients-résidents sur l'utilisation des plateformes de covoiturage dans ces deux villes. Le covoiturage est un service qui organise le transport aller simple à court terme via une plate-forme d'application en ligne qui relie le conducteur d'une voiture aux clients ou aux passagers via la localisation GPS. Un exemple de plateforme de covoiturage est Uber, Lyft, Bolt et Chidi.

Ces informations aideront les chercheurs à mieux comprendre le niveau d'expérience des clients et des résidents avec les plateformes de partage de trajet. L'objectif ultime de la recherche est de développer un ensemble de recommandations pour les futures plateformes de covoiturage et d'améliorer l'expérience client-résident dans les villes de Douala et Yaoundé.

Le questionnaire se compose de 14 questions et la réponse prend environ 7 à 10 minutes. Ce questionnaire est anonyme et totalement confidentiel. Toutes les réponses sont gardées confidentielles en ce qui concerne la recherche. Votre participation est très appréciée et je vous remercie de votre temps.

1. Quel est votre principal moyen de transport, que ce soit pour le travail ou à d'autres fins? *

○ Bus

○ Voiture-personnelle

○ Moto

○ vélo

○ Autres

○ Taxi

2. Quelle est l'importance des aspects suivants pour vous dans le choix du transport? *

	Trés important	Assez Important	Ni Important	Le moins Impo...	Je ne sais pas
Coût	○	○	○	○	○
Securité	○	○	○	○	○
Temps	○	○	○	○	○
Commodité	○	○	○	○	○
Confidentialité/...	○	○	○	○	○

3. Quelle est la distance de votre voyage la plupart du temps? (Aller simple). Choisissez parmi une échelle de 1 à 5, 1 étant inférieur à 1 km et 5 supérieur à 6 km. *

|	1	2	3	4	5	
Inférieur à 1 Km	○	○	○	○	○	Supérieur à 6 Km

4. Quelle est la durée de votre voyage dans le temps dans la plupart des jours? (Aller simple). Choisissez parmi une échelle de 1 à 5, 1 étant inférieur à 10 minutes et 5 supérieur à 30 minutes. *

○ Moins de 10 minutes

○ 10-20 minutes

○ 20-30 minutes

○ plus de 30 minutes

5. Dans quelle mesure êtes-vous satisfait de votre mode de transport actuel? Choisissez parmi une échelle de 1 à 5, 1 étant très satisfait et 5 insatisfait. *

	1	2	3	4	5	
Très satisfait	○	○	○	○	○	Insatisfait

Application de partage de Covoiturage
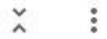
Description (optional)

---

6. Connaissez-vous des applications de covoiturage en ligne? Sélectionnez lequel des programmes suivants vous connaissez! *

○ Uber

○ Lyft

○ Bolt

○ Jrney

○ Autres

○ Je ne connais aucune application de covoiturage

---

7. Si vous connaissez l'application de covoiturage ci-dessus, en avez-vous déjà utilisé une? *

○ Oui

○ Non

Si OUI, veuillez partager vos réflexions sur l'expérience ci-dessus:

Long-answer text

8. Quelles sont les raisons pour lesquelles vous pourriez vouloir utiliser l'application de covoiturage? *

	Très important	Assez important	Ni important	Le moins impo...	Je ne sais pas
Coût	○	○	○	○	○
Gain de temps	○	○	○	○	○
Commodité	○	○	○	○	○
Aspect socialis...	○	○	○	○	○
Sécurité	○	○	○	○	○
Aventure	○	○	○	○	○
Autres	○	○	○	○	○
Accès facile à l...	○	○	○	○	○

9. Quels sont les obstacles possibles à votre utilisation de l'application de covoiturage? *

	Très important	Assez important	Ni important	Le moins impo...	Je ne sais pas
Insécurité	○	○	○	○	○
Non fiable	○	○	○	○	○
Non disponible ...	○	○	○	○	○
Manque de flex...	○	○	○	○	○
Manque d'intim...	○	○	○	○	○
Difficulté d'acc...	○	○	○	○	○
Difficulté d'acc...	○	○	○	○	○
Autres	○	○	○	○	○

Si AUTRES, veuillez expliquer:

Long-answer text

10. Si vous aviez le choix, préféreriez-vous conduire une voiture privée, utiliser les transports en *
commun ou utiliser le covoiturage?

○ Conduire

○ covoiturage

○ Transport public

Si AUTRES, veuillez expliquer:

Long-answer text

Démographique

Description (optional)

---

11. Sexe: *

○ Femme

○ Homme

○ Je ne souhaite pas le préciser

○ Other…

---

12. Age: *

○ 16-25

○ 26-35

○ 36-45

○ 45- et plus

---

13. Vivez-vous actuellement à Douala ou Yaoundé? *

○ Oui

○ Non

---

14. Avez-vous vécu à Douala ou   *

○ Oui

○ Non

Appendix 3. Background information on other transport modes in Cameroon

Railway transport network: Cameroon railway transport network dates back to the German colonial period. During that era, only two railway lines were operational, one running to the South and the other to the East, that was linking the mainland area where plantations were located to the principal seaport of the country located on the coast of Douala for exportation. (World Bank, 2017, 2). The current railway transport has undergone substantial changes with an increase in private funding and less government ownership in the railway network. (*ibid).* Despite the importance of railway transport, tracks are still poorly maintained, leading to a decline in service quality and poor infrastructure condition. Institutional mismanagement of the railway network led to the concession of the services to foreign operators: the French Group Bolloré companies (SAGA/SDV) and SYSTRA a subsidiary of the French Railways (SNCF) (Di borgo et al. 2006).

Sea transport network: Cameroon has several openings to the outside world by sea. The principal harbour in Country is located in the city of Douala, which dates back during the colonial period under the German. The current status of the harbour has seen a tremendous boost in development, and is one of Africa's largest ports and stands as an entry port for Central African nations like Chad and Central Africa republic. Other seaports within that nation include the Kribi deep seaport that can accommodate vessels as large as 400 m with a carrying capacity of 100,000 ton. (National Institute of Statistics, 2018)

Air transport network: The country is a natural air-traffic hub for most Central Africa states. Cameroon's traffic volume was higher than that of the Central Africa Republic, Gabon, Chad and Congo but well below that of Nigeria (Bofinger 2009). As well as other nations, Cameroon suffers from mismanagement of its air transport infrastructure with the main airport located in Douala and Yaounde. Initially, the national airline of the country was called Cameroon Airline with close to one million seats operating internationally and intercontinental (Bofinger 2009). Corruption and

mismanagement cripple the airline leading to a decline in services and infrastructure damages. The nation is one of the very few countries within the continent to attract private investor in its air transport infrastructure, from 1993 and 2008, seven out of the nation 14 airports were included in a fifteen-year join management contract that involved a shared risk between the private and public sector which was co-manage by Aéroports de Paris at 34% and the government of Cameroon at 24% and other carriers at 42%.

Appendix 4. Chi-Square test: Association between age and transport mode.

Results						
	16-25	26-35	36-45	46-above		Row Totals
Bicycle	1 (1.76) [0.33]	1 (1.39) [0.11]	1 (0.73) [0.10]	1 (0.12) [6.69]		4
Bus	18 (19.81) [0.17]	21 (15.61) [1.86]	5 (8.27) [1.29]	1 (1.31) [0.07]		45
Motorbike	33 (47.55) [4.45]	28 (37.47) [2.39]	44 (19.84) [29.43]	3 (3.15) [0.01]		108
Private car	3 (5.28) [0.99]	6 (4.16) [0.81]	2 (2.20) [0.02]	1 (0.35) [1.21]		12
Taxi	96 (76.60) [4.91]	63 (60.37) [0.11]	11 (31.96) [13.75]	4 (5.07) [0.23]		174
Column Totals	151	119	63	10		343 (Grand Total)

The chi-square statistic is 68.9206. The p-value is < 0.00001. The result is significant at $p < .05$.

Appendix 5. ANOVA test results: the difference between gender and safety

H0: where there is no connection between age and transport mode						
H1: there is a connection						
ANOVA: Single Factor						
Summary						
Groups	Count	Sum	Average	F	P-value	F crit
Column 1	3	37	12.33	1.9550	0.2219	5.1432
Column 2	3	46	15.33			
Column 3	3	83	27.67			

Appendix 6. ANOVA test results: the difference between gender and cash payment.

ANOVA: Single Factor						
Summary						
Groups	Count	Sum	Average	F	P-value	F crit
Female	6	354	59	0.033	0.859	4.965
Male	6	308	51.333			

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