

**YANGON UNIVERSITY OF ECONOMICS
DEPARTMENT OF APPLIED ECONOMICS
MASTER OF PUBLIC ADMINISTRATION PROGRAMME**

**A STUDY ON THE WOMEN SEXUAL HARASSMENT IN
USING PUBLIC TRANSPORTATION
(A Case Study of Yangon Bus Service)**

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EMPA-13 (17th BATCH)**

DECEMBER, 2020

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A thesis submitted as a partial fulfillment towards the requirement for the degree of
Master of Public Administration (MPA)

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ABSTRACT

Public transportation is a transportation service for individuals who are living in the country. Public transportation is playing a major role in Yangon mobility and accessibility. The objective of the study is to explore the women sexual harassment in using public transportation. The survey was designed as part of the descriptive method and collected data a sample of 200 women's who use public transportation in Yangon Region. The highest respondents were using public transportation every day of the week. Result of 200 total respondents, there were 112 respondents (56%) were being harassed at the bus station followed by 88 respondents (44%) on the street while walking on the way to public bus station. The respondents expressed a huge deal of frustration and stress due to using public transportation, which negatively affects their mood and physical health. Poor services that were mentioned included over-crowdedness, uncleanliness, lack of safety, lengthy routes, and many stops. In addition to the poor services, respondents stated that harassment also affects their mood and self-esteem.

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LIST OF ABBREVIATIONS

COVID	Coronavirus
GPS	Global Positioning System
JICA	Japan International Cooperation Agency
KM	Kilometer
MRT	Mass Rapid Transit
SEZ	Special Economic Zones
TOD	Transit Oriented Development
UNCHS	United Nations Centre for Human Settlements
YBS	Yangon Bus Service
YDBCC	Yangon Division Bus Control Committee
YRTA	Yangon Region Transport Authority

CHAPTER I

INTRODUCTION

1.1 Rationale of the Study

The transportation system works to move individuals or goods from one place to another to address geographical and geographical constraints. In addition, to support the spatial, social and economic evolution of transport cities (Divall and Bond, 2017). Public transportation is a transportation service for people living in the country. Thus, public transport, also known as mass transit, is a system of transportation that is designed to move individuals to different locations. The majority of individuals want to use public transport for their legal and informal work.

Public transportation operates on designated routes and is efficient. Inexpensive mobility, access to work, education, social engagements, and recreation activities. Public bus routes are important for urban public transport. Public transportation problems include public transportation services, safety, security, comfort, affordability, equality, and regularity, which all refer to the traffic performance.

Today, public transportation has become a major source of education and employment for women. Most of the users of public transport are low-income students and women who cannot afford their own cars. They choose public transport because it is the cheapest form of transportation for their day-to-day purposes. Safety and crime, which are pervasive in public transport in many cities, have led to more talk about ways to reduce them. Most women are threatened by the potential for safe public transportation and the potential for sexual and physical harassment among others.

Women in developing cities have been a growing threat to public safety and public transportation in recent decades. It should be noted that many of these public transport threats occur in various forms, but caution should be exercised. Many suffer from poor public transportation services and inadequate public transportation.

The challenge, especially for governments in developing countries, is to address crime while addressing the scarcity of public transportation and using a sustainable approach. The importance and urgency of safety and adequate public transportation has been linked to population growth and the continued rise of crime through the use of public transport in urban areas.

Public transportation plays a key role in the mobility and usability of Yangon. The current public transportation system provides a vision for the future sustainability of the city, with a growing car population and population. Yangon is the largest city and business center in the country.

According to the Central Statistical Organization, there are 15,293 registered buses in Yangon Region (2017-2018). The replacement of the old public bus system operated by Ma Hta Tha, with the Yangon Bus Service was the first reforms by the National League for Democracy government in the country's commercial capital. Yangon people travel an average of two trips per day. Buses are the main mode of

transportation in Yangon, accounting for almost fifty percentages of all trips. Women are more likely than men to walk and rely mainly on public transport.

Most people in developing cities rely on public transport in their daily life. There are also crimes committed in mode of transportation including bus, trains and taxis. For urban areas, public transportation is essential for social security and is accessible to anyone. The two common conditions for committing a crime on public transportation are very high during peak times and when the bus attendant is not supervised. The availability of buses has limited public transport due to limited demand at peak times. Pickpocketing and sexual harassment can occur during overcrowded time (Smith & Clarke, 2000). According to Sohail's study, women were abused during rush hour, mainly in the form of sexual harassment by stronger passengers on buses (Sohail, Maunder, & Miles, 2004).

There are many consequences from harassment to women such as reflection on negative thoughts, low self-esteem and self-harm. In addition, women also fear sexual harassment while using public transportation (Gautam, Sapakota, Shrestha, & Regmi, 2019). In general, there are few reports of sexual misconduct on public transport, and the reasons for not reporting it can vary from different countries. Some of the common reasons are police response and cultural and social attitudes toward women. Thus, the study is interested to condition of safety and sexual harassment on public transportation and to investigate factors which affect safety and sexual harassment for women in public transportation in Myanmar.

Finally, the study information will be used planning and management and contribute to measures that can be adopted to reduce criminal activities in public transportation system, and it is hoped that empirical knowledge on this disturbing issue will be instrumental in guiding decisions for integrating gender sensitive transport policy in Yangon and the country as whole.

1.2 Objective of the Study

The objective of the study is to explore the women sexual harassment using public transportation.

1.3 Method of Study

The method of the study is descriptive based on primary data and secondary data. Primary data is obtained through with a survey with semi-structure questionnaire on explore the women sexual harassment using public transportation of Yangon Region. The survey questionnaire is collected with both online and email system.

The survey questionnaire consists multiple choice questions in which the observer selects the answers and asks respondents to choose at least one of the other options and dichotomous questions with two reaction choices, Yes or No. And also used five points 'Likert Scale'.

The secondary data is gathered from literature studies, relevant information from Department of Road Transport Administration, Yangon Region Transport Authority document records, research papers, libraries and internet website.

1.4 Scope and Limitations of the Study

The scope of study focuses on women sexual harassment in using public transportation of Yangon Region. The survey is conducted on 200 women travelers using Yangon Bus Service. The study is not covered all women who are travelling with public transportation in Yangon Region. And also, during the survey questionnaire collection period is the coronavirus (COVID) disease occurs in the Yangon Region.

1.5 Organization of the Study

This study is organized into five chapters. Chapter one is introduction with rationale, objectives, method, scope and organization of the study. Chapter two provides the literature review on transport infrastructure and economic growth, importance of transport system in local economic development, safety in public transportation and so on. Chapter three is public transportation system in Yangon. Chapter four is applied descriptive and quantitative techniques of methodology to the empirically derived and collected data on experienced by the women in public transportation of Yangon Region. Chapter five is summarized conclusions with findings and provides suggestions for public transportation of Yangon Region.

CHAPTER II

LITERATURE REVIEW

2.1 Concept of Public Transportation

Public transportation in urban areas has gained greater attention in recent years for improving sustainability and therefore the quality of urban life. Improving the economic and environmental capacity of urban areas facilitates the efficient connection of resources to effective locations and the ease of mass migration (Bok and Kwon, 2016). Public transportation can be more attractive by providing door-to-door mobility (Muhammad Atiullah Saif, Mohammad Maghrour Zefreh and Adam Torok, 2018). The development of transportation services is an important factor for social quality (Yatskiv, Budilovich, and Gromule, 2017). Sustainability of transportation, environmental conditions of the cities, public health and economic condition of residents are shifting from private transportation to public transportation (Elias and Shiftan, 2012).

Access to public transport services and the provision of public transport services are important service issues. In network design of commercial services, researchers tend to focus more on reducing the cost of users and operators, rather than addressing issues of fairness and ease of use (Murray, 2003).

Availability of infrastructure, the information is simple and easy. Save time and money with side-by-side comparisons with public transportation (Yatskiv, Budilovich, and Gromule, 2017). Transportation and land use policies aim to reach consumers at a reasonable cost and time, as inadequate transportation leads to social exclusion (Hawas, Hassan, Abulibdeh, 2016).

Therefore, one of the main goals of policy makers and organizers in urban areas around the world is to provide efficient public transportation for consumers (Saghapour, Moridpour, Thompson 2016).

2.2 Types of Public Transportation

There are many types of public transportation available today. Types of public transportation includes public bus, railway, taxi and water bus.

2.2.1 Public bus

Public bus transportation services generally support the regular operation of public buses passing through the routes to the agreed bus stops under the public bus

transportation schedules. Public buses are safer than individual motor vehicles. Local people with high level of transportation can better security and reduce crime rates. Traveling on public bus transportation reduces the number of cars on the road and reduces the risk of an accident.

2.2.2 Railway

Railways are a safer public transportation system than any other form of public transportation. Railways are more efficient than passenger transport when traveling to low-traffic areas, despite the high capacity and efficiency of passengers and cargo. A rapid transit, underground, subway, and Mass Rapid Transit (MRT) system is usually the busiest in urban areas and often differs from the most frequent traffic and other traffic. Changes to urban railways affect local rail systems that provide passenger services in urban and suburban areas.

2.2.3 Taxi

Taxis are an immediately recognizable form of transportation that is located in almost every city in the world. The role of taxis in a city full of taxis varies from city to city. Taxi regulations have a long history. However, this has not yet been resolved globally. Taxis are an important part of the transportation system in developed cities. Still, not all taxis have the same concept. Taxis provide one-on-one instruction to individuals and parts of the urban transportation system, despite the scarcity of even a regular schedule, routes and designated stations are not enough, but they are part of some public transportation.

2.2.4 Water Transport

Water transportation means that the process of transport a watercraft, a boat, ship or vessels. The ship needed for a rich vessel was essential to the construction and maintenance of its hull. Shipping is mainly used for the carriage of individual and indestructible goods, generally mentioned to as cargo.

The city water transportation is a fundamental part of society and has innumerable associations. This means that all cities are dependent on water. The

reliable water supply is prerequisite for urban settlement and cities are large and small as a means of transportation.

Similarly, all cities depend on transportation. For survival and development, all cities must maintain an effective domestic transport system and establish effective connections not only with the region and the country, but also with the global economy. The link between water transportation and urban development is complex. Advantages and disadvantages compared to the consequences of water use. The urban transportation system varies between location and time.

2.3 Transportation and Economic Opportunities

Transportation developments have the beginning of the industrial revolution have been associated to grow economic opportunities. Transportation technology has been invented or adapted in various ways at every level of society with various effects. Transportation influences the economic opportunities of production and consumption. Historically, five majors in moving of economic development where a precise transportation technology has been used for economic, social and cultural suggested by (Rodrigue, 2017).

2.3.1 Seaports

Technological and commercial developments have made the oceans a place to do business. It was associated with seaports during the early stages of European expansion between the sixteenth and eightieth centuries. Although, international trade was initially developed through the colonial empires, land travel was limited. Later, during the industrial revolution, many seaports became important industries. With globalization and exports, seaports have increased their importance in supporting international trade and global supply chains. Simple businesses often involve a lot of goods. Complex economies increase the flow of goods.

2.3.2 Rivers and Canals

River trade has gained momentum throughout history, and even high-tech canals have been built because lock technology is fundamental. In the late eightieth and early ninetieth centuries, the first phase of the industrial revolution was associated with the development of canals to transport heavy goods, mainly in Western Europe

and North America. It allowed the development of basic and limited inland distribution systems. Most are still in use today.

2.3.3 Railways and Automobiles

The second phase of the nineteenth century industrial revolution was associated with the development and implementation of rail systems that provided faster and more efficient inland transportation. The increase in local settlements and the growth of goods and tourists have created economic and social opportunities.

The twentieth century saw the broad economy of transportation systems, such as national highways and automobiles, as a major economic sector. It is associated with significant business opportunities for reliable door-to-door delivery of industrial and commercial markets. Motorcycles have opened up new social opportunities, especially in the suburbs.

2.3.4 Airways and Information Technologies

The second half of the twentieth century was associated with the development of global aviation networks and economic globalization. New organizational and management models are emerging, especially in the fast-growing field of logistics and supply chain management. Although maritime transport is at the heart of globalization, aviation and information technology are becoming increasingly important to travelers and tourists. It accelerates information, especially in relation to the flow of goods.

2.3.5 Urbanization and Transport Development

Dimitriou, (1992) views about perspectives on transportation and Third World cities define urban development as a process of land use and population growth. In developed countries, the level of urban development should be referred to as industrial development and should be derived from developing countries. However,

studies show that the situation in developing countries is different and more complex in terms of urban services and city satisfaction (Aprodicio, Vinod and Hanley 2007).

Johnston, Gregory and Smith (1986), considered to include the normal and relative growth of cities within a defined area and usually within the country. Interestingly, discussions on urban development have seen different perspectives on the consequences of what is happening in most developing countries. However, in the age of rapid globalization, it should be noted that urbanization undermines its quality and loyalty. In the same way, it creates excellence in new groups and cities.

Transportation planning and urban management literature are integrated with individuals. The impact of the link between urban livelihoods and urban norms has added to the country's development process, especially the standard of living in third world countries.

Ayeni (2001), posited that the twentieth century was a good time to accept urban problems as a normal way of life in the world. In any case, perceptions of urban development are constantly changing over the years. For example, some have described cities as parasites and others as good cultural centers (UNCHS, 1996). In fact, for people from different cultures, the city meeting is a point. It can be seen as a meeting place for people of different ethnic and religious backgrounds. In addition to the scarcity of economic resources, it is a place where political stability and power struggle.

According to Gilbert and Gugler (1982) each city has its own special system for anonymity and individual offenses. There are three basic concepts of urban development and management that focus on urban development and management analysis, which provides a framework for evaluating the role of urban and urban services in individual development processes are: (i) behavioral view (ii) structural analysis, and (iii) urban demographic interpretation. Wirth (1938), As a pioneer of the concept of urban development, it is seen as a behavioral process, and urbanization is associated with behavioral change and individual behavior.

Similarly, Childe, (1968) pointed out that urbanization is a structural process that brings about change in the population as a whole and in the economy. The concept focuses on shifting people from rural and agricultural areas to urban or non-

agricultural areas as a reflection of economic specialization and technological advancement.

In conclusion, urbanization can be concluded that the process of social mobilization and social transformation and social transformation for social change. However, the transformation of the sector economy and the changes in the sector within the economy were a settlement process that led to the emergence of new forms of settlement and operation. It should be noted that the increase in urban population is not due to natural development alone. Although, population growth is concentrated in urban area because of migration and area expansion (Oyesiku, 2003).

Due to changes in production patterns, industries and services are locally located. Economic rationale for the economic size and income requirements of the population to live in urban areas. The geographical location of the people and the economic changes are leading to the economic development of cities and individuals. It is the economic transformation and economic transformation that requires urban development or productivity. However, it can be said that population growth affects all sectors of the country.

2.3.6 Sustainable Transportation

To better understand the concept of sustainable transport, the concept of sustainable development or development needs a broad overview to build strong relationships between concepts. From Geerling (2000), point of view, sustainable development can be defined as the process of change. Headline-grabbing resources; investment direction; upgrading current and future prospects to meet human needs and aspirations

Furthermore, Beella and Brezet (2007) from their own point of view, it is as if the idea has been evaluated as good or bad in the future and not growing in the future. By building this perspective, jobs, wages, education and health are good parts of society that need to be protected and evaluated for the future. Air pollution and poverty Crimes will not be allowed in the future (Ryan and Throgmorton, 2003).

Litman and Burwell (2006), pointed the idea that human movement is an economy is fundamental to society's economic and social development. It points to the impact on society and the ecosystem. This is beyond clear, sustainable

environmental issues and beyond the other economic, social and cultural aspects of society. Sustainability, on the other hand, captures the state of human activity and the need to balance various disciplines within society.

Economic development and urban development can be achieved through interconnected and interconnected transportation systems. Knowledge of sustainable urban development in developed countries is well known and documented. The role of transportation in achieving the goal of sustainable capital development in these countries is also well studied in the academic literature (World Bank, 2002).

Over the years, sustainability has been over-emphasized in the decision-making process, ignoring volatile elements or elements that are difficult to measure. Interesting is a project that considers how difficult it is to measure social things (transportation, health, education, etc.) can be considered sustainable. It focuses on the idea that sustainability is related to the long-term risks of available resources. Reflects the goals of justice for future generations.

2.3.7 Transport and Sustainable Livelihoods

Oyesiku (2003), the function of transport in cities to facilitate the transportation of goods and services from demand level. Transportation support to carry the basic objectives of urban life. Improving workplace efficiency and living standards in infrastructure and services. And also, Adeniji, (2000) viewed the effective function of transport as a blood system, generally a requirement for the nutrition of human life. Furthermore, Filani (1988) while examining the importance of transportation, the socioeconomic, depends on social and economic development. It is true to say that this weakens the engine that drives political integration and development. Based on this information, transportation is based on goods and services. It promotes mobility and a better quality of life for individuals by highlighting the importance of social and economic development in society.

Conversely, lack of transportation and mobility and lack of access to products and services can be detrimental to health. Therefore, transportation plays an important role in the structure and structure of space and space. It is a bridge between regions and businesses. It creates a valuable connection between population and the world.

Transportation is a multidimensional service that affects many aspects of the economy. Transportation has invested heavily in the socioeconomic life of organizations and corporations, but is also part of economic and social services. Transportation does not exist by itself.

Transportation is essential important for all types of human development such as social, economic, political, education, cultural, health and religion. Transportation is an essential tool for all human activities. It makes available interactions with all types of land uses such as commerce, industries, agricultural, educational etc. It depends on the individual. Represents the movement of goods and services from one space to another (Okoko, 2006).

Although transportation is more than just a matter of moving from space, it is an important aspect of transportation. Transportation is a trademark of social development. Therefore, a country can reach the stage of development due to its transportation conditions.

2.3.8 Travel Arrangements

Travel arrangements for women and men vary further depending on the purpose of the trip. Depending on the social and economic role of women in the household, women are the main occupants, and public transport is often used for education and health.

In the suburbs or in rural areas, women have more complex routes than men. With this in mind, walking is a key part of travel. In most urban areas, the destinations for women are different. Because women provide more space for work and household chores. In addition, women's traditional social role in caring for children and parents influences their travel patterns.

The women tend to take shorter trips, traveling with minors, carrying more packaging than men, and making multiple stops. As women often choose to look for work closer to home and avoid transportation challenges, the workplace also plays a key role in women's job opportunities (World Bank, 2012).

Due to the lack of public transport and poor public transport, there are more forms of travel than men than women. Traditional social norms, which symbolize women as symbols when they return home late due to delays in public transport, exacerbate this situation.

Public transportation users can use the transition system to explore the workplace for men and women. People who do not own a car because public transportation is not expensive. Both men and women use taxis to travel daily, despite the high cost. This is because public transport routes can be avoided for up to 30 minutes due to their lack of direction or the long wait for buses (CSBE, 2015).

2.4 Theories of Sexual Harassment

The term sexual harassment originated in North America in the mid-1970s and was coined to describe the problem (Gutek, 1985). Sexual harassment can lead to unwanted sexual growth and development. Inequalities in power often result from the abuse of power. The most common symptom for researchers is the definition of what triggers sexual harassment.

Researchers from around the world; Legal experts and policymakers disagree with the global definition. One of the reasons for this congenital problem is that one definition separates boundaries from expressions of sexual interest (Gutek, 1985). Sexual harassment affects many people. This is the largest proportion of the population than any other form of discrimination (Bargh, Raymond, Pryor, & Strack, 1995).

Spitzberg (1999) found that sexual harassment and coercion are actually more common than other forms of sexual violence. It is generally accepted that there is no cause for sexual harassment and that there is no theoretical framework that can best explain it (Skaine, 1996).

According to Ward, Polaschek, and Beech (2006), the terms theories and models are exchanged true the case with sexual harassment. In short, the models can be seen as metaphors that help researchers look at the structure of events under explanation (Ward et al., 2006). However, when these factors are related to the basic mechanism and interaction of various factors in the model (Ward et al., 2006).

One of the four main causes of sexual harassment is former loneliness. It creates a theory that combines socio-cultural and organizational data. In addition, the theory shows a strong naturalness compared to the only theories of previous sexual harassment. Clearly, it is a step forward for a field that dominates the causes of sexual harassment for a few reasons.

2.5 Sexual Harassment on Public Transportation

Sexual harassment on public transport lasts for days. It can occur in densely populated areas and usually in potentially dangerous situations. Previous studies have shown that women are more likely to be sexually harassed when they are having sex, even if they are not alone (Natarajan, 2016).

Parents in the developing world have come up with the idea of keeping their daughters in the home for a limited period of time, fearing that their daughters will be abused if they go public (Natarajan, 2016).

This practice among parents in developing countries further socially excludes young women, leading them to use the term Smith (2008) as a transitional captive, if the women are afraid to travel by public transportation or stop traveling alone or if there is no access or access for private transport.

Such theories greatly simplify sexual harassment situations, ignore the ancestral culture and instead of victim-blaming culture, go back to binary thinking where successful women have a responsibility to take care of themselves by enticing successful promoters through staying away from male-dominated public places.

Sexual harassment on public transport is an expression of patriotism. Men is for fear and control and for shaping and modeling the activities of the women (Mustaine & Tewksbury, 2002).

Stanko (1985) suggested that women should be socially normal for difficult security management, by removing microaggressions that are not normally sexually abusive, women face difficulties and invisible things and criticism, the woman failed to protect her victim because she did not notice the obvious signs (Powell & Henry, 2017).

2.5.1 Safety in Public Transportation

Fakoya, Apantaku and Adereti (2006) discuss gender equality in household food security. This study on informal participation is used to calculate the differences in the roles and experiences of men and women in society in social science analysis. Porter, (2008) noted that women and men have extensive experience in transportation systems. Gender in public transportation is very different from country to country, but some of the symptoms are the same. Individual travel decisions in cities affect the quality of life of urban dwellers.

The problems caused by physical assaults and sexual harassments especially the women because of the impact they make on the livelihoods of the vulnerable groups. The problems depend on the situation, but the inadequacy of public transport services can affect the safety and reliability of individual women. Both women and men are concerned about and have experienced some kind of verbal or physical harassment (World Bank, 2012). People go against the most appropriate and effective choice to avoid roadblocks. They use a form of travel that is not available.

Women living in densely populated areas prefer taxis to any other mode of transportation. Women are especially cautious when carrying large packages or traveling with children. Women avoid using certain buses or train stops; public transportation will be restricted for a limited time or will only be used if accompanied by someone.

According to the CSBE (2015), two-thirds of public transport users in Jordan are men and one-third are women. The study found that a few women were sexually harassed on public transportation in the evenings. Studies have shown that disturbances in motor vehicles are limited, but they do not always occur. Harassment can occur at bus stops, making it easier for the perpetrator to escape and remain anonymous. The incidents inside the vehicles were caused by the driver, it is still low because conductors and other bus users are in the habit of punishing the perpetrators. (CSBE, 2015).

According to the International Youth Foundation (2014), 30% of parents in Ruseifeh, Mafrag and Southern Shouneh do not allow public transportation for their children. Public transportation makes children more vulnerable. Dissatisfaction with unwanted attention is particularly prevalent among girls in these areas. According to parents in these areas, the results indicate that 40% of public transport users are disturbed.

Various studies have shown that women are victims of the current transportation system, which lacks access to education and business opportunities. As a result, it lowers their standard of living. Therefore, improving public transportation and infrastructure should be a top priority, and gender issues must be considered as part of the solution.

2.6 Review on Previous Studies

Futose and Kato (2015), *Yangon Urban Transport: Demand and service quality* reflect the current traffic situation in Yangon and discuss the dynamics and future direction of the urban transport system. The success of the survey is invaluable as it has successfully identified traffic conditions to understand current problems and develop future transportation policies.

Paing Myo Ko Ko (2018), point out the current situation of Yangon Bus Service (YBS) system in Myanmar. The new system was found to be less profitable and less successful than the old system Hta Tha System. And also, the study found that the transportation system was incomplete and insufficient. It can be considered as a basic requirement to upgrade the transportation system.

East Asia Institute (2018) working paper on public opinion polls on the Yangon Bus System and its Reform, the newly opened Yangon Bus Service (YBS) system has structural weaknesses. In particular, bus schedules and route maps were provided. Nevertheless, as people recalled the struggles of the previous system, they were able to endure the initial difficulties and hoped that reform would improve the situation.

Ei Shwe Sin Win (2019), learned that some passengers ride the bus for free. There are some complaints regarding the reckless driving though some conflicts of the bus conductors have been reduced to some extent.

Nirmal Geutam (2019), studied looked at sexual harassment and public transportation decisions among female students in the Kathmandu Valley, Nepal. In the evening, students riding the bus were more likely to experience distractions and emotional distress. Most of the harassment was made by a male passenger for young women between the ages of 20 and 23.

Eunice Chan (2019), studied the cultural context of the problem of sexual harassment on public buses in Yangon, a platform was used to explain the sexual harassment responses of young women on buses in Yangon and their views on their experiences and perspectives. Sexual harassment often occurs at peak and non-peak times on crowded and crowded buses, but is common on the streets and sometimes several times a day. Four main emotions that respondents highlighted when they were harassed were: shock, anger, fear, and shame.

CHAPTER III

PUBLIC TRANSPORTATION SYSTEM IN YANGON

3.1 Yangon Profile

Yangon was founded as Dagon by the Mon in the early eleventh century (1028–1043) dominated Lower Burma at that time (en.wikipedia.org/wiki/Yangon). Yangon became the capital of Union of Burma on January 4, 1946 when the country regained independence from the British Empire (en.wikipedia.org/wiki/Yangon). In November 2005, the military government relocated Nay Pyi Taw, designating 320 kilometers (199 miles) north of Yangon, as the new administrative capital, and later relocated the government to the newly developed city. However, Yangon is the largest city and the most important commercial center of Myanmar.

The city is set in the Yangon Region, a wider administrative area with a population about 6.2 million people in an area of 598.76 kilometers (km). The population density of Yangon is 16,000 persons per square kilometer. The annual growth rate of the city population has been about two percent. The central business district is located south of the Yangon River and Bago River. Administratively, the city is divided into four districts such as East District, West District, North District and South District with 45 townships. The essential religions in Yangon are Buddhism, Hinduism, Christianity and Islam.

Yangon city is mainly important not only in economic but also in political point of view. Most of rural people usually move to live in Yangon and population is increasing year by year. Yangon provides a variety of public transportation options but taxis are the most common and convenient way for visitors. The main reason is motorcycles and bicycles are not allowed within the Yangon area whereas public bus and taxis are available everywhere.

3.2 Public Transportation Service in Yangon

There are various types of public transportation services available in Yangon. There is public bus (Yangon Bus Service, YBS), circular railway, water bus and, city taxi. The public transport service fare differs depending on the type of vehicle and on whether the passenger is a local resident or a foreigner. Bus and trains are an important mode of public transportation for the majority of working or class people.

3.2.1 Public Bus Transportation Service

Public bus transportation service is cheaper and faster than other transportation modes and most belong to private companies. Table (3.1) presents the passenger and public bus in Yangon Region (2010 to 2018).

Table (3.1) Passenger and Public Bus in Yangon (2010-2018)

Year	Passenger per Year	Bus
2010-2011	265642	11388
2011-2012	249561	11393
2012-2013	292919	11443
2013-2014	382774	13036
2014-2015	429493	16816
2015-2016	462199	15543
2016-2017	512144	14756
2017-2018	530728	15293

Source: Department of Road Transport Administration, 2019

The private and public bus system, which retains more than fifty percentage of the market, and the outdated railway system of more than 50 km account for less than one percentage of the total traffic loss. One notable change since 2013 has been the introduction of buses. This is an active intervention by the Yangon Region government to strengthen the public transport system, which includes the suburban railway and water transport.

Before 2016, Yangon bus system was under the regulation of the Ma Hta Tha Central Committee. Public buses in Yangon are provided by both the public and

private sectors. The bus is considered to be unattractive to the elderly and operates on a daily basis, and demand for buses is on the rise. The private sector, regulated by the Yangon Division Bus Control Committee (YDBCC), is the main provider of public transport, operating about 2,400 public transport vehicles in the city.

‘In July 2016, the Yangon Region Government formed the Yangon Region Transport Authority (YRTA) to replace the existing bus regulator, Ma Hta Tha (formally known as the Central Supervisory Committee for Motor Vehicles)’ (JICA, 2019). Ma Tha Thar has controlled the city's bus system for more than 50 years and has a reputation for underperforming management.

In January 2017, Yangon Region Government abolished to Ma Hta Tha Central Committee. Yangon Region Transport Authority (YRTA) Started to control the Yangon Bus Services (YBS). the Yangon Region Government completely restructured the public bus network and management and launched the Yangon Bus Service (YBS). This marked the beginning of significant changes in the public bus system of Yangon. The most notable improvement began in January 2017, with the introduction of new buses; development of buses; restructuring bus operators; upgrading the bus business and bus system to the Yangon Bus Service (YBS), which covers bus refurbishment. Introduction to channels and information and communication technology.

The visions of Yangon Bus Service (YBS) are;

- (a) Current operating companies and bus lines will be transformed into public companies.
- (b) Once public companies are formed, bus gates will be built with companies
- (c) Bus fares will be made with modern payment system and
- (d) The process will be carried to use information technology.

In the Yangon Region 27 bus operators serving with 6550 vehicles in Yangon Bus Service (YBS) under the control of Yangon Region Transport Authority (YRTA). The average number of passengers has increased since more than 300 bus routes were cited. Due to the lack of information, there is some transfer speed, such as walking distance, for psychological data transfer due to lack of information. Carefully developed bus gates and intermodal facilities should be carefully designed to enhance smooth transfers as shown in Table (3.2).

Table (3.2) Public Bus Operators in Yangon

No.	Company	No. of Routes	No. of Owned Buses	Average Number of Buses Daily Operated	Operating Rate
1	Bandoola	5	244	213	87%
2	YUPT	19	1230	975	79%
3	Yangon Bus Public Co., Ltd	8	546	464	85%
4	Yangon Northern Taikkyithar	1	84	57	68%
5	Omini Focus General Service Public Co., Ltd	8	464	307	66%
6	Power Eleven Public Co., Ltd	3	225	158	70%
7	Ever Green Lucky Family	2	198	123	62%
8	Shwe Lan Khin	1	70	61	87%
9	Sanwaila	1	50	34	68%
10	Holiest Vim	4	174	114	66%
11	GYCT Co., Ltd	10	696	344	49%
12	Khit Thit Bayint Naung	11	606	425	49%
13	Golden Southern	10	749	423	56%
14	Kong Baung	2	170	129	76%
15	Trans Link Co., Ltd	2	60	54	90%
16	City Liner Co., Ltd	1	16	8	50%
17	Rapid City	8	323	168	52%
18	People Partner	5	265	241	91%
19	YBS (22)	1	101	71	70%
20	YBS (31)	1	41	19	46%
21	YBS (33)	1	55	42	76%
22	YBS (45)	1	25	23	92%
23	YBS (63)	1	28	25	89%
24	YBS (73)	1	11	5	45%
25	YBS (76)	1	46	32	70%
26	YBS (79)	1	85	39	46%
27	YBS (80)	1	19	15	79%

Source: Yangon Region Transport Authority, 2019

Yangon Bus Service (YBS) is a bus transportation network system that will be launched on 16 January 2017. A total of 60 bus lines and eight companies were set up under the management of the Yangon Region Transport Authority (YRTA) to replace the existing system where many companies and individual owned bus vehicles and bus line. In the past, individual owners drove only two or three buses with their owners. The eight companies are: (1) Omni Focus Co., Ltd., (2) Bandoola Transportation Co., Ltd., (3) Yangon Public Bus Co., Ltd., (4) Yangon Urban Public Transportation Co., Ltd., (5) Power Eleven Co., Ltd., (6) Sanwaila and San Raung Ni Co., Ltd., (7) City Liner Bus Public Co., Ltd., and (8) Golden South District Co., Ltd. Eight companies' structure are as follows:

- Public-private partnership company, namely, Yangon Bus Public Co., Ltd.,
- Existing private bus operators (from the previous system), namely, Yangon Urban Public Transportation Co., Ltd., Omni Focus Co., Ltd., Bandoola Transportation Co., Ltd.; and
- Associations of small-scale bus vehicle owners, namely, Power Eleven Co., Ltd., Sanwaila and San Raung Ni Co., Ltd., City Liner Bus Public Co., Ltd. And Golden Southern District Co., Ltd.

(A) Operating Issues of Yangon Bus Service

One of the expected effects of the restructuring of bus operators is the shift from a commission base to a travel-based commission or fixed pay system. The main characteristic of each system is as follows:

- (a) **Sales-based type:** Drivers often wait for passengers at bus stops, causing congestion.
- (b) **Trip-based type:** Drivers will overtake at a much faster rate to allow more passengers to drive.
- (c) **Fixed salary system:** is desirable for safe driving.

Many bus operators have shifted into fixed-salary system or trip-based system though some companies still apply conventional sales-based system. Operating buses under companies, on the other hand, can be divided into individual and private.

Drivers who drive individual vehicles are contracted by the owner, not the company. The salary system is in accordance with each contract. Most use a sales-based system.

Operation Rate (average number of buses daily operating/number of owned buses) is one indicator to measure the service level of bus operators. Lower operation rate causes financial loss, overloading and left-off passengers. The most important factor for low operating speed is the frequency of mechanical problems.

At most bus operators, drivers or maintenance personnel perform a pre-departure inspection. However, they do not manually edit the routine inspection record. Some bus operators own their workshops, while others carry out roadside repairs and maintenance.

The driving skills and habits of YBS drivers have a lot to do with customer satisfaction. As mentioned, YBS drivers operate under oppressive conditions for safety and security. Driver's Training Centre was established by Ministry of Transport and Communication and Yangon Region Transport Authority.

The training center issues type "E" driver's licence, which is required to drive passenger buses. However, there is no penalty for bus drivers without an "E" driver's license. Individual operators and some minor bus operators assign bus drivers without sufficient training and education.

Current operation system of YBS applies Dispatching Operation (Departure time of each bus is specified by the Dispatcher). The bus operator will return the staff to their original location. Destinations and departure times are recorded at each destination and at the main bus stop. The distance between the original and the destination should be effectively adjusted to ensure a high level of service at the peak of the morning and a sufficient speed at the peak of the evening. In Yangon, introduction of diagram operation is highly necessary.

(B) Improvement Directions for Yangon Bus Service

Yangon Bus Service was recently launched. Yangon still has many issues and problems that need to be addressed before the advent of a safe and secure public bus system. In the reorganization of the bus network into the Yangon Bus Service in January 2017, eight companies were established. Although, only one of these companies, the Yangon Bus Public Co. Ltd., was structured as a public-private

partnership. Two companies are private bus companies operating under the previous system and the other five are different from smaller bus owners. The situation is not easy with regard to the structure and structure of the companies operating the buses.

The bus upgrade program can be found in several stages. The first step is to consolidate eight of the five transport corridors on bus routes 80 and above. Only then can the paths in each group coordinate with each other. More importantly, each cluster should have a similar market size and demand potential should be approximately the same. Bus companies should be allowed to monopolize or privatize, mainly because they compete with other ways to increase car ownership.

Establishment of the consortiums is the second stage. They must be registered as public limited-liability companies. Identifying the investors who will start these seven companies is part of this process. YRTA can solicit proposals from existing bus operators who wish to lead. The first choice should be the largest operator operating in each of the eight corridors. The government needs to make a minimum contribution and give priority to the company that wants to own the largest stake.

The third step is for leaders to integrate other operators with their responsibilities. In exchange for shares in the new company, operators transferred their old buses to the company and became part of its bus group. The value and acceptance of buses will be a challenge. If no agreement has been reached, the new company may (i) stop the old company on the street and (ii) purchase the lease agreement under the supervision of the old operator. Until then, new cars are being distributed to replace old ones.

(C) Workings of Bus Company

Only two of the eight bus companies established when Yangon Bus Service was launched have a modern structure: public-private partner Yangon Bus Public Co., Ltd. and the privately owned Bandoola Transportation Co., Ltd. Therefore, six other companies still need to modernize their operations. The following section is showed six companies can be modernized in general.

(i) **Operations:** Its business goal is to maximize profits (bus passengers per bus) by efficiently utilizing bus assets at the rate of revenue per kilometer per day. Departments (about 60% of the total company workforce) have the following departments:

- Scheduling; Delivery and Inspection: Appropriate scheduling for buses and drivers and field inspectors;
- Operational Training: Recruitment and ongoing training, upgrading drivers' skills; and
- Field Operation – supervises drivers and conductors

(ii) **Shop and Maintenance:** Its business objective is to minimize non-operational buses and to get the most cost-effective buses available. This department (about 25% of the total company workforce) has the following departments:

- Preventive Maintenance – to handle such tasks as oil change, greasing, adjustment of brakes/clutch;
- Electrical-Mechanical General Repair;
- Major Repairs and Body Works – such as overhauling, fuel pump calibration, painting and metal fabrication;
- Works Planning and Control – to handle the scheduling of maintenance activities; and
- Maintenance Supply and Storage – to handle the procurement and inventory of spare parts.

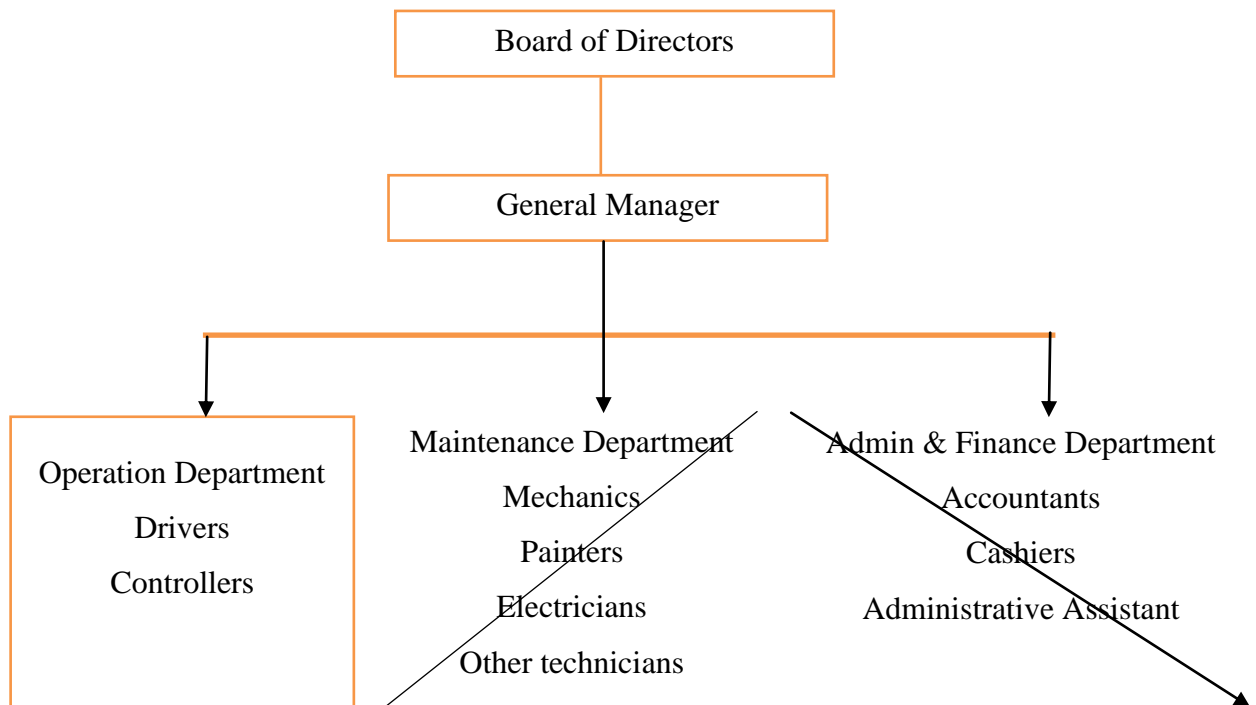
(iii) **Administration and Finance:** A support department with the following four departments:

- Administration – to handle human resources, property and security of assets, as well as general services;
- Legal – to handle claims arising from accidents, customer complaints, and compliance report with the government, and other legal requirements;
- Finance – to manage the accounting, payroll, ticket distribution and control, revenue verification, and internal audit; and

- Planning, Marketing and Public Relations – business objectives include bus route and service planning; monitor bus demand and demand on every street; developing public information and marketing plans.

Figure (3.1) presents the organizational structure of bus company.

Figure (3.1) Organizational Structure of Bus Company



Source: Yangon Bus Public Co., Ltd, 2019

Permanent drivers are assigned per bus and generally have a daily itinerary. In addition to the travel schedule, a leader is responsible for setting or allowing vacation days. If a driver fails to report for his or her planned trip, the supervisor usually assigns a rescue driver, who is usually waiting at such an opportunity in the warehouse.

The same procedure is followed when a regular member of the driver retires unexpectedly. Holidays are scheduled on a specific day. However, sometimes a driver is not obeyed because he or she is still in transition or does not have a relief camp. It is a good practice to give each employee one day off a week, unless it is a legal procedure. And if that employee needs to provide service on his rest day, he is entitled

to the same premium pay as working on vacation. The following Table (3.3) shows the human resource of bus company.

Table (3.3) Human Resource of Public Bus Company

Name of Department	Position	Employee
Operations	Driver	750
	Controller	100
Maintenance	Preventive Maintenance	250
	Electro-Mechanical	25
	Repairs and Body Technician	100
	Planning & Control Staff	50
	Materials Inventory Clerk	25
Administration and Finance		200

Source: Yangon Bus Public Co., Ltd, 2019

The Maintenance Department advises the Operations Department if a bus leaves at any time to inspect or change the oil. Sometimes maintenance embargoes the car when needed to maintain it. Adherence to the bus service schedule, such as holidays for bus attendants, depends on reserve buses. More buses are needed on the route, but when the available units are shorter, tensions between maintenance and operation sometimes erupt. In such cases, one policy should prevail over the other.

(D) Safety Transportation of Yangon Bus Service

Under the control of the Yangon Bus Service (YBS), routes are divided into two groups: urban and suburban to ensure safe transportation. Some buses run on the main roads within the city center. Due to the differences between the two main thoroughfares of the city and the suburbs, daily commuters from the suburbs to the city center are usually time-saving and cost-effective. Under the old Ma Hta Tha Bus system buses were privatized and all buses went to private bus companies. Therefore, Ma Hta Tha the practice of drivers arriving at the next bus stop or parking at the bus stops may not effectively eliminate long bus rides to carry as many passengers as possible.

Ma Hta Tha was replaced by YBS, the system was changed to a one-route one-bus system to accommodate new passengers as needed. Although, Bus owners

are still reluctant to accept the transition to privatization of private bus companies to public bus companies. In addition, the change forced bus owners to convert former bus owners into public bus company employees. YBS also eliminated conductors. Therefore, the implementation of YBS is very difficult due to the interests of bus owners and the unemployed drivers and lightning problems.

There are two types of bus lines under public buses. Company-owned buses are buses owned by the company and privately owned under the company name. Company-owned buses are monitored by companies and drivers and conductors are now company employees. Private bus owners drive their buses under their own names for company services.

All bus fares are pocketed. They also appoint drivers for their buses. There is another bus line that is not operated by public bus companies. They are called private bus owners' groups and are licensed by the YRTA. YRTA could not stop them. Because they lost business and took time to transition.

Only public and private buses are operated by public companies, and only company buses stop racing and provide good service to passengers. YBS's goal of operating all buses under the ownership of public companies remains a challenge ahead of reckless driving and bus racing.

The plan to ensure the safety of passengers is to set up a GPS system and CCTVs. Company buses and buses running under the company name may be equipped with GPS and CCTV systems in accordance with YRTA regulations and standards, but private buses cannot monitor them. To improve bus service, they introduced a payment system for drivers and bus owners based on the number of kilometers they drove. Another system that provides better bus service is the Real Time Information System, which provides accurate information on the exact arrival time of each bus at every bus stop for three hours and five minutes.

3.2.2 Railway Transportation Service

The railway transportation service is largely provided by the government of the Union of Myanmar, especially for lower income people. It is important to know the performance and efficiency of the Myanmar Railways. Based on this knowledge, it is necessary to study industrial development to facilitate the development of the

country. Myanmar Railways belongs to Ministry of Transportation and Communication.

The organization set up of the Myanmar Railways is based in departmental system. The Chief Executive Officer and Chairman of the Management Committee is the Managing Director, with the support of 13 General Managers. The eight main departments are Technical and Administration Support, Planning and administration, Commercial, Finance, Inspection, Operation, Civil, Mechanical and Electrical.

The railway system is divided into 11 divisions and further integrated into the lower and upper regional administrations. The key features of this structure reflect the direction towards a more decentralized decision-making process, which focuses on the planning and distribution of products and services from consumers through market responses.

Currently, Yangon Region has a total of 149 km of railway services and 59 stations using the conventional system. There are eight lines and a dedicated branch line for cargo services for Yangon Port. The characteristics of the main lines are briefly as follows:

(a) Circular Line: This line is divided into two parts. Insein (20.3 km and 21 stations) from central Yangon and from the west side of the ring road in the middle of the west. From the Middle East to Insein to Daingon. There are 25.8 km and 17 stations.

(b) Pyay Line: This stretches from north of Da Nyin Gone to Hmawbi, Six stations 26.5 km north of Nyin Gone and a 3.0 km junction extend to Hmawbi which serves the Computer University of Yangon.

(c) Yangon–Mandalay Line Section in Yangon Area: This is part of the north-south main route from Yangon to Mandalay. From Central Rangoon to Dabin, seven stations with section 36.0 km and a 6.4 km junction connect Dagon University in northeastern Rangoon.

(d) Thilawa Line: This is a 26.7-kilometer route connecting to the industrial zone southeast of Yangon, with five stations and a 5.0-kilometer junction. In charge of East Yangon University.

The development of the railway in Yangon should be viewed not only from the perspective of transportation but also from the perspective of urban development.

Yangon Railways could be the main driving force and catalyst for urban development and the development of the desired location. The development of a high-quality urban rail can also generate tremendous opportunities for Transit Oriented Development (TOD) when properly designed and can capture the value from those developments, thereby improving people's mobility, infrastructure accessibility, and public convenience.

3.2.3 Inland Waterway Transportation Service

Traffic jams in Yangon have worsened in Yangon due to the increase in the number of cars, buses, trucks, and etc. which is associated with rapid economic growth. In addition to freight, passenger transport is one of the reasons for the worsening traffic congestion. Therefore, it is necessary to take action from the logistics sector for passengers and cargo. Industry through the Thilawa SEZ and other industrial zones is expected to increase the flow of goods passing through Yangon.

There are three major water transport routes in Yangon. These are the routes connecting Yangon and the opposite side of the river. The present condition of the jetties and ships that operated in these routes. Besides the three, there is a service transporting passenger for short distances at Yangon Port using small boats.

The Yangon Region Transport Authority is planning to ease congestion in Yangon by using high-speed vessels on the Hlaing and Ngamoe Yeik rivers. Two local joint ventures have submitted bids to YRTA.

In October 2017, the first Yangon Water Bus was launched between Insein and Botahtaung area. The second phase (Botahtaung from North Dagon) and the third phase (from Botahtaung to Thanlyin) are scheduled to begin in 2018. The first phase of the operation is scheduled to target about 20,000 passengers every 20 minutes from 6 a.m. to 6:30 p.m. Recently, the company has revised its schedule several times and reduced service frequencies to meet passenger demand. Thirteen boats will be connected to seven jetties and the entire Insein township as the first phase of the project.

The Yangon Region Government has promised to deliver YBS buses to ports. In addition to regular transportation, additional trips to Thanlyin and Twantay townships are planned on Saturday and Sunday. It costs 6,000 kyats per person to go

to Thanlyin and 7,000 kyats to Twante. The cruise on Yangon River at sunset costs Kyat 3000.

3.3 Sexual Harassment Criminal Offences in Myanmar

Myanmar's main law on violence and related crimes is the 1860 Penal Code defines women as female of any age (Myanmar Laws and CEDAW, 2013). Criminal practice dates back to the British colonial era. Not surprisingly, there are few provisions specifically referring to gender-based violence. Statements of related crimes do not focus on the main problem. Violations of women's integrity may be viewed as suspicious of victims' behavior or as socially motivated by violence. The use of the Penal Code of criminal procedure is governed by the Code of Criminal Procedure, 1898 and the Evidence Act, 1872 (Myanmar Laws and CEDAW, 2013).

Many sexual chapters of the Code of Criminal Procedure address criminal offenses that may result in sexual assault or harassment. Section 354 punishes the offense with the intent to provoke the modesty of a woman (Myanmar Laws and CEDAW, 2013). The person faces up to two years in prison and a fine. Section 509 deals making song, anyone who does something by showing objects or behaviors or by insulting a woman's modesty is liable to imprisonment and fine (Myanmar Laws and CEDAW, 2013).

Since modesty is not required by law, it is not clear which offenses are involved in these provisions. In one case, a four-year-old boy was sentenced to three years in prison for sexually assaulting a worker under 323.13 and 354.16 (Myanmar Laws and CEDAW, 2013). Another was a girl who beat a boy at school and fell in front of a crowd, embarrassing her shame (Myanmar Laws and CEDAW, 2013). The boy was charged under sections 323 and 354 of the Penal Code for raping her modesty (Myanmar Laws and CEDAW, 2013). A third time, a man was charged under Section 354 for taking a nude photo of a woman (Myanmar Laws and CEDAW, 2013).

Anti-Violence Against Women Laws can provide provisions to explicitly complement rape and other forms of sexual violence (Myanmar Laws and CEDAW,

2013). They can provide appropriate legal protection to victims of rape in connection with the prosecution of cases that alleviate unnecessary suffering and support justice (Myanmar Laws and CEDAW, 2013). These issues of discrimination and violence against non-compliant women can also be addressed (Myanmar Laws and CEDAW, 2013).

3.4 Protection of Sexual Harassment on Public Transportation

Sexual harassment is a form of gender discrimination and consists of any unwanted, offensive or humiliating behavior related to a person's gender. It includes but is not limited to the following: (a) unwanted touching, (b) coercion to engage in sexual acts, (c) display of sexually explicit materials (d) offensive comments or acts that reference a person's gender and (e) repeated unwanted invitations to social activities.

Sexual harassment on public transport in Yangon is a well-known problem. The regional government has announced that it is introduced only buses later this year to protect women travelers. Women's rights activists welcomed the initiative, but emphasized it was not the solution to sexual harassment in the country. The women gave the others a bus in a windmill and told them to use it if someone attacked them. The idea is that a quiet muffled voice will block the molester and alert other passengers that a woman is in trouble.

The rate of harassment on buses is not suspected, but most women do not report incidents to the police, so official numbers cannot be obtained. The impact of the women's campaign, which began two years ago cannot be quantified, but participants say the results have been positive. For most women participating in the campaign, it is the first time the women have made a public statement about a problem affecting everyday life. Many jokes have been made about white cloth, but it has also raised public awareness of sexual harassment.

Sexual harassment is a problem in Myanmar and even riding in the front seat of a taxi or waking on the street exposes women to the threat of abuse. Under Myanmar's penal code, sex offenders can receive prison terms of up to a year, but often the court favors men and offenders are not convicted. If a man is charged with a crime, a woman's reputation is tarnished. It prevents women from filing in court.

CHAPTER IV

SURVEY ANALYSIS

4.1 Survey Profile

Yangon, the former capital of Myanmar with a population of 6.2 million (as of 2017), is the country's largest commercial hub. Traffic and transportation conditions in the capital have deteriorated rapidly, especially since the new government came to power. Yangon traffic is increased especially from private cars and buses, has contributed to air pollution and accidents. The urban area is also expected to expand into the surrounding areas, with Yangon into a megacity with a population of 10 million in the future.

Yangon Region is a key importer of Myanmar's socio-economic activities with increasing economic and population growth, increased traffic demand and revenue. Private vehicle ownership rates will increase. The pressure on urban and transport development will be even greater.

Many trade and services are located in the interior of the city, including the main business area and to the north, including the urban area. Productivity growth is concentrated in the city's suburbs, northwest and northeast. Administratively, the city is divided into four districts (North, East, West, and South) and 45 townships. The essential religions in Yangon are Buddhism, Hinduism, Christianity and Islam.

4.2 Survey Design

The sampling method used a convenient sampling method form for the survey questionnaire. The survey was conducted by NGO (CBO) and CBO (community-based) workers, on visitors and members of the organization. Because COVID 19 occurred in Yangon Region during the survey period. The population is made up of women and girls using public transport in urban area.

The survey was designed as part of a survey of about 200 women using public transport in Rangoon Region. The survey was conducted from June to July 2020 for this study, based on volunteer collaboration.

The survey questionnaire is divided into four sections to ensure accurate measurement of views on transportation in Yangon. The first section asks for personal information, such as the participant's age, education level, occupation, marital status, and place of residence.

The second section aims to understand the respondents' public transportation behaviors. In this section, the survey seeks to identify why and how women use public transportation, what their preferred mode of transportation is, average duration trips, number of trips, preferred time for using transportation, and cost.

The third section of the questionnaire aims to explore the views and opinions of women by considering their experiences and how public transport affects their socio-economic life. The last section of the questionnaire sets out suggestions and solutions for improving public transport for women.

The survey was designed as part of the quantitative research and targeted a sample of 200 women who use public transportation in Yangon Region. The survey was based on the voluntary cooperation and interviewed between June to July 2020 for this study.

The survey questionnaire had a number of questions to choose from and the researchers provided a choice of answers. Two dichotomous questions with only two responds were answered to Yes or No. And also used five points 'Likert Scale' (Very Dissatisfied = 1, Dissatisfied = 2, Neutral = 3, Satisfied = 4, and Very Satisfied = 5). The questionnaire was first written in Myanmar and then translated into English questionnaire had attached in Appendix.

4.3 Survey Findings

According to the survey questionnaires, findings of the survey are presented below four sections such as Part (I) Socio-economic Features of the Respondent, Part (II) Using Public Transportation, Part (III) Personal Harassment and Part (IV) Women's View of Public Transportation.

4.3.1 Socio-Economic Features of the Respondent

The following Table (4.1) is Socio-economic features of the women respondents include age level, marital status, level of education, occupation, monthly income and place of residence in Yangon.

Table (4.1) Socio-Economic Features of Respondents

Particular	No. of Respondents	Percentage
Age Level		
Less than 20 years	25	12.5
Between 20 years to 30 years	30	15.0
Between 31 years to 40 years	118	59.0
Between 41 years to 50 years	27	13.5
Total	200	100
Marital Status		
Single	44	22.0
Married	156	78.0
Total	200	100
Level of Education		
Under Graduated Level	16	8.0
Graduated Level	141	70.5
Post Graduated Level	43	21.5
Total	200	100
Occupation		
Student	15	7.5
Private Employee	159	79.5
Government Employee	16	8.0
Business Owner	10	5.0

Total	200	100
Monthly Income		
Under 500,000 Kyat	108	54.0
Above 500,000 Kyat	92	46.0
Total	200	100
Particular	No. of Respondents	Percentage
Place of Residence in Yangon		
Eastern District	9	4.5
Western District	34	17.0
Southern District	61	30.5
Northern District	96	48.0
Total	200	100

Source: Survey data, 2020

Above from Table (4.2), the age level of the total 200 respondents shows that 25 respondents (12.5%) were less than 20 years, 30 respondents (15.0%) were between 20 years to 30 years, 118 respondents (59.0%) were between 31 years to 40 years and 27 respondents (13.5%) were between 41 years to 50 years. Therefore, the majority of respondents age level was between 31 years and 40 years. Most of respondents were married.

In the education level of 200 respondents, 16 respondents (8.0%) have under graduated level, 141 respondents (70.5%) have graduated and 43 respondents (21.5%) have post graduated in the study.

For occupation, the largest number 159 respondents (79.5%) have worked at private organization. But 16 respondents (8.0%) of the total are working in government service, and 15 respondents (7.5%) were student. The rest of 10 respondents (5.0%) of total have worked their own business.

Monthly income situation of total 200 Respondents, 108 Respondents (54.0%) have got under 500,000 Kyat and 92 Respondents (46.0%) have got above 500,000 Kyat. The majority of respondents are living at Northern District followed by Southern District, Western District and Eastern District in Yangon Region.

4.3.2 Using Public Transportation

Total 200 respondents were asked to select reasons for using public transportation in their daily commuting as shown in Table (4.2).

Table (4.2) Reason for Using Public Transportation

Particular	No. of Respondents	Percentage
Work	164	82.0
Education	36	18.0
Total	200	100

Source: Survey data, 2020

Respondents were asked to select reasons for using public transportation in their daily commuting, 164 respondents (82.0%) showed that work was the most common reason for using public transportation and 36 respondents (18.0%) were using public transportation for education. The mostly respondents said that reason for using public transportation is low cost.

Table (4.3) Usually Take During One Trip

Particular	No. of Respondents	Percentage
Two	68	34.0
More than three	132	66.0
Total	200	100

Source: Survey data, 2020

From Table (4.3), the study of 200 women usually took during one trip, 68 respondents (34.0%) of total were required two routes to reach their work and 132 respondents (66.0%) took more than three routes. All respondents said that the bus was the most popular type of transportation option. It is safe to ride with passengers as it is the cheapest form of public transport. But taxi used when the respondents are an urgent need to travel.

Table (4.4) Days per Week Used Public Transportation

Particular	No. of Respondents	Percentage
Every day	184	92.0
Three days a week	16	8.0
Total	200	100

Source: Survey data, 2020

According to result of Table (4.4), the number of days per week they use public transportation. Total 200 respondents answered that almost evenly split between two categories, the highest respondents said that they are using public transportation from Monday to Sunday in the week for going to work and other activities. The lowest respondents and 16 respondents (8%) are using three days a week for their education, shopping and other activities.

Table (4.5) is presented the women using public transportation in their daily life. All of the women said that they use public transportation alone. Sometime they are travelling with their family, friends and colleagues. Furthermore, those who answered this question were asked to explain the reasons for travelling with other people. The most common reasons mentioned by the respondents was related to safety and security.

Table (4.5) Public Transportation Using Time

Particular	No. of Respondents	Percentage
Peak hours	186	93.0
All the time	14	7.0
Total	200	100

Source: Survey data, 2020

Above from Table (4.5), using public transportation during peak hours was 186 respondents (93.0%) out of the total 200 women and 14 respondents (7%) for using public transportation all the time. According to this sample, the least reported time that women use public transportation was night hours. The main time in which working women use public transportation to get to their work was during morning peak hours and evening peak hours.

Table (4.6) Walking Distance of Bus Stations

Particular	No. of Respondents	Percentage
Less than fifteen minutes	129	64.5
Half an hour-one hour	71	35.5
Total	200	100

Source: Survey data, 2020

Regarding Table (4.6), 129 respondents (64.5%) out of total 200 women said that they walk less than fifteen minutes to reach the desired bus station and 71 respondents (35.5%) said they walk between half an hour and one hour. All of the respondents said that they have less than fifteen minutes waiting time of public transportation per trip at the bus station. It should be noted that employed respondents filter out those who say they use the desired station for public transport to work on their daily commute.

All of the respondents said that they are waiting between fifteen minutes to half an hour for their public transportation per trip. One woman mentioned that if she missed the bus then she would have to wait another half an hour for the next available bus. Another woman said she often had to wait for the bus to fill up at her workplace.

Table (4.7) Spending on Daily Public Bus Transportation

Particular	No. of Respondents	Percentage
Less than 500 Kyat	134	67.0
More than 500 Kyat	66	33.0
Total	200	100

Source: Survey data, 2020

According to result of Table (4.7), 134 respondents (67.0%) answered that they have spent less than 500 Kyat on public transportation daily and 66 respondents (33.0%) said that they spend more than 500 Kyat.

Table (4.8) Evaluating Cost of Public Bus Transportation and Monthly Income

Particular	No. of Respondents	Percentage
Adequate	71	35.5

Low	129	64.5
Total	200	100

Source: Survey data, 2020

Table (4.8) is related to evaluating the cost of public transportation with regards to monthly income of 200 women in the study. The majority of respondents said that the cost of public transportation was lower than their monthly income.

Some respondents said that using public transport could not afford to buy their own car. Furthermore, respondents expressed their satisfaction with the cost of public transportation in relation to their income.

4.3.3 Personal Harassment

The following Table (4.9) shows the women security using in public transportation in Yangon Region.

Table (4.9) Personal Harassment of Respondents Using Public Transportation

Particular	No. of Respondents	Percentage
Different Experience of Man		
Yes	107	53.5
No	93	46.5
Total	200	100
Harassed Using Public Bus Transportation		
Yes	88	44.0
No	112	56.0
Total	200	100
Type of Harassment		
Verbal abuse	60	30.0
Physical abuse	67	33.5
Stalking	73	36.5
Total	200	100
Location of Harassment		
On the street while walking to bus station	88	44.0
At the bus station	112	56.0

Total	200	100
Particular	No. of Respondents	Percentage
Time of Harassment		
Morning peak hours	60	30.0
Evening peak hours	67	33.5
Night hours	73	36.5
Total	200	100
Acting after Harassed		
Walk faster	66	33.0
Confront the person	134	67.0
Total	200	100
Number of Harassment		
Few times or less annually	82	41.0
Once a month or less	118	59.0
Total	200	100
Harassing Person		
Passengers	105	52.5
Money collectors	95	47.5
Total	200	100

Source: Survey data, 2020

From Table (4.9) result shows that, 107 respondents (53.5%) out of total 200 women answered yes and 93 respondents (46.5%) answered no for different experience of man using public transportation. As a result of 200 women for the harassed using public bus transportation, 88 respondents (44.0%) said that they have been harassed using public transportation. Although 112 respondents (56.0%) have not harassed using public transportation.

Respondents were asked to choose the type of disturbance, knowing that they could choose more than one type of disturbance when used on public transportation. All the women reported receiving inappropriate matches from them. This was followed by stalking, physical abuse and verbal abuse.

In the study of 200 women when using public transportation with type of harassment. Their answered is followed by stalking abuse with 73 respondents (36.5%), physical abuse with 67 respondents (33.5%) and verbal abuse with 60

respondents (30%). Few respondents asked people to ask for their phone numbers or tell them anything else. They try to talk to someone to avoid such harassment.

Total 200 women were asked to select the place where they encounter harassment when using public transportation with their knowledge to select more than one answered. Result of total respondents, there were 112 respondents (56%) were being harassed at the bus station followed by 88 respondents (44%) on the street while walking on the way to public bus station. To avoid street harassment, people adopt unaffordable modes of travel, such as using the first available means of transportation, as opposed to the most appropriate and efficient option.

All of the women mentioned that they were afraid to use public transportation at night. Most women are afraid that men will be harassed by men because there are no women on the bus at night. Regarding from 200 women, 60 respondents (30.0%) have been harassed during morning peak hours when using public transportation, 67 respondents (33.5%) were during evening peak hours and 5373 respondents (36.5%) were during night hours.

The women asked to select how they react after being harassed when using public transportation. there were 134 respondents (67%) out of total 200 women said that they have confront the person and 66 respondents (33%) answered that they walked faster. Many of the women mentioned that preventative action they take such as talking on the phone with someone, putting a bag between them and asking to change seats.

The result of 200 women experiences the number of harassment while using the public transportation. According to result of 200 women, 81 respondents (54%) said few times or less annually with harassment using public transportation followed by 69 respondents (46%) answered once a month or less.

Respondents' increased depression and stress due to the use of public transport have adversely affected their mental and physical health. Another source of frustration is harassment. Others have argued that society views women as objects, not human beings, which as affects the way they treat male passengers while using public transport.

Total 200 women were asked to select the person who harasses them when using public transportation with their opinion. The majority of respondents, 105

respondents (52.5%) answered the passengers and 95 respondents (47.5%) said the money collectors.

Furthermore, a little woman mentioned that she feels a negative stigma around public transportation users. She said that those who use the public transportation system are often cheap, poor and low-class.

4.3.4 Women View of Public Transportation

The following Table (4.10) is presented the respondents opinion on level of satisfaction when using public transportation in Yangon Region.

Table (4.10) Mean Value for Respondents Opinion Using Public Transportation

Particular	Mean
Speed	3.27
Comfortability reliability seats	3.41
Shelters ease of use	2.61
Travel information easy	2.45
Waiting time	3.57
Safety	2.35
Public Transportation Services	2.34
Overall Mean Value	2.86

Source: Survey data, 2020

Above from Table (4.10), the study of speed mean value (3.27) result showed that the public bus is high speed in the study. The comfortability reliability seats mean value (3.41) mentioned that the public bus seats system is comfortable using for travelers.

The mean value (2.61) shelters ease showed that the respondents have not satisfied and travel information mean value (2.45) is not easy to use for traveler. The waiting time mean value (3.57) is the respondents have satisfied.

In the study of safety mean value (2.35) showed that the respondents have dissatisfied because the public bus is very old model and the safety system is dangerous situation for travelers. And also, public transportation services mean value (2.34) mentioned that the respondents have dissatisfied level on this situation.

Respondents were asked those who explained how public transportation affected their daily commute or commute to school. Regarding the negative aspect. Lack of up-to-date public transportation has led to a growing response to being late for work or school.

Respondents also said that public transportation is a waste of time. Some said they left their homes early in the morning to catch up on long routes and stops. Some respondents stated that they did not want to go to work or school due to poor public transport services.

Poor services include overcrowding, uncleanliness, insecurity, includes long routes and many stops. In addition to the poor services, respondents stated that harassment also affects their mood and self-esteem.

The following Table (4.11) is related to respondents' perception on whether public transportation is integral for women economic participation and social participation.

Table (4.11) Public Bus Transportation is Integral for Women's Economic Participation

Particular	No. of Respondents	Percentage
Economic Participation		
Yes	108	54.0
No	92	46.0
Total	200	100
Social Participation		
Yes	133	66.5
No	67	33.5
Total	200	100

Source: Survey data, 2020,

In the study of 200 respondent's perception on whether public transportation is integral for women's economic participation or not, 108 respondents (54.0%) believed

that public transport is integral for women’s economic participation while only 92 respondents (46.0%) have not believed.

Regarding 200 respondent’s perception on whether public transportation is integral for women’s social participation or not, 133 respondents (66.5%) believed that public transport is integral for a women’s social participation while only 67 respondents (33.5%) have not believed.

Table (4.12) Mean Value for Women View to Improve Public Bus Transportation

Particular	Mean
Safer Buses	2.01
More Frequent Buses	3.62
Availability of Modern and Equipped Bus Stations	2.74
More Bus Stations	3.47
Cleaning Buses	2.35
Overall Mean Value	2.84

Source: Survey data, 2020

Above from Table (4.12), all of respondents answered that public transportation in Yangon Region is not suitable for people with disabilities and not suitable for senior citizens or the elderly people.

CHAPTER V

CONCLUSION

5.1 Findings

The survey was designed as part of the quantitative research and targeted a sample of 200 women who used public transportation in Yangon Region. The survey questionnaire is collected with both online and email system. The population was composed of a representative sample of women who use public transportation, including women enrolled in universities, working women and women from urban areas. The majority of respondents age level was between 31 years and 40 years. Most of respondents were married. The majority of respondents are living at Northern District followed by Southern District, Western District and Eastern District in Yangon Region.

Regarding from 200 respondents, 164 respondents (82%) shows that work was the most common reason for using public transportation and 36 respondents (18%) were using public transportation for education. The mostly respondents said that reason for using public transportation is low cost.

The highest respondents were using public transportation every day of the week. All of the respondents said that they have less than fifteen minutes waiting time

of public transportation per trip at the bus station. The majority of respondents said that the cost of public transportation was lower than their monthly income.

Respondents were asked to choose the type of disruption they face in public transport because they knew they could choose more than one type of harassment when using public transportation. All the women reported receiving inappropriate matches from them. This was followed by stalking, physical abuse and verbal abuse.

Result of total 200 women, there were 112 respondents (56%) were being harassed at the bus station followed by 88 respondents (44%) on the street while walking on the way to public transportation. All of the women mentioned that they were afraid to use public transportation at night. Most women are afraid that men will be harassed by men because there are no women on the bus at night. Many women take precautionary measures by talking on the phone with someone; preventive measures were taken between them, such as dropping a bag and requesting a change of seat. The majority of respondents, 105 respondents (52.5%) answered the passengers and 95 respondents (47.5%) said the money collectors.

In the study of safety question, mostly respondents answered that the public bus is very old model and the safety system is dangerous situation for travelers. All of respondents answered that public transportation in Yangon Region is not suitable for people with disabilities and not suitable for senior citizens or the elderly people.

Poor services include overcrowding, uncleanliness, insecurity, includes long routes and many stops. In addition to the poor services, respondents stated that harassment also affects their mood and self-esteem.

Respondents also said that public transportation is a waste of time. Some said they left their homes early in the morning to catch up on long routes and stops. Some respondents stated that they did not want to go to work or school due to poor public transportation services.

5.2 Recommendations

Yangon is growing rapidly and will continue to do so in the future. The urban population is dependent on natural development and employment in other parts of the country. Higher education; Migration due to new businesses and other opportunities

will increase both. People's income will increase. As the economy grows, lifestyles will continue to change. The market strengthens its international connectivity.

Transportation is used for socio-economic activities; Land use; Transportation plans need to be integrated into urban development strategies, as they have a huge impact on the environment and public financing. And the development of new cities and subcenters.

The Yangon transportation system is equipped with new advanced features such as a railway network. It is designed in many ways to accommodate highways and modern buses. These methods combine to ensure people's safe and affordable movement. Must work as a coordinated system. YRTA needs to increase its operations and capacity as the sole governing body for the management and management of the transportation system in Yangon.

Moreover, increasing public transportation as an opportunity to tackle rampant crime in public transportation, recent developments in Yangon reflect the government's commitment to improving the people's movement. More importantly, the government recognizes the need to promote more effective spatial communication between different sectors and peoples and productive movements in Yangon Region. Therefore, the safety and adequacy of public transportation services were examined primarily by the severity of the crime and the fear of crime, transport infrastructure, location and condition of bus stations, condition of walking distance when traveling services and needs of other services.

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CHAPTER I

INTRODUCTION

1.1 Rationale of the Study

The transportation system works to move individuals or goods from one place to another to address geographical and geographical constraints. In addition, to support the spatial, social and economic evolution of transport cities (Divall and Bond, 2017). Public transportation is a transportation service for people living in the country. Thus, public transport, also known as mass transit, is a system of transportation that is designed to move individuals to different locations. The majority of individuals want to use public transport for their legal and informal work.

Public transportation operates on designated routes and is efficient. Inexpensive mobility, access to work, education, social engagements, and recreation activities. Public bus routes are important for urban public transport. Public transportation problems include public transportation services, safety, security, comfort, affordability, equality, and regularity, which all refer to the traffic performance.

Today, public transportation has become a major source of education and employment for women. Most of the users of public transport are low-income students and women who cannot afford their own cars. They choose public transport because it is the cheapest form of transportation for their day-to-day purposes. Safety and crime, which are pervasive in public transport in many cities, have led to more talk about ways to reduce them. Most women are threatened by the potential for safe public transportation and the potential for sexual and physical harassment among others.

Women in developing cities have been a growing threat to public safety and public transportation in recent decades. It should be noted that many of these public transport threats occur in various forms, but caution should be exercised. Many suffer from poor public transportation services and inadequate public transportation.

The challenge, especially for governments in developing countries, is to address crime while addressing the scarcity of public transportation and using a sustainable approach. The importance and urgency of safety and adequate public transportation has been linked to population growth and the continued rise of crime through the use of public transport in urban areas.

Public transportation plays a key role in the mobility and usability of Yangon. The current public transportation system provides a vision for the future sustainability of the city, with a growing car population and population. Yangon is the largest city and business center in the country.

According to the Central Statistical Organization, there are 15,293 registered buses in Yangon Region (2017-2018). The replacement of the old public bus system operated by Ma Hta Tha, with the Yangon Bus Service was the first reforms by the National League for Democracy government in the country's commercial capital. Yangon people travel an average of two trips per day. Buses are the main mode of transportation in Yangon, accounting for almost fifty percentages of all trips. Women are more likely than men to walk and rely mainly on public transport.

Most people in developing cities rely on public transport in their daily life. There are also crimes committed in mode of transportation including bus, trains and taxis. For urban areas, public transportation is essential for social security and is accessible to anyone. The two common conditions for committing a crime on public transportation are very high during peak times and when the bus attendant is not supervised. The availability of buses has limited public transport due to limited demand at peak times. Pickpocketing and sexual harassment can occur during overcrowded time (Smith & Clarke, 2000). According to Sohail's study, women were abused during rush hour, mainly in the form of sexual harassment by stronger passengers on buses (Sohail, Maunder, & Miles, 2004).

There are many consequences from harassment to women such as reflection on negative thoughts, low self-esteem and self-harm. In addition, women also fear sexual harassment while using public transportation (Gautam, Sapakota, Shrestha, & Regmi, 2019). In general, there are few reports of sexual misconduct on public transport, and the reasons for not reporting it can vary from different countries. Some of the common reasons are police response and cultural and social attitudes toward women. Thus, the study is interested to condition of safety and sexual harassment on

public transportation and to investigate factors which affect safety and sexual harassment for women in public transportation in Myanmar.

Finally, the study information will be used planning and management and contribute to measures that can be adopted to reduce criminal activities in public transportation system, and it is hoped that empirical knowledge on this disturbing issue will be instrumental in guiding decisions for integrating gender sensitive transport policy in Yangon and the country as whole.

1.2 Objective of the Study

The objective of the study is to explore the women sexual harassment using public transportation.

1.3 Method of Study

The method of the study is descriptive based on primary data and secondary data. Primary data is obtained through with a survey with semi-structure questionnaire on explore the women sexual harassment using public transportation of Yangon Region. The survey questionnaire is collected with both online and email system.

The survey questionnaire consists multiple choice questions in which the observer selects the answers and asks respondents to choose at least one of the other options and dichotomous questions with two reaction choices, Yes or No. And also used five points 'Likert Scale'.

The secondary data is gathered from literature studies, relevant information from Department of Road Transport Administration, Yangon Region Transport Authority document records, research papers, libraries and internet website.

1.4 Scope and Limitations of the Study

The scope of study focuses on women sexual harassment in using public transportation of Yangon Region. The survey is conducted on 200 women travelers using Yangon Bus Service. The study is not covered all women who are travelling with public transportation in Yangon Region. And also, during the survey

questionnaire collection period is the coronavirus (COVID) disease occurs in the Yangon Region.

1.5 Organization of the Study

This study is organized into five chapters. Chapter one is introduction with rationale, objectives, method, scope and organization of the study. Chapter two provides the literature review on transport infrastructure and economic growth, importance of transport system in local economic development, safety in public transportation and so on. Chapter three is public transportation system in Yangon. Chapter four is applied descriptive and quantitative techniques of methodology to the empirically derived and collected data on experienced by the women in public transportation of Yangon Region. Chapter five is summarized conclusions with findings and provides suggestions for public transportation of Yangon Region.

CHAPTER II

LITERATURE REVIEW

2.1 Concept of Public Transportation

Public transportation in urban areas has gained greater attention in recent years for improving sustainability and therefore the quality of urban life. Improving the economic and environmental capacity of urban areas facilitates the efficient connection of resources to effective locations and the ease of mass migration (Bok and Kwon, 2016). Public transportation can be more attractive by providing door-to-door mobility (Muhammad Atiullah Saif, Mohammad Maghrour Zefreh and Adam Torok, 2018). The development of transportation services is an important factor for social quality (Yatskiv, Budilovich, and Gromule, 2017). Sustainability of transportation, environmental conditions of the cities, public health and economic condition of residents are shifting from private transportation to public transportation (Elias and Shifan, 2012).

Access to public transport services and the provision of public transport services are important service issues. In network design of commercial services, researchers tend to focus more on reducing the cost of users and operators, rather than addressing issues of fairness and ease of use (Murray, 2003).

Availability of infrastructure, the information is simple and easy. Save time and money with side-by-side comparisons with public transportation (Yatskiv, Budilovich, and Gromule, 2017). Transportation and land use policies aim to reach consumers at a reasonable cost and time, as inadequate transportation leads to social exclusion (Hawas, Hassan, Abulibdeh, 2016).

Therefore, one of the main goals of policy makers and organizers in urban areas around the world is to provide efficient public transportation for consumers (Saghapour, Moridpour, Thompson 2016).

2.2 Types of Public Transportation

There are many types of public transportation available today. Types of public transportation includes public bus, railway, taxi and water bus.

2.2.1 Public bus

Public bus transportation services generally support the regular operation of public buses passing through the routes to the agreed bus stops under the public bus transportation schedules. Public buses are safer than individual motor vehicles. Local people with high level of transportation can better security and reduce crime rates. Traveling on public bus transportation reduces the number of cars on the road and reduces the risk of an accident.

2.2.2 Railway

Railways are a safer public transportation system than any other form of public transportation. Railways are more efficient than passenger transport when traveling to low-traffic areas, despite the high capacity and efficiency of passengers and cargo. A rapid transit, underground, subway, and Mass Rapid Transit (MRT) system is usually the busiest in urban areas and often differs from the most frequent traffic and other traffic. Changes to urban railways affect local rail systems that provide passenger services in urban and suburban areas.

2.2.5 Taxi

Taxis are an immediately recognizable form of transportation that is located in almost every city in the world. The role of taxis in a city full of taxis varies from city to city. Taxi regulations have a long history. However, this has not yet been resolved globally. Taxis are an important part of the transportation system in developed cities.

Still, not all taxis have the same concept. Taxis provide one-on-one instruction to individuals and parts of the urban transportation system, despite the scarcity of even a regular schedule, routes and designated stations are not enough, but they are part of some public transportation.

2.2.6 Water Transport

Water transportation means that the process of transport a watercraft, a boat, ship or vessels. The ship needed for a rich vessel was essential to the construction and maintenance of its hull. Shipping is mainly used for the carriage of individual and indestructible goods, generally mentioned to as cargo.

The city water transportation is a fundamental part of society and has innumerable associations. This means that all cities are dependent on water. The reliable water supply is prerequisite for urban settlement and cities are large and small as a means of transportation.

Similarly, all cities depend on transportation. For survival and development, all cities must maintain an effective domestic transport system and establish effective connections not only with the region and the country, but also with the global economy. The link between water transportation and urban development is complex. Advantages and disadvantages compared to the consequences of water use. The urban transportation system varies between location and time.

2.3 Transportation and Economic Opportunities

Transportation developments have the beginning of the industrial revolution have been associated to grow economic opportunities. Transportation technology has been invented or adapted in various ways at every level of society with various effects. Transportation influences the economic opportunities of production and consumption. Historically, five majors in moving of economic development where a precise transportation technology has been used for economic, social and cultural suggested by (Rodrigue, 2017).

2.3.1 Seaports

Technological and commercial developments have made the oceans a place to do business. It was associated with seaports during the early stages of European expansion between the sixteenth and eighteenth centuries. Although, international trade was initially developed through the colonial empires, land travel was limited. Later, during the industrial revolution, many seaports became important industries. With globalization and exports, seaports have increased their importance in supporting international trade and global supply chains. Simple businesses often involve a lot of goods. Complex economies increase the flow of goods.

2.3.2 Rivers and Canals

River trade has gained momentum throughout history, and even high-tech canals have been built because lock technology is fundamental. In the late eighteenth and early nineteenth centuries, the first phase of the industrial revolution was associated with the development of canals to transport heavy goods, mainly in Western Europe and North America. It allowed the development of basic and limited inland distribution systems. Most are still in use today.

2.3.3 Railways and Automobiles

The second phase of the nineteenth century industrial revolution was associated with the development and implementation of rail systems that provided faster and more efficient inland transportation. The increase in local settlements and the growth of goods and tourists have created economic and social opportunities.

The twentieth century saw the broad economy of transportation systems, such as national highways and automobiles, as a major economic sector. It is associated with significant business opportunities for reliable door-to-door delivery of industrial and commercial markets. Motorcycles have opened up new social opportunities, especially in the suburbs.

2.3.4 Airways and Information Technologies

The second half of the twentieth century was associated with the development of global aviation networks and economic globalization. New organizational and management models are emerging, especially in the fast-growing field of logistics and supply chain management. Although maritime transport is at the heart of

globalization, aviation and information technology are becoming increasingly important to travelers and tourists. It accelerates information, especially in relation to the flow of goods.

2.3.5 Urbanization and Transport Development

Dimitriou, (1992) views about perspectives on transportation and Third World cities define urban development as a process of land use and population growth. In developed countries, the level of urban development should be referred to as industrial development and should be derived from developing countries. However, studies show that the situation in developing countries is different and more complex in terms of urban services and city satisfaction (Aprodicio, Vinod and Hanley 2007).

Johnston, Gregory and Smith (1986), considered to include the normal and relative growth of cities within a defined area and usually within the country. Interestingly, discussions on urban development have seen different perspectives on the consequences of what is happening in most developing countries. However, in the age of rapid globalization, it should be noted that urbanization undermines its quality and loyalty. In the same way, it creates excellence in new groups and cities.

Transportation planning and urban management literature are integrated with individuals. The impact of the link between urban livelihoods and urban norms has added to the country's development process, especially the standard of living in third world countries.

Ayeni (2001), posited that the twentieth century was a good time to accept urban problems as a normal way of life in the world. In any case, perceptions of urban development are constantly changing over the years. For example, some have described cities as parasites and others as good cultural centers (UNCHS, 1996). In fact, for people from different cultures, the city meeting is a point. It can be seen as a meeting place for people of different ethnic and religious backgrounds. In addition to the scarcity of economic resources, it is a place where political stability and power struggle.

According to Gilbert and Gugler (1982) each city has its own special system for anonymity and individual offenses. There are three basic concepts of urban development and management that focus on urban development and management analysis, which provides a framework for evaluating the role of urban and urban services in individual development processes are: (i) behavioral view (ii) structural analysis, and (iii) urban demographic interpretation. Wirth (1938), As a pioneer of the concept of urban development, it is seen as a behavioral process, and urbanization is associated with behavioral change and individual behavior.

Similarly, Childe, (1968) pointed out that urbanization is a structural process that brings about change in the population as a whole and in the economy. The concept focuses on shifting people from rural and agricultural areas to urban or non-agricultural areas as a reflection of economic specialization and technological advancement.

In conclusion, urbanization can be concluded that the process of social mobilization and social transformation and social transformation for social change. However, the transformation of the sector economy and the changes in the sector within the economy were a settlement process that led to the emergence of new forms of settlement and operation. It should be noted that the increase in urban population is not due to natural development alone. Although, population growth is concentrated in urban area because of migration and area expansion (Oyesiku, 2003).

Due to changes in production patterns, industries and services are locally located. Economic rationale for the economic size and income requirements of the population to live in urban areas. The geographical location of the people and the economic changes are leading to the economic development of cities and individuals. It is the economic transformation and economic transformation that requires urban development or productivity. However, it can be said that population growth affects all sectors of the country.

2.3.6 Sustainable Transportation

To better understand the concept of sustainable transport, the concept of sustainable development or development needs a broad overview to build strong relationships between concepts. From Geerling (2000), point of view, sustainable

development can be defined as the process of change. Headline-grabbing resources; investment direction; upgrading current and future prospects to meet human needs and aspirations

Furthermore, Beella and Brezet (2007) from their own point of view, it is as if the idea has been evaluated as good or bad in the future and not growing in the future. By building this perspective, jobs, wages, education and health are good parts of society that need to be protected and evaluated for the future. Air pollution and poverty Crimes will not be allowed in the future (Ryan and Throgmorton, 2003).

Litman and Burwell (2006), pointed the idea that human movement is an economy is fundamental to society's economic and social development. It points to the impact on society and the ecosystem. This is beyond clear, sustainable environmental issues and beyond the other economic, social and cultural aspects of society. Sustainability, on the other hand, captures the state of human activity and the need to balance various disciplines within society.

Economic development and urban development can be achieved through interconnected and interconnected transportation systems. Knowledge of sustainable urban development in developed countries is well known and documented. The role of transportation in achieving the goal of sustainable capital development in these countries is also well studied in the academic literature (World Bank, 2002).

Over the years, sustainability has been over-emphasized in the decision-making process, ignoring volatile elements or elements that are difficult to measure. Interesting is a project that considers how difficult it is to measure social things (transportation, health, education, etc.) can be considered sustainable. It focuses on the idea that sustainability is related to the long-term risks of available resources. Reflects the goals of justice for future generations.

2.3.7 Transport and Sustainable Livelihoods

Oyesiku (2003), the function of transport in cities to facilitate the transportation of goods and services from demand level. Transportation support to carry the basic objectives of urban life. Improving workplace efficiency and living standards in infrastructure and services. And also, Adeniji, (2000) viewed the effective function of transport as a blood system, generally a requirement for the

nutrition of human life. Furthermore, Filani (1988) while examining the importance of transportation, the socioeconomic, depends on social and economic development. It is true to say that this weakens the engine that drives political integration and development. Based on this information, transportation is based on goods and services. It promotes mobility and a better quality of life for individuals by highlighting the importance of social and economic development in society.

Conversely, lack of transportation and mobility and lack of access to products and services can be detrimental to health. Therefore, transportation plays an important role in the structure and structure of space and space. It is a bridge between regions and businesses. It creates a valuable connection between population and the world.

Transportation is a multidimensional service that affects many aspects of the economy. Transportation has invested heavily in the socioeconomic life of organizations and corporations, but is also part of economic and social services. Transportation does not exist by itself.

Transportation is essential important for all types of human development such as social, economic, political, education, cultural, health and religion. Transportation is an essential tool for all human activities. It makes available interactions with all types of land uses such as commerce, industries, agricultural, educational etc. It depends on the individual. Represents the movement of goods and services from one space to another (Okoko, 2006).

Although transportation is more than just a matter of moving from space, it is an important aspect of transportation. Transportation is a trademark of social development. Therefore, a country can reach the stage of development due to its transportation conditions.

2.3.8 Travel Arrangements

Travel arrangements for women and men vary further depending on the purpose of the trip. Depending on the social and economic role of women in the household, women are the main occupants, and public transport is often used for education and health.

In the suburbs or in rural areas, women have more complex routes than men. With this in mind, walking is a key part of travel. In most urban areas, the destinations for women are different. Because women provide more space for work and household chores. In addition, women's traditional social role in caring for children and parents influences their travel patterns.

The women tend to take shorter trips, traveling with minors, carrying more packaging than men, and making multiple stops. As women often choose to look for work closer to home and avoid transportation challenges, the workplace also plays a key role in women's job opportunities (World Bank, 2012).

Due to the lack of public transport and poor public transport, there are more forms of travel than men than women. Traditional social norms, which symbolize women as symbols when they return home late due to delays in public transport, exacerbate this situation.

Public transportation users can use the transition system to explore the workplace for men and women. People who do not own a car because public transportation is not expensive. Both men and women use taxis to travel daily, despite the high cost. This is because public transport routes can be avoided for up to 30 minutes due to their lack of direction or the long wait for buses (CSBE, 2015).

2.4 Theories of Sexual Harassment

The term sexual harassment originated in North America in the mid-1970s and was coined to describe the problem (Gutek, 1985). Sexual harassment can lead to unwanted sexual growth and development. Inequalities in power often result from the abuse of power. The most common symptom for researchers is the definition of what triggers sexual harassment.

Researchers from around the world; Legal experts and policymakers disagree with the global definition. One of the reasons for this congenital problem is that one definition separates boundaries from expressions of sexual interest (Gutek, 1985). Sexual harassment affects many people. This is the largest proportion of the population than any other form of discrimination (Bargh, Raymond, Pryor, & Strack, 1995).

Spitzberg (1999) found that sexual harassment and coercion are actually more common than other forms of sexual violence. It is generally accepted that there is no cause for sexual harassment and that there is no theoretical framework that can best explain it (Skaine, 1996).

According to Ward, Polaschek, and Beech (2006), the terms theories and models are exchanged true the case with sexual harassment. In short, the models can be seen as metaphors that help researchers look at the structure of events under explanation (Ward et al., 2006). However, when these factors are related to the basic mechanism and interaction of various factors in the model (Ward et al., 2006).

One of the four main causes of sexual harassment is former loneliness. It creates a theory that combines socio-cultural and organizational data. In addition, the theory shows a strong naturalness compared to the only theories of previous sexual harassment. Clearly, it is a step forward for a field that dominates the causes of sexual harassment for a few reasons.

2.5 Sexual Harassment on Public Transportation

Sexual harassment on public transport lasts for days. It can occur in densely populated areas and usually in potentially dangerous situations. Previous studies have shown that women are more likely to be sexually harassed when they are having sex, even if they are not alone (Natarajan, 2016).

Parents in the developing world have come up with the idea of keeping their daughters in the home for a limited period of time, fearing that their daughters will be abused if they go public (Natarajan, 2016).

This practice among parents in developing countries further socially excludes young women, leading them to use the term Smith (2008) as a transitional captive, if the women are afraid to travel by public transportation or stop traveling alone or if there is no access or access for private transport.

Such theories greatly simplify sexual harassment situations, ignore the ancestral culture and instead of victim-blaming culture, go back to binary thinking where successful women have a responsibility to take care of themselves by enticing successful promoters through staying away from male-dominated public places.

Sexual harassment on public transport is an expression of patriarchy. Men use force and control and for shaping and modeling the activities of the women (Mustaine & Tewksbury, 2002).

Stanko (1985) suggested that women should be socially normal for difficult security management, by removing microaggressions that are not normally sexually abusive, women face difficulties and invisible things and criticism, the woman failed to protect her victim because she did not notice the obvious signs (Powell & Henry, 2017).

2.5.1 Safety in Public Transportation

Fakoya, Apantaku and Adereti (2006) discuss gender equality in household food security. This study on informal participation is used to calculate the differences in the roles and experiences of men and women in society in social science analysis. Porter, (2008) noted that women and men have extensive experience in transportation systems. Gender in public transportation is very different from country to country, but some of the symptoms are the same. Individual travel decisions in cities affect the quality of life of urban dwellers.

The problems caused by physical assaults and sexual harassments especially the women because of the impact they make on the livelihoods of the vulnerable groups. The problems depend on the situation, but the inadequacy of public transport services can affect the safety and reliability of individual women. Both women and men are concerned about and have experienced some kind of verbal or physical harassment (World Bank, 2012). People go against the most appropriate and effective choice to avoid roadblocks. They use a form of travel that is not available.

Women living in densely populated areas prefer taxis to any other mode of transportation. Women are especially cautious when carrying large packages or traveling with children. Women avoid using certain buses or train stops; public transportation will be restricted for a limited time or will only be used if accompanied by someone.

According to the CSBE (2015), two-thirds of public transport users in Jordan are men and one-third are women. The study found that a few women were sexually harassed on public transportation in the evenings. Studies have shown that disturbances in motor vehicles are limited, but they do not always occur. Harassment

can occur at bus stops, making it easier for the perpetrator to escape and remain anonymous. The incidents inside the vehicles were caused by the driver, it is still low because conductors and other bus users are in the habit of punishing the perpetrators. (CSBE, 2015).

According to the International Youth Foundation (2014), 30% of parents in Ruseifeh, Mafraq and Southern Shouneh do not allow public transportation for their children. Public transportation makes children more vulnerable. Dissatisfaction with unwanted attention is particularly prevalent among girls in these areas. According to parents in these areas, the results indicate that 40% of public transport users are disturbed.

Various studies have shown that women are victims of the current transportation system, which lacks access to education and business opportunities. As a result, it lowers their standard of living. Therefore, improving public transportation and infrastructure should be a top priority, and gender issues must be considered as part of the solution.

2.6 Review on Previous Studies

Futose and Kato (2015), Yangon Urban Transport: Demand and service quality reflect the current traffic situation in Yangon and discuss the dynamics and future direction of the urban transport system. The success of the survey is invaluable as it has successfully identified traffic conditions to understand current problems and develop future transportation policies.

Paing Myo Ko Ko (2018), point out the current situation of Yangon Bus Service (YBS) system in Myanmar. The new system was found to be less profitable and less successful than the old system Hta Tha System. And also, the study found that the transportation system was incomplete and insufficient. It can be considered as a basic requirement to upgrade the transportation system.

East Asia Institute (2018) working paper on public opinion polls on the Yangon Bus System and its Reform, the newly opened Yangon Bus Service (YBS) system has structural weaknesses. In particular, bus schedules and route maps were provided. Nevertheless, as people recalled the struggles of the previous system, they

were able to endure the initial difficulties and hoped that reform would improve the situation.

Ei Shwe Sin Win (2019), learned that some passengers ride the bus for free. There are some complaints regarding the reckless driving though some conflicts of the bus conductors have been reduced to some extent.

Nirmal Geutam (2019), studied looked at sexual harassment and public transportation decisions among female students in the Kathmandu Valley, Nepal. In the evening, students riding the bus were more likely to experience distractions and emotional distress. Most of the harassment was made by a male passenger for young women between the ages of 20 and 23.

Eunice Chan (2019), studied the cultural context of the problem of sexual harassment on public buses in Yangon, a platform was used to explain the sexual harassment responses of young women on buses in Yangon and their views on their experiences and perspectives. Sexual harassment often occurs at peak and non-peak times on crowded and crowded buses, but is common on the streets and sometimes several times a day. Four main emotions that respondents highlighted when they were harassed were: shock, anger, fear, and shame.

CHAPTER III

PUBLIC TRANSPORTATION SYSTEM IN YANGON

3.1 Yangon Profile

Yangon was founded as Dagon by the Mon in the early eleventh century (1028–1043) dominated Lower Burma at that time (en.wikipedia.org/wiki/Yangon). Yangon became the capital of Union of Burma on January 4, 1946 when the country regained independence from the British Empire (en.wikipedia.org/wiki/Yangon). In November 2005, the military government relocated Nay Pyi Taw, designating 320 kilometers (199 miles) north of Yangon, as the new administrative capital, and later relocated the government to the newly developed city. However, Yangon is the largest city and the most important commercial center of Myanmar.

The city is set in the Yangon Region, a wider administrative area with a population about 6.2 million people in an area of 598.76 kilometers (km). The population density of Yangon is 16,000 persons per square kilometer. The annual

growth rate of the city population has been about two percentage. The central business district is located south of the Yangon River and Bago River. Administratively, the city is divided into for four districts such as East District, West District, North District and South District with 45 townships. The essential religions in Yangon are Buddhism, Hinduism, Christianity and Islam.

Yangon city is mainly important not only in economic but also in political point of view. Most of rural people usually move to live in Yangon and population is increasing year by year. Yangon provides a variety of public transportation options but taxis are the most common and convenient way for visitors. The main reason is motorcycles and bicycles are not allowed within the Yangon area whereas public bus and taxis are available everywhere.

3.2 Public Transportation Service in Yangon

There are various types of public transportation services available in Yangon. There is public bus (Yangon Bus Service, YBS), circular railway, water bus and, city taxi. The public transport service fare differs depending on the type of vehicle and on whether the passenger is a local resident or a foreigner. Bus and trains are an important mode of public transportation for the majority of working or class people.

3.2.1 Public Bus Transportation Service

Public bus transportation service is cheaper and faster than other transportation modes and most belong to private companies. Table (3.1) presents the passenger and public bus in Yangon Region (2010 to 2018).

Table (3.1) Passenger and Public Bus in Yangon (2010-2018)

Year	Passenger per Year	Bus
2010-2011	265642	11388
2011-2012	249561	11393
2012-2013	292919	11443
2013-2014	382774	13036
2014-2015	429493	16816

2015-2016	462199	15543
2016-2017	512144	14756
2017-2018	530728	15293

Source: Department of Road Transport Administration, 2019

The private and public bus system, which retains more than fifty percentage of the market, and the outdated railway system of more than 50 km account for less than one percentage of the total traffic loss. One notable change since 2013 has been the introduction of buses. This is an active intervention by the Yangon Region government to strengthen the public transport system, which includes the suburban railway and water transport.

Before 2016, Yangon bus system was under the regulation of the Ma Hta Tha Central Committee. Public buses in Yangon are provided by both the public and private sectors. The bus is considered to be unattractive to the elderly and operates on a daily basis, and demand for buses is on the rise. The private sector, regulated by the Yangon Division Bus Control Committee (YDBCC), is the main provider of public transport, operating about 2,400 public transport vehicles in the city.

‘In July 2016, the Yangon Region Government formed the Yangon Region Transport Authority (YRTA) to replace the existing bus regulator, Ma Hta Tha (formally known as the Central Supervisory Committee for Motor Vehicles)’ (JICA, 2019). Ma Tha Thar has controlled the city's bus system for more than 50 years and has a reputation for underperforming management.

In January 2017, Yangon Region Government abolished to Ma Hta Tha Central Committee. Yangon Region Transport Authority (YRTA) Started to control the Yangon Bus Services (YBS). the Yangon Region Government completely restructured the public bus network and management and launched the Yangon Bus Service (YBS). This marked the beginning of significant changes in the public bus system of Yangon. The most notable improvement began in January 2017, with the introduction of new buses; development of buses; restructuring bus operators; upgrading the bus business and bus system to the Yangon Bus Service (YBS), which covers bus refurbishment. Introduction to channels and information and communication technology.

The visions of Yangon Bus Service (YBS) are;

(a) Current operating companies and bus lines will be transformed into public companies.

(b) Once public companies are formed, bus gates will be built with companies

(c) Bus fares will be made with modern payment system and

(d) The process will be carried to use information technology.

In the Yangon Region 27 bus operators serving with 6550 vehicles in Yangon Bus Service (YBS) under the control of Yangon Region Transport Authority (YRTA). The average number of passengers has increased since more than 300 bus routes were cited. Due to the lack of information, there is some transfer speed, such as walking distance, for psychological data transfer due to lack of information. Carefully developed bus gates and intermodal facilities should be carefully designed to enhance smooth transfers as shown in Table (3.2).

Table (3.2) Public Bus Operators in Yangon

No.	Company	No. of Routes	No. of Owned Buses	Average Number of Buses Daily Operated	Operating Rate
1	Bandoola	5	244	213	87%
2	YUPT	19	1230	975	79%
3	Yangon Bus Public Co., Ltd	8	546	464	85%
4	Yangon Northern Taikkyithar	1	84	57	68%
5	Omini Focus General Service Public Co., Ltd	8	464	307	66%
6	Power Eleven Public Co., Ltd	3	225	158	70%
7	Ever Green Lucky Family	2	198	123	62%
8	Shwe Lan Khin	1	70	61	87%
9	Sanwaila	1	50	34	68%
10	Holiest Vim	4	174	114	66%
11	GYCT Co., Ltd	10	696	344	49%
12	Khit Thit Bayint	11	606	425	49%

	Naung				
13	Golden Southern	10	749	423	56%
14	Kong Baung	2	170	129	76%
15	Trans Link Co., Ltd	2	60	54	90%
16	City Liner Co., Ltd	1	16	8	50%
17	Rapid City	8	323	168	52%
18	People Partner	5	265	241	91%
19	YBS (22)	1	101	71	70%
20	YBS (31)	1	41	19	46%
21	YBS (33)	1	55	42	76%
22	YBS (45)	1	25	23	92%
23	YBS (63)	1	28	25	89%
24	YBS (73)	1	11	5	45%
25	YBS (76)	1	46	32	70%
26	YBS (79)	1	85	39	46%
27	YBS (80)	1	19	15	79%

Source: Yangon Region Transport Authority, 2019

Yangon Bus Service (YBS) is a bus transportation network system that will be launched on 16 January 2017. A total of 60 bus lines and eight companies were set up under the management of the Yangon Region Transport Authority (YRTA) to replace the existing system where many companies and individual owned bus vehicles and bus line. In the past, individual owners drove only two or three buses with their owners. The eight companies are: (1) Omni Focus Co., Ltd., (2) Bandoola Transportation Co., Ltd., (3) Yangon Public Bus Co., Ltd., (4) Yangon Urban Public Transportation Co., Ltd., (5) Power Eleven Co., Ltd., (6) Sanwaila and San Raung Ni Co., Ltd., (7) City Liner Bus Public Co., Ltd., and (8) Golden South District Co., Ltd. Eight companies' structure are as follows:

- Public-private partnership company, namely, Yangon Bus Public Co., Ltd.,
- Existing private bus operators (from the previous system), namely, Yangon Urban Public Transportation Co., Ltd., Omni Focus Co., Ltd., Bandoola Transportation Co., Ltd.; and
- Associations of small-scale bus vehicle owners, namely, Power Eleven Co., Ltd., Sanwaila and San Raung Ni Co., Ltd., City Liner Bus Public Co., Ltd. And Golden Southern District Co., Ltd.

(A) Operating Issues of Yangon Bus Service

One of the expected effects of the restructuring of bus operators is the shift from a commission base to a travel-based commission or fixed pay system. The main characteristic of each system is as follows:

- (d) **Sales-based type:** Drivers often wait for passengers at bus stops, causing congestion.
- (e) **Trip-based type:** Drivers will overtake at a much faster rate to allow more passengers to drive.
- (f) **Fixed salary system:** is desirable for safe driving.

Many bus operators have shifted into fixed-salary system or trip-based system though some companies still apply conventional sales-based system. Operating buses under companies, on the other hand, can be divided into individual and private. Drivers who drive individual vehicles are contracted by the owner, not the company. The salary system is in accordance with each contract. Most use a sales-based system.

Operation Rate (average number of buses daily operating/number of owned buses) is one indicator to measure the service level of bus operators. Lower operation rate causes financial loss, overloading and left-off passengers. The most important factor for low operating speed is the frequency of mechanical problems.

At most bus operators, drivers or maintenance personnel perform a pre-departure inspection. However, they do not manually edit the routine inspection record. Some bus operators own their workshops, while others carry out roadside repairs and maintenance.

The driving skills and habits of YBS drivers have a lot to do with customer satisfaction. As mentioned, YBS drivers operate under oppressive conditions for safety and security. Driver's Training Centre was established by Ministry of Transport and Communication and Yangon Region Transport Authority.

The training center issues type "E" driver's licence, which is required to drive passenger buses. However, there is no penalty for bus drivers without an "E" driver's license. Individual operators and some minor bus operators assign bus drivers without sufficient training and education.

Current operation system of YBS applies Dispatching Operation (Departure time of each bus is specified by the Dispatcher). The bus operator will return the staff

to their original location. Destinations and departure times are recorded at each destination and at the main bus stop. The distance between the original and the destination should be effectively adjusted to ensure a high level of service at the peak of the morning and a sufficient speed at the peak of the evening. In Yangon, introduction of diagram operation is highly necessary.

(B) Improvement Directions for Yangon Bus Service

Yangon Bus Service was recently launched. Yangon still has many issues and problems that need to be addressed before the advent of a safe and secure public bus system. In the reorganization of the bus network into the Yangon Bus Service in January 2017, eight companies were established. Although, only one of these companies, the Yangon Bus Public Co. Ltd., was structured as a public-private partnership. Two companies are private bus companies operating under the previous system and the other five are different from smaller bus owners. The situation is not easy with regard to the structure and structure of the companies operating the buses.

The bus upgrade program can be found in several stages. The first step is to consolidate eight of the five transport corridors on bus routes 80 and above. Only then can the paths in each group coordinate with each other. More importantly, each cluster should have a similar market size and demand potential should be approximately the same. Bus companies should be allowed to monopolize or privatize, mainly because they compete with other ways to increase car ownership.

Establishment of the consortiums is the second stage. They must be registered as public limited-liability companies. Identifying the investors who will start these seven companies is part of this process. YRTA can solicit proposals from existing bus operators who wish to lead. The first choice should be the largest operator operating in each of the eight corridors. The government needs to make a minimum contribution and give priority to the company that wants to own the largest stake.

The third step is for leaders to integrate other operators with their responsibilities. In exchange for shares in the new company, operators transferred their old buses to the company and became part of its bus group. The value and acceptance of buses will be a challenge. If no agreement has been reached, the new company may (i) stop the old company on the street and (ii) purchase the lease

agreement under the supervision of the old operator. Until then, new cars are being distributed to replace old ones.

(C) Workings of Bus Company

Only two of the eight bus companies established when Yangon Bus Service was launched have a modern structure: public-private partner Yangon Bus Public Co., Ltd. and the privately owned Bandoola Transportation Co., Ltd. Therefore, six other companies still need to modernize their operations. The following section is showed six companies can be modernized in general.

(i) **Operations:** Its business goal is to maximize profits (bus passengers per bus) by efficiently utilizing bus assets at the rate of revenue per kilometer per day. Departments (about 60% of the total company workforce) have the following departments:

- Scheduling; Delivery and Inspection: Appropriate scheduling for buses and drivers and field inspectors;
- Operational Training: Recruitment and ongoing training, upgrading drivers' skills; and
- Field Operation – supervises drivers and conductors

(ii) **Shop and Maintenance:** Its business objective is to minimize non-operational buses and to get the most cost-effective buses available. This department (about 25% of the total company workforce) has the following departments:

- Preventive Maintenance – to handle such tasks as oil change, greasing, adjustment of brakes/clutch;
- Electrical-Mechanical General Repair;
- Major Repairs and Body Works – such as overhauling, fuel pump calibration, painting and metal fabrication;
- Works Planning and Control – to handle the scheduling of maintenance activities; and

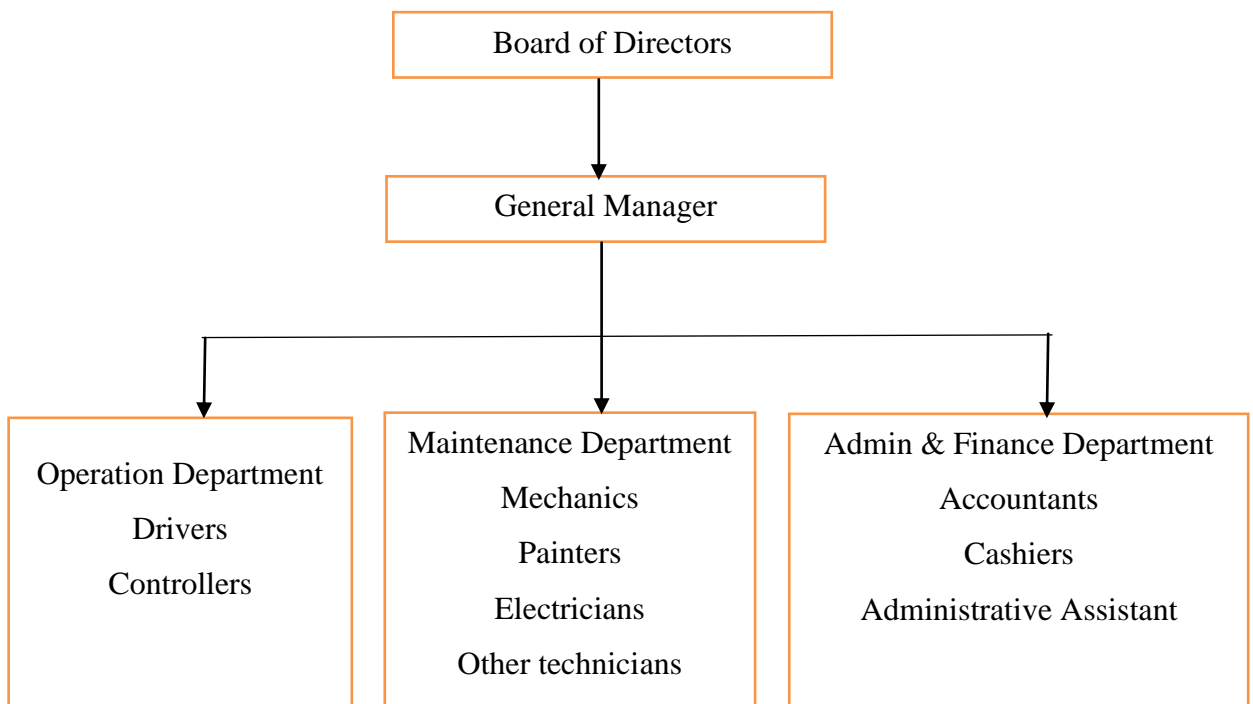
- Maintenance Supply and Storage – to handle the procurement and inventory of spare parts.

(iii) **Administration and Finance:** A support department with the following four departments:

- Administration – to handle human resources, property and security of assets, as well as general services;
- Legal – to handle claims arising from accidents, customer complaints, and compliance report with the government, and other legal requirements;
- Finance – to manage the accounting, payroll, ticket distribution and control, revenue verification, and internal audit; and
- Planning, Marketing and Public Relations – business objectives include bus route and service planning; monitor bus demand and demand on every street; developing public information and marketing plans.

Figure (3.1) presents the organizational structure of bus company.

Figure (3.1) Organizational Structure of Bus Company



Source: Yangon Bus Public Co., Ltd, 2019

Permanent drivers are assigned per bus and generally have a daily itinerary. In addition to the travel schedule, a leader is responsible for setting or allowing vacation days. If a driver fails to report for his or her planned trip, the supervisor usually assigns a rescue driver, who is usually waiting at such an opportunity in the warehouse.

The same procedure is followed when a regular member of the driver retires unexpectedly. Holidays are scheduled on a specific day. However, sometimes a driver is not obeyed because he or she is still in transition or does not have a relief camp. It is a good practice to give each employee one day off a week, unless it is a legal procedure. And if that employee needs to provide service on his rest day, he is entitled to the same premium pay as working on vacation. The following Table (3.3) shows the human resource of bus company.

Table (3.3) Human Resource of Public Bus Company

Name of Department	Position	Employee
Operations	Driver	750
	Controller	100
Maintenance	Preventive Maintenance	250
	Electro-Mechanical	25
	Repairs and Body Technician	100
	Planning & Control Staff	50
	Materials Inventory Clerk	25
Administration and Finance		200

Source: Yangon Bus Public Co., Ltd, 2019

The Maintenance Department advises the Operations Department if a bus leaves at any time to inspect or change the oil. Sometimes maintenance embargoes the car when needed to maintain it. Adherence to the bus service schedule, such as holidays for bus attendants, depends on reserve buses. More buses are needed on the route, but when the available units are shorter, tensions between maintenance and operation sometimes erupt. In such cases, one policy should prevail over the other.

(D) Safety Transportation of Yangon Bus Service

Under the control of the Yangon Bus Service (YBS), routes are divided into two groups: urban and suburban to ensure safe transportation. Some buses run on the main roads within the city center. Due to the differences between the two main thoroughfares of the city and the suburbs, daily commuters from the suburbs to the city center are usually time-saving and cost-effective. Under the old Ma Hta Tha Bus system buses were privatized and all buses went to private bus companies. Therefore, Ma Hta Tha the practice of drivers arriving at the next bus stop or parking at the bus stops may not effectively eliminate long bus rides to carry as many passengers as possible.

Ma Hta Tha was replaced by YBS, the system was changed to a one-route one-bus system to accommodate new passengers as needed. Although, Bus owners are still reluctant to accept the transition to privatization of private bus companies to public bus companies. In addition, the change forced bus owners to convert former bus owners into public bus company employees. YBS also eliminated conductors. Therefore, the implementation of YBS is very difficult due to the interests of bus owners and the unemployed drivers and lightning problems.

There are two types of bus lines under public buses. Company-owned buses are buses owned by the company and privately owned under the company name. Company-owned buses are monitored by companies and drivers and conductors are now company employees. Private bus owners drive their buses under their own names for company services.

All bus fares are pocketed. They also appoint drivers for their buses. There is another bus line that is not operated by public bus companies. They are called private bus owners' groups and are licensed by the YRTA. YRTA could not stop them. Because they lost business and took time to transition.

Only public and private buses are operated by public companies, and only company buses stop racing and provide good service to passengers. YBS's goal of operating all buses under the ownership of public companies remains a challenge ahead of reckless driving and bus racing.

The plan to ensure the safety of passengers is to set up a GPS system and CCTVs. Company buses and buses running under the company name may be equipped with GPS and CCTV systems in accordance with YRTA regulations and

standards, but private buses cannot monitor them. To improve bus service, they introduced a payment system for drivers and bus owners based on the number of kilometers they drove. Another system that provides better bus service is the Real Time Information System, which provides accurate information on the exact arrival time of each bus at every bus stop for three hours and five minutes.

3.2.2 Railway Transportation Service

The railway transportation service is largely provided by the government of the Union of Myanmar, especially for lower income people. It is important to know the performance and efficiency of the Myanmar Railways. Based on this knowledge, it is necessary to study industrial development to facilitate the development of the country. Myanmar Railways belongs to Ministry of Transportation and Communication.

The organization set up of the Myanmar Railways is based in departmental system. The Chief Executive Officer and Chairman of the Management Committee is the Managing Director, with the support of 13 General Managers. The eight main departments are Technical and Administration Support, Planning and administration, Commercial, Finance, Inspection, Operation, Civil, Mechanical and Electrical.

The railway system is divided into 11 divisions and further integrated into the lower and upper regional administrations. The key features of this structure reflect the direction towards a more decentralized decision-making process, which focuses on the planning and distribution of products and services from consumers through market responses.

Currently, Yangon Region has a total of 149 km of railway services and 59 stations using the conventional system. There are eight lines and a dedicated branch line for cargo services for Yangon Port. The characteristics of the main lines are briefly as follows:

(a) Circular Line: This line is divided into two parts. Insein (20.3 km and 21 stations) from central Yangon and from the west side of the ring road in the middle of the west. From the Middle East to Insein to Daingon. There are 25.8 km and 17 stations.

(b) Pyay Line: This stretches from north of Da Nyin Gone to Hmawbi, Six stations 26.5 km north of Nyin Gone and a 3.0 km junction extend to Hmawbi which serves the Computer University of Yangon.

(c) Yangon–Mandalay Line Section in Yangon Area: This is part of the north-south main route from Yangon to Mandalay. From Central Rangoon to Dabin, seven stations with section 36.0 km and a 6.4 km junction connect Dagon University in northeastern Rangoon.

(d) Thilawa Line: This is a 26.7-kilometer route connecting to the industrial zone southeast of Yangon, with five stations and a 5.0-kilometer junction. In charge of East Yangon University.

The development of the railway in Yangon should be viewed not only from the perspective of transportation but also from the perspective of urban development. Yangon Railways could be the main driving force and catalyst for urban development and the development of the desired location. The development of a high-quality urban rail can also generate tremendous opportunities for Transit Oriented Development (TOD) when properly designed and can capture the value from those developments, thereby improving people's mobility, infrastructure accessibility, and public convenience.

3.2.3 Inland Waterway Transportation Service

Traffic jams in Yangon have worsened in Yangon due to the increase in the number of cars, buses, trucks, and etc. which is associated with rapid economic growth. In addition to freight, passenger transport is one of the reasons for the worsening traffic congestion. Therefore, it is necessary to take action from the logistics sector for passengers and cargo. Industry through the Thilawa SEZ and other industrial zones is expected to increase the flow of goods passing through Yangon.

There are three major water transport routes in Yangon. These are the routes connecting Yangon and the opposite side of the river. The present condition of the jetties and ships that operated in these routes. Besides the three, there is a service transporting passenger for short distances at Yangon Port using small boats.

The Yangon Region Transport Authority is planning to ease congestion in Yangon by using high-speed vessels on the Hlaing and Ngamoe Yeik rivers. Two local joint ventures have submitted bids to YRTA.

In October 2017, the first Yangon Water Bus was launched between Insein and Botahtaung area. The second phase (Botahtaung from North Dagon) and the third phase (from Botahtaung to Thanlyin) are scheduled to begin in 2018. The first phase of the operation is scheduled to target about 20,000 passengers every 20 minutes from 6 a.m. to 6:30 p.m. Recently, the company has revised its schedule several times and reduced service frequencies to meet passenger demand. Thirteen boats will be connected to seven jetties and the entire Insein township as the first phase of the project.

The Yangon Region Government has promised to deliver YBS buses to ports. In addition to regular transportation, additional trips to Thanlyin and Twantay townships are planned on Saturday and Sunday. It costs 6,000 kyats per person to go to Thanlyin and 7,000 kyats to Twante. The cruise on Yangon River at sunset costs Kyat 3000.

3.3 Sexual Harassment Criminal Offences in Myanmar

Myanmar's main law on violence and related crimes is the 1860 Penal Code defines women as female of any age (Myanmar Laws and CEDAW, 2013). Criminal practice dates back to the British colonial era. Not surprisingly, there are few provisions specifically referring to gender-based violence. Statements of related crimes do not focus on the main problem. Violations of women's integrity may be viewed as suspicious of victims' behavior or as socially motivated by violence. The use of the Penal Code of criminal procedure is governed by the Code of Criminal Procedure, 1898 and the Evidence Act, 1872 (Myanmar Laws and CEDAW, 2013).

Many sexual chapters of the Code of Criminal Procedure address criminal offenses that may result in sexual assault or harassment. Section 354 punishes the offense with the intent to provoke the modesty of a woman (Myanmar Laws and CEDAW, 2013). The person faces up to two years in prison and a fine. Section 509

deals making song, anyone who does something by showing objects or behaviors or by insulting a woman's modesty is liable to imprisonment and fine (Myanmar Laws and CEDAW, 2013).

Since modesty is not required by law, it is not clear which offenses are involved in these provisions. In one case, a four-year-old boy was sentenced to three years in prison for sexually assaulting a worker under 323.13 and 354.16 (Myanmar Laws and CEDAW, 2013). Another was a girl who beat a boy at school and fell in front of a crowd, embarrassing her shame (Myanmar Laws and CEDAW, 2013). The boy was charged under sections 323 and 354 of the Penal Code for raping her modesty (Myanmar Laws and CEDAW, 2013). A third time, a man was charged under Section 354 for taking a nude photo of a woman (Myanmar Laws and CEDAW, 2013).

Anti-Violence Against Women Laws can provide provisions to explicitly complement rape and other forms of sexual violence (Myanmar Laws and CEDAW, 2013). They can provide appropriate legal protection to victims of rape in connection with the prosecution of cases that alleviate unnecessary suffering and support justice (Myanmar Laws and CEDAW, 2013). These issues of discrimination and violence against non-compliant women can also be addressed (Myanmar Laws and CEDAW, 2013).

3.4 Protection of Sexual Harassment on Public Transportation

Sexual harassment is a form of gender discrimination and consists of any unwanted, offensive or humiliating behavior related to a person's gender. It includes but is not limited to the following: (a) unwanted touching, (b) coercion to engage in sexual acts, (c) display of sexually explicit materials (d) offensive comments or acts that reference a person's gender and (e) repeated unwanted invitations to social activities.

Sexual harassment on public transport in Yangon is a well-known problem. The regional government has announced that it is introduced only buses later this year to protect women travelers. Women's rights activists welcomed the initiative, but emphasized it was not the solution to sexual harassment in the country. The women gave the others a bus in a windmill and told them to use it if someone attacked them.

The idea is that a quiet muffled voice will block the molester and alert other passengers that a woman is in trouble.

The rate of harassment on buses is not suspected, but most women do not report incidents to the police, so official numbers cannot be obtained. The impact of the women's campaign, which began two years ago cannot be quantified, but participants say the results have been positive. For most women participating in the campaign, it is the first time the women have made a public statement about a problem affecting everyday life. Many jokes have been made about white cloth, but it has also raised public awareness of sexual harassment.

Sexual harassment is a problem in Myanmar and even riding in the front seat of a taxi or waking on the street exposes women to the threat of abuse. Under Myanmar's penal code, sex offenders can receive prison terms of up to a year, but often the court favors men and offenders are not convicted. If a man is charged with a crime, a woman's reputation is tarnished. It prevents women from filing in court.

CHAPTER IV

SURVEY ANALYSIS

4.1 Survey Profile

Yangon, the former capital of Myanmar with a population of 6.2 million (as of 2017), is the country's largest commercial hub. Traffic and transportation conditions in the capital have deteriorated rapidly, especially since the new government came to power. Yangon traffic is increased especially from private cars and buses, has

contributed to air pollution and accidents. The urban area is also expected to expand into the surrounding areas, with Yangon into a megacity with a population of 10 million in the future.

Yangon Region is a key importer of Myanmar's socio-economic activities with increasing economic and population growth, increased traffic demand and revenue. Private vehicle ownership rates will increase. The pressure on urban and transport development will be even greater.

Many trade and services are located in the interior of the city, including the main business area and to the north, including the urban area. Productivity growth is concentrated in the city's suburbs, northwest and northeast. Administratively, the city is divided into four districts (North, East, West, and South) and 45 townships. The essential religions in Yangon are Buddhism, Hinduism, Christianity and Islam.

4.2 Survey Design

The sampling method used a convenient sampling method form for the survey questionnaire. The survey was conducted by NGO (CBO) and CBO (community-based) workers, on visitors and members of the organization. Because COVID 19 occurred in Yangon Region during the survey period. The population is made up of women and girls using public transport in urban area.

The survey was designed as part of a survey of about 200 women using public transport in Rangoon Region. The survey was conducted from June to July 2020 for this study, based on volunteer collaboration.

The survey questionnaire is divided into four sections to ensure accurate measurement of views on transportation in Yangon. The first section asks for personal information, such as the participant's age, education level, occupation, marital status, and place of residence.

The second section aims to understand the respondents' public transportation behaviors. In this section, the survey seeks to identify why and how women use public transportation, what their preferred mode of transportation is, average duration trips, number of trips, preferred time for using transportation, and cost.

The third section of the questionnaire aims to explore the views and opinions of women by considering their experiences and how public transport affects their socio-economic life. The last section of the questionnaire sets out suggestions and solutions for improving public transport for women.

The survey was designed as part of the quantitative research and targeted a sample of 200 women who use public transportation in Yangon Region. The survey was based on the voluntary cooperation and interviewed between June to July 2020 for this study.

The survey questionnaire had a number of questions to choose from and the researchers provided a choice of answers. Two dichotomous questions with only two responds were answered to Yes or No. And also used five points ‘Likert Scale’ (Very Dissatisfied = 1, Dissatisfied = 2, Neutral = 3, Satisfied = 4, and Very Satisfied = 5). The questionnaire was first written in Myanmar and then translated into English questionnaire had attached in Appendix.

4.3 Survey Findings

According to the survey questionnaires, findings of the survey are presented below four sections such as Part (I) Socio-economic Features of the Respondent, Part (II) Using Public Transportation, Part (III) Personal Harassment and Part (IV) Women’s View of Public Transportation.

4.3.1 Socio-Economic Features of the Respondent

The following Table (4.1) is Socio-economic features of the women respondents include age level, marital status, level of education, occupation, monthly income and place of residence in Yangon.

Table (4.1) Socio-Economic Features of Respondents

Particular	No. of Respondents	Percentage
Age Level		
Less than 20 years	25	12.5
Between 20 years to 30 years	30	15.0

Between 31 years to 40 years	118	59.0
Between 41 years to 50 years	27	13.5
Total	200	100
Marital Status		
Single	44	22.0
Married	156	78.0
Total	200	100
Level of Education		
Under Graduated Level	16	8.0
Graduated Level	141	70.5
Post Graduated Level	43	21.5
Total	200	100
Occupation		
Student	15	7.5
Private Employee	159	79.5
Government Employee	16	8.0
Business Owner	10	5.0
Total	200	100
Monthly Income		
Under 500,000 Kyat	108	54.0
Above 500,000 Kyat	92	46.0
Total	200	100
Particular	No. of Respondents	Percentage
Place of Residence in Yangon		
Eastern District	9	4.5
Western District	34	17.0
Southern District	61	30.5
Northern District	96	48.0
Total	200	100

Source: Survey data, 2020

Above from Table (4.2), the age level of the total 200 respondents shows that 25 respondents (12.5%) were less than 20 years, 30 respondents (15.0%) were between 20 years to 30 years, 118 respondents (59.0%) were between 31 years to 40

years and 27 respondents (13.5%) were between 41 years to 50 years. Therefore, the majority of respondents age level was between 31 years and 40 years. Most of respondents were married.

In the education level of 200 respondents, 16 respondents (8.0%) have under graduated level, 141 respondents (70.5%) have graduated and 43 respondents (21.5%) have post graduated in the study.

For occupation, the largest number 159 respondents (79.5%) have worked at private organization. But 16 respondents (8.0%) of the total are working in government service, and 15 respondents (7.5%) were student. The rest of 10 respondents (5.0%) of total have worked their own business.

Monthly income situation of total 200 Respondents, 108 Respondents (54.0%) have got under 500,000 Kyat and 92 Respondents (46.0%) have got above 500,000 Kyat. The majority of respondents are living at Northern District followed by Southern District, Western District and Eastern District in Yangon Region.

4.3.2 Using Public Transportation

Total 200 respondents were asked to select reasons for using public transportation in their daily commuting as shown in Table (4.2).

Table (4.2) Reason for Using Public Transportation

Particular	No. of Respondents	Percentage
Work	164	82.0
Education	36	18.0
Total	200	100

Source: Survey data, 2020

Respondents were asked to select reasons for using public transportation in their daily commuting, 164 respondents (82.0%) showed that work was the most common reason for using public transportation and 36 respondents (18.0%) were using public transportation for education. The mostly respondents said that reason for using public transportation is low cost.

Table (4.3) Usually Take During One Trip

Particular	No. of Respondents	Percentage
Two	68	34.0
More than three	132	66.0
Total	200	100

Source: Survey data, 2020

From Table (4.3), the study of 200 women usually took during one trip, 68 respondents (34.0%) of total were required two routes to reach their work and 132 respondents (66.0%) took more than three routes. All respondents said that the bus was the most popular type of transportation option. It is safe to ride with passengers as it is the cheapest form of public transport. But taxi used when the respondents are an urgent need to travel.

Table (4.4) Days per Week Used Public Transportation

Particular	No. of Respondents	Percentage
Every day	184	92.0
Three days a week	16	8.0
Total	200	100

Source: Survey data, 2020

According to result of Table (4.4), the number of days per week they use public transportation. Total 200 respondents answered that almost evenly split between two categories, the highest respondents said that they are using public transportation from Monday to Sunday in the week for going to work and other activities. The lowest respondents and 16 respondents (8%) are using three days a week for their education, shopping and other activities.

Table (4.5) is presented the women using public transportation in their daily life. All of the women said that they use public transportation alone. Sometime they are travelling with their family, friends and colleagues. Furthermore, those who answered this question were asked to explain the reasons for travelling with other

people. The most common reasons mentioned by the respondents was related to safety and security.

Table (4.5) Public Transportation Using Time

Particular	No. of Respondents	Percentage
Peak hours	186	93.0
All the time	14	7.0
Total	200	100

Source: Survey data, 2020

Above from Table (4.5), using public transportation during peak hours was 186 respondents (93.0%) out of the total 200 women and 14 respondents (7%) for using public transportation all the time. According to this sample, the least reported time that women use public transportation was night hours. The main time in which working women use public transportation to get to their work was during morning peak hours and evening peak hours.

Table (4.6) Walking Distance of Bus Stations

Particular	No. of Respondents	Percentage
Less than fifteen minutes	129	64.5
Half an hour-one hour	71	35.5
Total	200	100

Source: Survey data, 2020

Regarding Table (4.6), 129 respondents (64.5%) out of total 200 women said that they walk less than fifteen minutes to reach the desired bus station and 71 respondents (35.5%) said they walk between half an hour and one hour. All of the respondents said that they have less than fifteen minutes waiting time of public transportation per trip at the bus station. It should be noted that employed respondents filter out those who say they use the desired station for public transport to work on their daily commute.

All of the respondents said that they are waiting between fifteen minutes to half an hour for their public transportation per trip. One woman mentioned that if she

missed the bus then she would have to wait another half an hour for the next available bus. Another woman said she often had to wait for the bus to fill up at her workplace.

Table (4.7) Spending on Daily Public Bus Transportation

Particular	No. of Respondents	Percentage
Less than 500 Kyat	134	67.0
More than 500 Kyat	66	33.0
Total	200	100

Source: Survey data, 2020

According to result of Table (4.7), 134 respondents (67.0%) answered that they have spent less than 500 Kyat on public transportation daily and 66 respondents (33.0%) said that they spend more than 500 Kyat.

Table (4.8) Evaluating Cost of Public Bus Transportation and Monthly Income

Particular	No. of Respondents	Percentage
Adequate	71	35.5
Low	129	64.5
Total	200	100

Source: Survey data, 2020

Table (4.8) is related to evaluating the cost of public transportation with regards to monthly income of 200 women in the study. The majority of respondents said that the cost of public transportation was lower than their monthly income.

Some respondents said that using public transport could not afford to buy their own car. Furthermore, respondents expressed their satisfaction with the cost of public transportation in relation to their income.

4.3.3 Personal Harassment

The following Table (4.9) shows the women security using in public transportation in Yangon Region.

Table (4.9) Personal Harassment of Respondents Using Public Transportation

Particular	No. of Respondents	Percentage
Different Experience of Man		
Yes	107	53.5
No	93	46.5
Total	200	100
Harassed Using Public Bus Transportation		
Yes	88	44.0
No	112	56.0
Total	200	100
Type of Harassment		
Verbal abuse	60	30.0
Physical abuse	67	33.5
Stalking	73	36.5
Total	200	100
Location of Harassment		
On the street while walking to bus station	88	44.0
At the bus station	112	56.0
Total	200	100
Particular	No. of Respondents	Percentage
Time of Harassment		
Morning peak hours	60	30.0
Evening peak hours	67	33.5
Night hours	73	36.5
Total	200	100
Acting after Harassed		
Walk faster	66	33.0
Confront the person	134	67.0
Total	200	100
Number of Harassment		
Few times or less annually	82	41.0
Once a month or less	118	59.0
Total	200	100
Harassing Person		

Passengers	105	52.5
Money collectors	95	47.5
Total	200	100

Source: Survey data, 2020

From Table (4.9) result shows that, 107 respondents (53.5%) out of total 200 women answered yes and 93 respondents (46.5%) answered no for different experience of man using public transportation. As a result of 200 women for the harassed using public bus transportation, 88 respondents (44.0%) said that they have been harassed using public transportation. Although 112 respondents (56.0%) have not harassed using public transportation.

Respondents were asked to choose the type of disturbance, knowing that they could choose more than one type of disturbance when used on public transportation. All the women reported receiving inappropriate matches from them. This was followed by stalking, physical abuse and verbal abuse.

In the study of 200 women when using public transportation with type of harassment. Their answered is followed by stalking abuse with 73 respondents (36.5%), physical abuse with 67 respondents (33.5%) and verbal abuse with 60 respondents (30%). Few respondents asked people to ask for their phone numbers or tell them anything else. They try to talk to someone to avoid such harassment.

Total 200 women were asked to select the place where they encounter harassment when using public transportation with their knowledge to select more than one answered. Result of total respondents, there were 112 respondents (56%) were being harassed at the bus station followed by 88 respondents (44%) on the street while walking on the way to public bus station. To avoid street harassment, people adopt unaffordable modes of travel, such as using the first available means of transportation, as opposed to the most appropriate and efficient option.

All of the women mentioned that they were afraid to use public transportation at night. Most women are afraid that men will be harassed by men because there are no women on the bus at night. Regarding from 200 women, 60 respondents (30.0%) have been harassed during morning peak hours when using public transportation, 67 respondents (33.5%) were during evening peak hours and 5373 respondents (36.5%) were during night hours.

The women asked to select how they react after being harassed when using public transportation. there were 134 respondents (67%) out of total 200 women said that they have confront the person and 66 respondents (33%) answered that they walked faster. Many of the women mentioned that preventative action they take such as talking on the phone with someone, putting a bag between them and asking to change seats.

The result of 200 women experiences the number of harassment while using the public transportation. According to result of 200 women, 81 respondents (54%) said few times or less annually with harassment using public transportation followed by 69 respondents (46%) answered once a month or less.

Respondents' increased depression and stress due to the use of public transport have adversely affected their mental and physical health. Another source of frustration is harassment. Others have argued that society views women as objects, not human beings, which as affects the way they treat male passengers while using public transport.

Total 200 women were asked to select the person who harasses them when using public transportation with their opinion. The majority of respondents, 105 respondents (52.5%) answered the passengers and 95 respondents (47.5%) said the money collectors.

Furthermore, a little woman mentioned that she feels a negative stigma around public transportation users. She said that those who use the public transportation system are often cheap, poor and low-class.

4.3.4 Women View of Public Transportation

The following Table (4.10) is presented the respondents opinion on level of satisfaction when using public transportation in Yangon Region.

Table (4.10) Mean Value for Respondents Opinion Using Public Transportation

Particular	Mean
-------------------	-------------

Speed	3.27
Comfortability reliability seats	3.41
Shelters ease of use	2.61
Travel information easy	2.45
Waiting time	3.57
Safety	2.35
Public Transportation Services	2.34
Overall Mean Value	2.86

Source: Survey data, 2020

Above from Table (4.10), the study of speed mean value (3.27) result showed that the public bus is high speed in the study. The comfortability reliability seats mean value (3.41) mentioned that the public bus seats system is comfortable using for travelers.

The mean value (2.61) shelters ease showed that the respondents have not satisfied and travel information mean value (2.45) is not easy to use for traveler. The waiting time mean value (3.57) is the respondents have satisfied.

In the study of safety mean value (2.35) showed that the respondents have dissatisfied because the public bus is very old model and the safety system is dangerous situation for travelers. And also, public transportation services mean value (2.34) mentioned that the respondents have dissatisfied level on this situation.

Respondents were asked those who explained how public transportation affected their daily commute or commute to school. Regarding the negative aspect. Lack of up-to-date public transportation has led to a growing response to being late for work or school.

Respondents also said that public transportation is a waste of time. Some said they left their homes early in the morning to catch up on long routes and stops. Some respondents stated that they did not want to go to work or school due to poor public transport services.

Poor services include overcrowding, uncleanliness, insecurity, includes long routes and many stops. In addition to the poor services, respondents stated that harassment also affects their mood and self-esteem.

The following Table (4.11) is related to respondents' perception on whether public transportation is integral for women economic participation and social participation.

Table (4.11) Public Bus Transportation is Integral for Women's Economic Participation

Particular	No. of Respondents	Percentage
Economic Participation		
Yes	108	54.0
No	92	46.0
Total	200	100
Social Participation		
Yes	133	66.5
No	67	33.5
Total	200	100

Source: Survey data, 2020,

In the study of 200 respondent's perception on whether public transportation is integral for women's economic participation or not, 108 respondents (54.0%) believed that public transport is integral for women's economic participation while only 92 respondents (46.0%) have not believed.

Regarding 200 respondent's perception on whether public transportation is integral for women's social participation or not, 133 respondents (66.5%) believed that public transport is integral for a women's social participation while only 67 respondents (33.5%) have not believed.

Table (4.12) Mean Value for Women View to Improve Public Bus Transportation

Particular	Mean
Safer Buses	2.01
More Frequent Buses	3.62
Availability of Modern and Equipped Bus Stations	2.74

More Bus Stations	3.47
Cleaning Buses	2.35
Overall Mean Value	2.84

Source: Survey data, 2020

Above from Table (4.12), all of respondents answered that public transportation in Yangon Region is not suitable for people with disabilities and not suitable for senior citizens or the elderly people.

CHAPTER V

CONCLUSION

5.1 Findings

The survey was designed as part of the quantitative research and targeted a sample of 200 women who used public transportation in Yangon Region. The survey questionnaire is collected with both online and email system. The population was composed of a representative sample of women who use public transportation, including women enrolled in universities, working women and women from urban areas. The majority of respondents age level was between 31 years and 40 years. Most of respondents were married. The majority of respondents are living at Northern District followed by Southern District, Western District and Eastern District in Yangon Region.

Regarding from 200 respondents, 164 respondents (82%) shows that work was the most common reason for using public transportation and 36 respondents (18%) were using public transportation for education. The mostly respondents said that reason for using public transportation is low cost.

The highest respondents were using public transportation every day of the week. All of the respondents said that they have less than fifteen minutes waiting time of public transportation per trip at the bus station. The majority of respondents said that the cost of public transportation was lower than their monthly income.

Respondents were asked to choose the type of disruption they face in public transport because they knew they could choose more than one type of harassment when using public transportation. All the women reported receiving inappropriate matches from them. This was followed by stalking, physical abuse and verbal abuse.

Result of total 200 women, there were 112 respondents (56%) were being harassed at the bus station followed by 88 respondents (44%) on the street while walking on the way to public transportation. All of the women mentioned that they were afraid to use public transportation at night. Most women are afraid that men will be harassed by men because there are no women on the bus at night. Many women take precautionary measures by talking on the phone with someone; preventive measures were taken between them, such as dropping a bag and requesting a change of seat. The majority of respondents, 105 respondents (52.5%) answered the passengers and 95 respondents (47.5%) said the money collectors.

In the study of safety question, mostly respondents answered that the public bus is very old model and the safety system is dangerous situation for travelers. All of respondents answered that public transportation in Yangon Region is not suitable for people with disabilities and not suitable for senior citizens or the elderly people.

Poor services include overcrowding, uncleanliness, insecurity, includes long routes and many stops. In addition to the poor services, respondents stated that harassment also affects their mood and self-esteem.

Respondents also said that public transportation is a waste of time. Some said they left their homes early in the morning to catch up on long routes and stops. Some respondents stated that they did not want to go to work or school due to poor public transportation services.

5.2 Recommendations

Yangon is growing rapidly and will continue to do so in the future. The urban population is dependent on natural development and employment in other parts of the country. Higher education; Migration due to new businesses and other opportunities will increase both. People's income will increase. As the economy grows, lifestyles will continue to change. The market strengthens its international connectivity.

Transportation is used for socio-economic activities; Land use; Transportation plans need to be integrated into urban development strategies, as they have a huge impact on the environment and public financing. And the development of new cities and subcenters.

The Yangon transportation system is equipped with new advanced features such as a railway network. It is designed in many ways to accommodate highways and modern buses. These methods combine to ensure people's safe and affordable movement. Must work as a coordinated system. YRTA needs to increase its operations and capacity as the sole governing body for the management and management of the transportation system in Yangon.

Moreover, increasing public transportation as an opportunity to tackle rampant crime in public transportation, recent developments in Yangon reflect the government's commitment to improving the people's movement. More importantly, the government recognizes the need to promote more effective spatial communication

between different sectors and peoples and productive movements in Yangon Region. Therefore, the safety and adequacy of public transportation services were examined primarily by the severity of the crime and the fear of crime, transport infrastructure, location and condition of bus stations, condition of walking distance when traveling services and needs of other services.

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CHAPTER I

INTRODUCTION

1.1 Rationale of the Study

The transportation system works to move individuals or goods from one place to another to address geographical and geographical constraints. In addition, to support the spatial, social and economic evolution of transport cities (Divall and Bond, 2017). Public transportation is a transportation service for people living in the country. Thus, public transport, also known as mass transit, is a system of transportation that is designed to move individuals to different locations. The majority of individuals want to use public transport for their legal and informal work.

Public transportation operates on designated routes and is efficient. Inexpensive mobility, access to work, education, social engagements, and recreation activities. Public bus routes are important for urban public transport. Public transportation problems include public transportation services, safety, security, comfort, affordability, equality, and regularity, which all refer to the traffic performance.

Today, public transportation has become a major source of education and employment for women. Most of the users of public transport are low-income students and women who cannot afford their own cars. They choose public transport because it is the cheapest form of transportation for their day-to-day purposes. Safety and crime, which are pervasive in public transport in many cities, have led to more talk about ways to reduce them. Most women are threatened by the potential for safe public transportation and the potential for sexual and physical harassment among others.

Women in developing cities have been a growing threat to public safety and public transportation in recent decades. It should be noted that many of these public transport threats occur in various forms, but caution should be exercised. Many suffer from poor public transportation services and inadequate public transportation.

The challenge, especially for governments in developing countries, is to address crime while addressing the scarcity of public transportation and using a sustainable approach. The importance and urgency of safety and adequate public transportation has been linked to population growth and the continued rise of crime through the use of public transport in urban areas.

Public transportation plays a key role in the mobility and usability of Yangon. The current public transportation system provides a vision for the future sustainability of the city, with a growing car population and population. Yangon is the largest city and business center in the country.

According to the Central Statistical Organization, there are 15,293 registered buses in Yangon Region (2017-2018). The replacement of the old public bus system operated by Ma Hta Tha, with the Yangon Bus Service was the first reforms by the National League for Democracy government in the country's commercial capital. Yangon people travel an average of two trips per day. Buses are the main mode of

transportation in Yangon, accounting for almost fifty percentages of all trips. Women are more likely than men to walk and rely mainly on public transport.

Most people in developing cities rely on public transport in their daily life. There are also crimes committed in mode of transportation including bus, trains and taxis. For urban areas, public transportation is essential for social security and is accessible to anyone. The two common conditions for committing a crime on public transportation are very high during peak times and when the bus attendant is not supervised. The availability of buses has limited public transport due to limited demand at peak times. Pickpocketing and sexual harassment can occur during overcrowded time (Smith & Clarke, 2000). According to Sohail's study, women were abused during rush hour, mainly in the form of sexual harassment by stronger passengers on buses (Sohail, Maunder, & Miles, 2004).

There are many consequences from harassment to women such as reflection on negative thoughts, low self-esteem and self-harm. In addition, women also fear sexual harassment while using public transportation (Gautam, Sapakota, Shrestha, & Regmi, 2019). In general, there are few reports of sexual misconduct on public transport, and the reasons for not reporting it can vary from different countries. Some of the common reasons are police response and cultural and social attitudes toward women. Thus, the study is interested to condition of safety and sexual harassment on public transportation and to investigate factors which affect safety and sexual harassment for women in public transportation in Myanmar.

Finally, the study information will be used planning and management and contribute to measures that can be adopted to reduce criminal activities in public transportation system, and it is hoped that empirical knowledge on this disturbing issue will be instrumental in guiding decisions for integrating gender sensitive transport policy in Yangon and the country as whole.

1.2 Objective of the Study

The objective of the study is to explore the women sexual harassment using public transportation.

1.3 Method of Study

The method of the study is descriptive based on primary data and secondary data. Primary data is obtained through with a survey with semi-structure questionnaire on explore the women sexual harassment using public transportation of Yangon Region. The survey questionnaire is collected with both online and email system.

The survey questionnaire consists multiple choice questions in which the observer selects the answers and asks respondents to choose at least one of the other options and dichotomous questions with two reaction choices, Yes or No. And also used five points 'Likert Scale'.

The secondary data is gathered from literature studies, relevant information from Department of Road Transport Administration, Yangon Region Transport Authority document records, research papers, libraries and internet website.

1.4 Scope and Limitations of the Study

The scope of study focuses on women sexual harassment in using public transportation of Yangon Region. The survey is conducted on 200 women travelers using Yangon Bus Service. The study is not covered all women who are travelling with public transportation in Yangon Region. And also, during the survey questionnaire collection period is the coronavirus (COVID) disease occurs in the Yangon Region.

1.5 Organization of the Study

This study is organized into five chapters. Chapter one is introduction with rationale, objectives, method, scope and organization of the study. Chapter two provides the literature review on transport infrastructure and economic growth, importance of transport system in local economic development, safety in public transportation and so on. Chapter three is public transportation system in Yangon. Chapter four is applied descriptive and quantitative techniques of methodology to the empirically derived and collected data on experienced by the women in public transportation of Yangon Region. Chapter five is summarized conclusions with findings and provides suggestions for public transportation of Yangon Region.

CHAPTER II

LITERATURE REVIEW

2.1 Concept of Public Transportation

Public transportation in urban areas has gained greater attention in recent years for improving sustainability and therefore the quality of urban life. Improving the economic and environmental capacity of urban areas facilitates the efficient connection of resources to effective locations and the ease of mass migration (Bok and Kwon, 2016). Public transportation can be more attractive by providing door-to-door mobility (Muhammad Atiullah Saif, Mohammad Maghrour Zefreh and Adam Torok, 2018). The development of transportation services is an important factor for social quality (Yatskiv, Budilovich, and Gromule, 2017). Sustainability of transportation, environmental conditions of the cities, public health and economic condition of residents are shifting from private transportation to public transportation (Elias and Shiftan, 2012).

Access to public transport services and the provision of public transport services are important service issues. In network design of commercial services, researchers tend to focus more on reducing the cost of users and operators, rather than addressing issues of fairness and ease of use (Murray, 2003).

Availability of infrastructure, the information is simple and easy. Save time and money with side-by-side comparisons with public transportation (Yatskiv, Budilovich, and Gromule, 2017). Transportation and land use policies aim to reach consumers at a reasonable cost and time, as inadequate transportation leads to social exclusion (Hawas, Hassan, Abulibdeh, 2016).

Therefore, one of the main goals of policy makers and organizers in urban areas around the world is to provide efficient public transportation for consumers (Saghapour, Moridpour, Thompson 2016).

2.2 Types of Public Transportation

There are many types of public transportation available today. Types of public transportation includes public bus, railway, taxi and water bus.

2.2.1 Public bus

Public bus transportation services generally support the regular operation of public buses passing through the routes to the agreed bus stops under the public bus

transportation schedules. Public buses are safer than individual motor vehicles. Local people with high level of transportation can better security and reduce crime rates. Traveling on public bus transportation reduces the number of cars on the road and reduces the risk of an accident.

2.2.2 Railway

Railways are a safer public transportation system than any other form of public transportation. Railways are more efficient than passenger transport when traveling to low-traffic areas, despite the high capacity and efficiency of passengers and cargo. A rapid transit, underground, subway, and Mass Rapid Transit (MRT) system is usually the busiest in urban areas and often differs from the most frequent traffic and other traffic. Changes to urban railways affect local rail systems that provide passenger services in urban and suburban areas.

2.2.7 Taxi

Taxis are an immediately recognizable form of transportation that is located in almost every city in the world. The role of taxis in a city full of taxis varies from city to city. Taxi regulations have a long history. However, this has not yet been resolved globally. Taxis are an important part of the transportation system in developed cities. Still, not all taxis have the same concept. Taxis provide one-on-one instruction to individuals and parts of the urban transportation system, despite the scarcity of even a regular schedule, routes and designated stations are not enough, but they are part of some public transportation.

2.2.8 Water Transport

Water transportation means that the process of transport a watercraft, a boat, ship or vessels. The ship needed for a rich vessel was essential to the construction and maintenance of its hull. Shipping is mainly used for the carriage of individual and indestructible goods, generally mentioned to as cargo.

The city water transportation is a fundamental part of society and has innumerable associations. This means that all cities are dependent on water. The

reliable water supply is prerequisite for urban settlement and cities are large and small as a means of transportation.

Similarly, all cities depend on transportation. For survival and development, all cities must maintain an effective domestic transport system and establish effective connections not only with the region and the country, but also with the global economy. The link between water transportation and urban development is complex. Advantages and disadvantages compared to the consequences of water use. The urban transportation system varies between location and time.

2.3 Transportation and Economic Opportunities

Transportation developments have the beginning of the industrial revolution have been associated to grow economic opportunities. Transportation technology has been invented or adapted in various ways at every level of society with various effects. Transportation influences the economic opportunities of production and consumption. Historically, five majors in moving of economic development where a precise transportation technology has been used for economic, social and cultural suggested by (Rodrigue, 2017).

2.3.1 Seaports

Technological and commercial developments have made the oceans a place to do business. It was associated with seaports during the early stages of European expansion between the sixteenth and eightieth centuries. Although, international trade was initially developed through the colonial empires, land travel was limited. Later, during the industrial revolution, many seaports became important industries. With globalization and exports, seaports have increased their importance in supporting international trade and global supply chains. Simple businesses often involve a lot of goods. Complex economies increase the flow of goods.

2.3.2 Rivers and Canals

River trade has gained momentum throughout history, and even high-tech canals have been built because lock technology is fundamental. In the late eightieth and early ninetieth centuries, the first phase of the industrial revolution was associated with the development of canals to transport heavy goods, mainly in Western Europe

and North America. It allowed the development of basic and limited inland distribution systems. Most are still in use today.

2.3.3 Railways and Automobiles

The second phase of the nineteenth century industrial revolution was associated with the development and implementation of rail systems that provided faster and more efficient inland transportation. The increase in local settlements and the growth of goods and tourists have created economic and social opportunities.

The twentieth century saw the broad economy of transportation systems, such as national highways and automobiles, as a major economic sector. It is associated with significant business opportunities for reliable door-to-door delivery of industrial and commercial markets. Motorcycles have opened up new social opportunities, especially in the suburbs.

2.3.4 Airways and Information Technologies

The second half of the twentieth century was associated with the development of global aviation networks and economic globalization. New organizational and management models are emerging, especially in the fast-growing field of logistics and supply chain management. Although maritime transport is at the heart of globalization, aviation and information technology are becoming increasingly important to travelers and tourists. It accelerates information, especially in relation to the flow of goods.

2.3.5 Urbanization and Transport Development

Dimitriou, (1992) views about perspectives on transportation and Third World cities define urban development as a process of land use and population growth. In developed countries, the level of urban development should be referred to as industrial development and should be derived from developing countries. However,

studies show that the situation in developing countries is different and more complex in terms of urban services and city satisfaction (Aprodicio, Vinod and Hanley 2007).

Johnston, Gregory and Smith (1986), considered to include the normal and relative growth of cities within a defined area and usually within the country. Interestingly, discussions on urban development have seen different perspectives on the consequences of what is happening in most developing countries. However, in the age of rapid globalization, it should be noted that urbanization undermines its quality and loyalty. In the same way, it creates excellence in new groups and cities.

Transportation planning and urban management literature are integrated with individuals. The impact of the link between urban livelihoods and urban norms has added to the country's development process, especially the standard of living in third world countries.

Ayeni (2001), posited that the twentieth century was a good time to accept urban problems as a normal way of life in the world. In any case, perceptions of urban development are constantly changing over the years. For example, some have described cities as parasites and others as good cultural centers (UNCHS, 1996). In fact, for people from different cultures, the city meeting is a point. It can be seen as a meeting place for people of different ethnic and religious backgrounds. In addition to the scarcity of economic resources, it is a place where political stability and power struggle.

According to Gilbert and Gugler (1982) each city has its own special system for anonymity and individual offenses. There are three basic concepts of urban development and management that focus on urban development and management analysis, which provides a framework for evaluating the role of urban and urban services in individual development processes are: (i) behavioral view (ii) structural analysis, and (iii) urban demographic interpretation. Wirth (1938), As a pioneer of the concept of urban development, it is seen as a behavioral process, and urbanization is associated with behavioral change and individual behavior.

Similarly, Childe, (1968) pointed out that urbanization is a structural process that brings about change in the population as a whole and in the economy. The concept focuses on shifting people from rural and agricultural areas to urban or non-

agricultural areas as a reflection of economic specialization and technological advancement.

In conclusion, urbanization can be concluded that the process of social mobilization and social transformation and social transformation for social change. However, the transformation of the sector economy and the changes in the sector within the economy were a settlement process that led to the emergence of new forms of settlement and operation. It should be noted that the increase in urban population is not due to natural development alone. Although, population growth is concentrated in urban area because of migration and area expansion (Oyesiku, 2003).

Due to changes in production patterns, industries and services are locally located. Economic rationale for the economic size and income requirements of the population to live in urban areas. The geographical location of the people and the economic changes are leading to the economic development of cities and individuals. It is the economic transformation and economic transformation that requires urban development or productivity. However, it can be said that population growth affects all sectors of the country.

2.3.6 Sustainable Transportation

To better understand the concept of sustainable transport, the concept of sustainable development or development needs a broad overview to build strong relationships between concepts. From Geerling (2000), point of view, sustainable development can be defined as the process of change. Headline-grabbing resources; investment direction; upgrading current and future prospects to meet human needs and aspirations

Furthermore, Beella and Brezet (2007) from their own point of view, it is as if the idea has been evaluated as good or bad in the future and not growing in the future. By building this perspective, jobs, wages, education and health are good parts of society that need to be protected and evaluated for the future. Air pollution and poverty Crimes will not be allowed in the future (Ryan and Throgmorton, 2003).

Litman and Burwell (2006), pointed the idea that human movement is an economy is fundamental to society's economic and social development. It points to the impact on society and the ecosystem. This is beyond clear, sustainable

environmental issues and beyond the other economic, social and cultural aspects of society. Sustainability, on the other hand, captures the state of human activity and the need to balance various disciplines within society.

Economic development and urban development can be achieved through interconnected and interconnected transportation systems. Knowledge of sustainable urban development in developed countries is well known and documented. The role of transportation in achieving the goal of sustainable capital development in these countries is also well studied in the academic literature (World Bank, 2002).

Over the years, sustainability has been over-emphasized in the decision-making process, ignoring volatile elements or elements that are difficult to measure. Interesting is a project that considers how difficult it is to measure social things (transportation, health, education, etc.) can be considered sustainable. It focuses on the idea that sustainability is related to the long-term risks of available resources. Reflects the goals of justice for future generations.

2.3.7 Transport and Sustainable Livelihoods

Oyesiku (2003), the function of transport in cities to facilitate the transportation of goods and services from demand level. Transportation support to carry the basic objectives of urban life. Improving workplace efficiency and living standards in infrastructure and services. And also, Adeniji, (2000) viewed the effective function of transport as a blood system, generally a requirement for the nutrition of human life. Furthermore, Filani (1988) while examining the importance of transportation, the socioeconomic, depends on social and economic development. It is true to say that this weakens the engine that drives political integration and development. Based on this information, transportation is based on goods and services. It promotes mobility and a better quality of life for individuals by highlighting the importance of social and economic development in society.

Conversely, lack of transportation and mobility and lack of access to products and services can be detrimental to health. Therefore, transportation plays an important role in the structure and structure of space and space. It is a bridge between regions and businesses. It creates a valuable connection between population and the world.

Transportation is a multidimensional service that affects many aspects of the economy. Transportation has invested heavily in the socioeconomic life of organizations and corporations, but is also part of economic and social services. Transportation does not exist by itself.

Transportation is essential important for all types of human development such as social, economic, political, education, cultural, health and religion. Transportation is an essential tool for all human activities. It makes available interactions with all types of land uses such as commerce, industries, agricultural, educational etc. It depends on the individual. Represents the movement of goods and services from one space to another (Okoko, 2006).

Although transportation is more than just a matter of moving from space, it is an important aspect of transportation. Transportation is a trademark of social development. Therefore, a country can reach the stage of development due to its transportation conditions.

2.3.8 Travel Arrangements

Travel arrangements for women and men vary further depending on the purpose of the trip. Depending on the social and economic role of women in the household, women are the main occupants, and public transport is often used for education and health.

In the suburbs or in rural areas, women have more complex routes than men. With this in mind, walking is a key part of travel. In most urban areas, the destinations for women are different. Because women provide more space for work and household chores. In addition, women's traditional social role in caring for children and parents influences their travel patterns.

The women tend to take shorter trips, traveling with minors, carrying more packaging than men, and making multiple stops. As women often choose to look for work closer to home and avoid transportation challenges, the workplace also plays a key role in women's job opportunities (World Bank, 2012).

Due to the lack of public transport and poor public transport, there are more forms of travel than men than women. Traditional social norms, which symbolize women as symbols when they return home late due to delays in public transport, exacerbate this situation.

Public transportation users can use the transition system to explore the workplace for men and women. People who do not own a car because public transportation is not expensive. Both men and women use taxis to travel daily, despite the high cost. This is because public transport routes can be avoided for up to 30 minutes due to their lack of direction or the long wait for buses (CSBE, 2015).

2.4 Theories of Sexual Harassment

The term sexual harassment originated in North America in the mid-1970s and was coined to describe the problem (Gutek, 1985). Sexual harassment can lead to unwanted sexual growth and development. Inequalities in power often result from the abuse of power. The most common symptom for researchers is the definition of what triggers sexual harassment.

Researchers from around the world; Legal experts and policymakers disagree with the global definition. One of the reasons for this congenital problem is that one definition separates boundaries from expressions of sexual interest (Gutek, 1985). Sexual harassment affects many people. This is the largest proportion of the population than any other form of discrimination (Bargh, Raymond, Pryor, & Strack, 1995).

Spitzberg (1999) found that sexual harassment and coercion are actually more common than other forms of sexual violence. It is generally accepted that there is no cause for sexual harassment and that there is no theoretical framework that can best explain it (Skaine, 1996).

According to Ward, Polaschek, and Beech (2006), the terms theories and models are exchanged true the case with sexual harassment. In short, the models can be seen as metaphors that help researchers look at the structure of events under explanation (Ward et al., 2006). However, when these factors are related to the basic mechanism and interaction of various factors in the model (Ward et al., 2006).

One of the four main causes of sexual harassment is former loneliness. It creates a theory that combines socio-cultural and organizational data. In addition, the theory shows a strong naturalness compared to the only theories of previous sexual harassment. Clearly, it is a step forward for a field that dominates the causes of sexual harassment for a few reasons.

2.5 Sexual Harassment on Public Transportation

Sexual harassment on public transport lasts for days. It can occur in densely populated areas and usually in potentially dangerous situations. Previous studies have shown that women are more likely to be sexually harassed when they are having sex, even if they are not alone (Natarajan, 2016).

Parents in the developing world have come up with the idea of keeping their daughters in the home for a limited period of time, fearing that their daughters will be abused if they go public (Natarajan, 2016).

This practice among parents in developing countries further socially excludes young women, leading them to use the term Smith (2008) as a transitional captive, if the women are afraid to travel by public transportation or stop traveling alone or if there is no access or access for private transport.

Such theories greatly simplify sexual harassment situations, ignore the ancestral culture and instead of victim-blaming culture, go back to binary thinking where successful women have a responsibility to take care of themselves by enticing successful promoters through staying away from male-dominated public places.

Sexual harassment on public transport is an expression of patriotism. Men is for fear and control and for shaping and modeling the activities of the women (Mustaine & Tewksbury, 2002).

Stanko (1985) suggested that women should be socially normal for difficult security management, by removing microaggressions that are not normally sexually abusive, women face difficulties and invisible things and criticism, the woman failed to protect her victim because she did not notice the obvious signs (Powell & Henry, 2017).

2.5.1 Safety in Public Transportation

Fakoya, Apantaku and Adereti (2006) discuss gender equality in household food security. This study on informal participation is used to calculate the differences in the roles and experiences of men and women in society in social science analysis. Porter, (2008) noted that women and men have extensive experience in transportation systems. Gender in public transportation is very different from country to country, but some of the symptoms are the same. Individual travel decisions in cities affect the quality of life of urban dwellers.

The problems caused by physical assaults and sexual harassments especially the women because of the impact they make on the livelihoods of the vulnerable groups. The problems depend on the situation, but the inadequacy of public transport services can affect the safety and reliability of individual women. Both women and men are concerned about and have experienced some kind of verbal or physical harassment (World Bank, 2012). People go against the most appropriate and effective choice to avoid roadblocks. They use a form of travel that is not available.

Women living in densely populated areas prefer taxis to any other mode of transportation. Women are especially cautious when carrying large packages or traveling with children. Women avoid using certain buses or train stops; public transportation will be restricted for a limited time or will only be used if accompanied by someone.

According to the CSBE (2015), two-thirds of public transport users in Jordan are men and one-third are women. The study found that a few women were sexually harassed on public transportation in the evenings. Studies have shown that disturbances in motor vehicles are limited, but they do not always occur. Harassment can occur at bus stops, making it easier for the perpetrator to escape and remain anonymous. The incidents inside the vehicles were caused by the driver, it is still low because conductors and other bus users are in the habit of punishing the perpetrators. (CSBE, 2015).

According to the International Youth Foundation (2014), 30% of parents in Ruseifeh, Mafrag and Southern Shouneh do not allow public transportation for their children. Public transportation makes children more vulnerable. Dissatisfaction with unwanted attention is particularly prevalent among girls in these areas. According to parents in these areas, the results indicate that 40% of public transport users are disturbed.

Various studies have shown that women are victims of the current transportation system, which lacks access to education and business opportunities. As a result, it lowers their standard of living. Therefore, improving public transportation and infrastructure should be a top priority, and gender issues must be considered as part of the solution.

2.6 Review on Previous Studies

Futose and Kato (2015), *Yangon Urban Transport: Demand and service quality* reflect the current traffic situation in Yangon and discuss the dynamics and future direction of the urban transport system. The success of the survey is invaluable as it has successfully identified traffic conditions to understand current problems and develop future transportation policies.

Paing Myo Ko Ko (2018), point out the current situation of Yangon Bus Service (YBS) system in Myanmar. The new system was found to be less profitable and less successful than the old system Hta Tha System. And also, the study found that the transportation system was incomplete and insufficient. It can be considered as a basic requirement to upgrade the transportation system.

East Asia Institute (2018) working paper on public opinion polls on the Yangon Bus System and its Reform, the newly opened Yangon Bus Service (YBS) system has structural weaknesses. In particular, bus schedules and route maps were provided. Nevertheless, as people recalled the struggles of the previous system, they were able to endure the initial difficulties and hoped that reform would improve the situation.

Ei Shwe Sin Win (2019), learned that some passengers ride the bus for free. There are some complaints regarding the reckless driving though some conflicts of the bus conductors have been reduced to some extent.

Nirmal Geutam (2019), studied looked at sexual harassment and public transportation decisions among female students in the Kathmandu Valley, Nepal. In the evening, students riding the bus were more likely to experience distractions and emotional distress. Most of the harassment was made by a male passenger for young women between the ages of 20 and 23.

Eunice Chan (2019), studied the cultural context of the problem of sexual harassment on public buses in Yangon, a platform was used to explain the sexual harassment responses of young women on buses in Yangon and their views on their experiences and perspectives. Sexual harassment often occurs at peak and non-peak times on crowded and crowded buses, but is common on the streets and sometimes several times a day. Four main emotions that respondents highlighted when they were harassed were: shock, anger, fear, and shame.

CHAPTER III

PUBLIC TRANSPORTATION SYSTEM IN YANGON

3.1 Yangon Profile

Yangon was founded as Dagon by the Mon in the early eleventh century (1028–1043) dominated Lower Burma at that time (en.wikipedia.org/wiki/Yangon). Yangon became the capital of Union of Burma on January 4, 1946 when the country regained independence from the British Empire (en.wikipedia.org/wiki/Yangon). In November 2005, the military government relocated Nay Pyi Taw, designating 320 kilometers (199 miles) north of Yangon, as the new administrative capital, and later relocated the government to the newly developed city. However, Yangon is the largest city and the most important commercial center of Myanmar.

The city is set in the Yangon Region, a wider administrative area with a population about 6.2 million people in an area of 598.76 kilometers (km). The population density of Yangon is 16,000 persons per square kilometer. The annual growth rate of the city population has been about two percent. The central business district is located south of the Yangon River and Bago River. Administratively, the city is divided into four districts such as East District, West District, North District and South District with 45 townships. The essential religions in Yangon are Buddhism, Hinduism, Christianity and Islam.

Yangon city is mainly important not only in economic but also in political point of view. Most of rural people usually move to live in Yangon and population is increasing year by year. Yangon provides a variety of public transportation options but taxis are the most common and convenient way for visitors. The main reason is motorcycles and bicycles are not allowed within the Yangon area whereas public bus and taxis are available everywhere.

3.2 Public Transportation Service in Yangon

There are various types of public transportation services available in Yangon. There is public bus (Yangon Bus Service, YBS), circular railway, water bus and, city taxi. The public transport service fare differs depending on the type of vehicle and on whether the passenger is a local resident or a foreigner. Bus and trains are an important mode of public transportation for the majority of working or class people.

3.2.1 Public Bus Transportation Service

Public bus transportation service is cheaper and faster than other transportation modes and most belong to private companies. Table (3.1) presents the passenger and public bus in Yangon Region (2010 to 2018).

Table (3.1) Passenger and Public Bus in Yangon (2010-2018)

Year	Passenger per Year	Bus
2010-2011	265642	11388
2011-2012	249561	11393
2012-2013	292919	11443
2013-2014	382774	13036
2014-2015	429493	16816
2015-2016	462199	15543
2016-2017	512144	14756
2017-2018	530728	15293

Source: Department of Road Transport Administration, 2019

The private and public bus system, which retains more than fifty percentage of the market, and the outdated railway system of more than 50 km account for less than one percentage of the total traffic loss. One notable change since 2013 has been the introduction of buses. This is an active intervention by the Yangon Region government to strengthen the public transport system, which includes the suburban railway and water transport.

Before 2016, Yangon bus system was under the regulation of the Ma Hta Tha Central Committee. Public buses in Yangon are provided by both the public and

private sectors. The bus is considered to be unattractive to the elderly and operates on a daily basis, and demand for buses is on the rise. The private sector, regulated by the Yangon Division Bus Control Committee (YDBCC), is the main provider of public transport, operating about 2,400 public transport vehicles in the city.

‘In July 2016, the Yangon Region Government formed the Yangon Region Transport Authority (YRTA) to replace the existing bus regulator, Ma Hta Tha (formally known as the Central Supervisory Committee for Motor Vehicles)’ (JICA, 2019). Ma Tha Thar has controlled the city's bus system for more than 50 years and has a reputation for underperforming management.

In January 2017, Yangon Region Government abolished to Ma Hta Tha Central Committee. Yangon Region Transport Authority (YRTA) Started to control the Yangon Bus Services (YBS). the Yangon Region Government completely restructured the public bus network and management and launched the Yangon Bus Service (YBS). This marked the beginning of significant changes in the public bus system of Yangon. The most notable improvement began in January 2017, with the introduction of new buses; development of buses; restructuring bus operators; upgrading the bus business and bus system to the Yangon Bus Service (YBS), which covers bus refurbishment. Introduction to channels and information and communication technology.

The visions of Yangon Bus Service (YBS) are;

- (a) Current operating companies and bus lines will be transformed into public companies.
- (b) Once public companies are formed, bus gates will be built with companies
- (c) Bus fares will be made with modern payment system and
- (d) The process will be carried to use information technology.

In the Yangon Region 27 bus operators serving with 6550 vehicles in Yangon Bus Service (YBS) under the control of Yangon Region Transport Authority (YRTA). The average number of passengers has increased since more than 300 bus routes were cited. Due to the lack of information, there is some transfer speed, such as walking distance, for psychological data transfer due to lack of information. Carefully developed bus gates and intermodal facilities should be carefully designed to enhance smooth transfers as shown in Table (3.2).

Table (3.2) Public Bus Operators in Yangon

No.	Company	No. of Routes	No. of Owned Buses	Average Number of Buses Daily Operated	Operating Rate
1	Bandoola	5	244	213	87%
2	YUPT	19	1230	975	79%
3	Yangon Bus Public Co., Ltd	8	546	464	85%
4	Yangon Northern Taikkyithar	1	84	57	68%
5	Omini Focus General Service Public Co., Ltd	8	464	307	66%
6	Power Eleven Public Co., Ltd	3	225	158	70%
7	Ever Green Lucky Family	2	198	123	62%
8	Shwe Lan Khin	1	70	61	87%
9	Sanwaila	1	50	34	68%
10	Holiest Vim	4	174	114	66%
11	GYCT Co., Ltd	10	696	344	49%
12	Khit Thit Bayint Naung	11	606	425	49%
13	Golden Southern	10	749	423	56%
14	Kong Baung	2	170	129	76%
15	Trans Link Co., Ltd	2	60	54	90%
16	City Liner Co., Ltd	1	16	8	50%
17	Rapid City	8	323	168	52%
18	People Partner	5	265	241	91%
19	YBS (22)	1	101	71	70%
20	YBS (31)	1	41	19	46%
21	YBS (33)	1	55	42	76%
22	YBS (45)	1	25	23	92%
23	YBS (63)	1	28	25	89%
24	YBS (73)	1	11	5	45%
25	YBS (76)	1	46	32	70%
26	YBS (79)	1	85	39	46%
27	YBS (80)	1	19	15	79%

Source: Yangon Region Transport Authority, 2019

Yangon Bus Service (YBS) is a bus transportation network system that will be launched on 16 January 2017. A total of 60 bus lines and eight companies were set up under the management of the Yangon Region Transport Authority (YRTA) to replace the existing system where many companies and individual owned bus vehicles and bus line. In the past, individual owners drove only two or three buses with their owners. The eight companies are: (1) Omni Focus Co., Ltd., (2) Bandoola Transportation Co., Ltd., (3) Yangon Public Bus Co., Ltd., (4) Yangon Urban Public Transportation Co., Ltd., (5) Power Eleven Co., Ltd., (6) Sanwaila and San Raung Ni Co., Ltd., (7) City Liner Bus Public Co., Ltd., and (8) Golden South District Co., Ltd. Eight companies' structure are as follows:

- Public-private partnership company, namely, Yangon Bus Public Co., Ltd.,
- Existing private bus operators (from the previous system), namely, Yangon Urban Public Transportation Co., Ltd., Omni Focus Co., Ltd., Bandoola Transportation Co., Ltd.; and
- Associations of small-scale bus vehicle owners, namely, Power Eleven Co., Ltd., Sanwaila and San Raung Ni Co., Ltd., City Liner Bus Public Co., Ltd. And Golden Southern District Co., Ltd.

(A) Operating Issues of Yangon Bus Service

One of the expected effects of the restructuring of bus operators is the shift from a commission base to a travel-based commission or fixed pay system. The main characteristic of each system is as follows:

- (g) **Sales-based type:** Drivers often wait for passengers at bus stops, causing congestion.
- (h) **Trip-based type:** Drivers will overtake at a much faster rate to allow more passengers to drive.
- (i) **Fixed salary system:** is desirable for safe driving.

Many bus operators have shifted into fixed-salary system or trip-based system though some companies still apply conventional sales-based system. Operating buses under companies, on the other hand, can be divided into individual and private.

Drivers who drive individual vehicles are contracted by the owner, not the company. The salary system is in accordance with each contract. Most use a sales-based system.

Operation Rate (average number of buses daily operating/number of owned buses) is one indicator to measure the service level of bus operators. Lower operation rate causes financial loss, overloading and left-off passengers. The most important factor for low operating speed is the frequency of mechanical problems.

At most bus operators, drivers or maintenance personnel perform a pre-departure inspection. However, they do not manually edit the routine inspection record. Some bus operators own their workshops, while others carry out roadside repairs and maintenance.

The driving skills and habits of YBS drivers have a lot to do with customer satisfaction. As mentioned, YBS drivers operate under oppressive conditions for safety and security. Driver's Training Centre was established by Ministry of Transport and Communication and Yangon Region Transport Authority.

The training center issues type "E" driver's licence, which is required to drive passenger buses. However, there is no penalty for bus drivers without an "E" driver's license. Individual operators and some minor bus operators assign bus drivers without sufficient training and education.

Current operation system of YBS applies Dispatching Operation (Departure time of each bus is specified by the Dispatcher). The bus operator will return the staff to their original location. Destinations and departure times are recorded at each destination and at the main bus stop. The distance between the original and the destination should be effectively adjusted to ensure a high level of service at the peak of the morning and a sufficient speed at the peak of the evening. In Yangon, introduction of diagram operation is highly necessary.

(B) Improvement Directions for Yangon Bus Service

Yangon Bus Service was recently launched. Yangon still has many issues and problems that need to be addressed before the advent of a safe and secure public bus system. In the reorganization of the bus network into the Yangon Bus Service in January 2017, eight companies were established. Although, only one of these companies, the Yangon Bus Public Co. Ltd., was structured as a public-private

partnership. Two companies are private bus companies operating under the previous system and the other five are different from smaller bus owners. The situation is not easy with regard to the structure and structure of the companies operating the buses.

The bus upgrade program can be found in several stages. The first step is to consolidate eight of the five transport corridors on bus routes 80 and above. Only then can the paths in each group coordinate with each other. More importantly, each cluster should have a similar market size and demand potential should be approximately the same. Bus companies should be allowed to monopolize or privatize, mainly because they compete with other ways to increase car ownership.

Establishment of the consortiums is the second stage. They must be registered as public limited-liability companies. Identifying the investors who will start these seven companies is part of this process. YRTA can solicit proposals from existing bus operators who wish to lead. The first choice should be the largest operator operating in each of the eight corridors. The government needs to make a minimum contribution and give priority to the company that wants to own the largest stake.

The third step is for leaders to integrate other operators with their responsibilities. In exchange for shares in the new company, operators transferred their old buses to the company and became part of its bus group. The value and acceptance of buses will be a challenge. If no agreement has been reached, the new company may (i) stop the old company on the street and (ii) purchase the lease agreement under the supervision of the old operator. Until then, new cars are being distributed to replace old ones.

(C) Workings of Bus Company

Only two of the eight bus companies established when Yangon Bus Service was launched have a modern structure: public-private partner Yangon Bus Public Co., Ltd. and the privately owned Bandoola Transportation Co., Ltd. Therefore, six other companies still need to modernize their operations. The following section is showed six companies can be modernized in general.

(i) **Operations:** Its business goal is to maximize profits (bus passengers per bus) by efficiently utilizing bus assets at the rate of revenue per kilometer per day. Departments (about 60% of the total company workforce) have the following departments:

- Scheduling; Delivery and Inspection: Appropriate scheduling for buses and drivers and field inspectors;
- Operational Training: Recruitment and ongoing training, upgrading drivers' skills; and
- Field Operation – supervises drivers and conductors

(ii) **Shop and Maintenance:** Its business objective is to minimize non-operational buses and to get the most cost-effective buses available. This department (about 25% of the total company workforce) has the following departments:

- Preventive Maintenance – to handle such tasks as oil change, greasing, adjustment of brakes/clutch;
- Electrical-Mechanical General Repair;
- Major Repairs and Body Works – such as overhauling, fuel pump calibration, painting and metal fabrication;
- Works Planning and Control – to handle the scheduling of maintenance activities; and
- Maintenance Supply and Storage – to handle the procurement and inventory of spare parts.

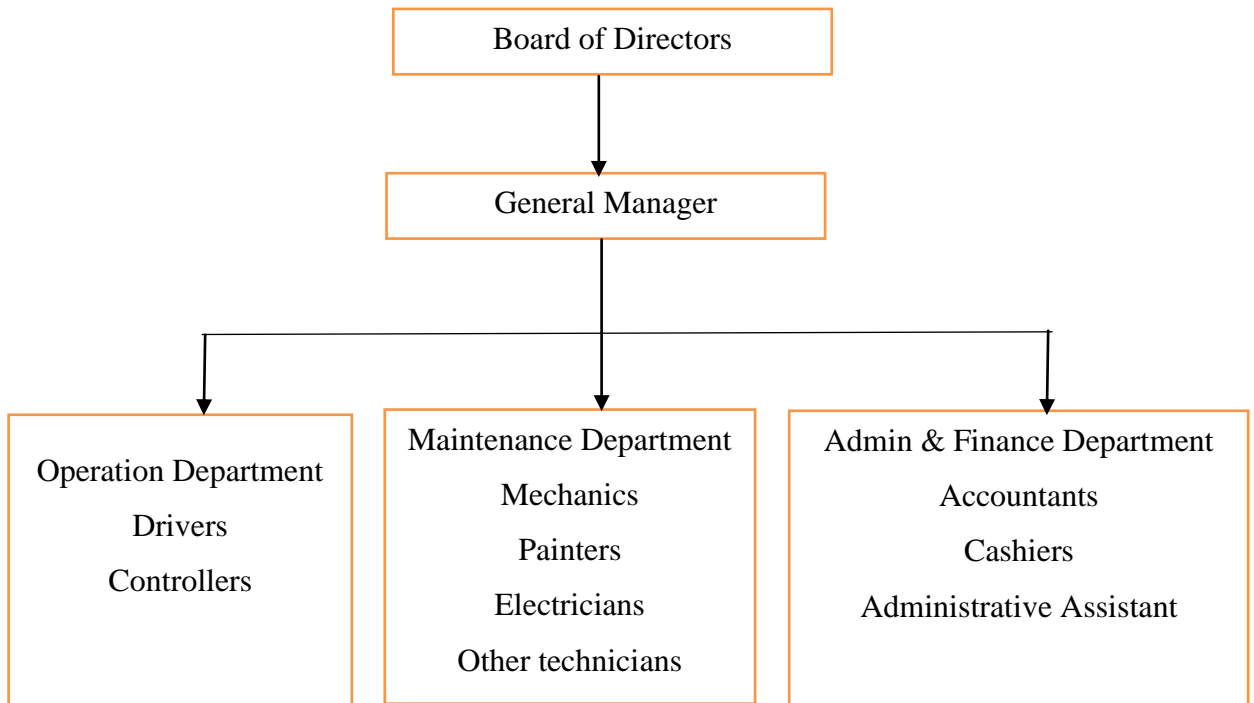
(iii) **Administration and Finance:** A support department with the following four departments:

- Administration – to handle human resources, property and security of assets, as well as general services;
- Legal – to handle claims arising from accidents, customer complaints, and compliance report with the government, and other legal requirements;
- Finance – to manage the accounting, payroll, ticket distribution and control, revenue verification, and internal audit; and

- Planning, Marketing and Public Relations – business objectives include bus route and service planning; monitor bus demand and demand on every street; developing public information and marketing plans.

Figure (3.1) presents the organizational structure of bus company.

Figure (3.1) Organizational Structure of Bus Company



Source: Yangon Bus Public Co., Ltd, 2019

Permanent drivers are assigned per bus and generally have a daily itinerary. In addition to the travel schedule, a leader is responsible for setting or allowing vacation days. If a driver fails to report for his or her planned trip, the supervisor usually assigns a rescue driver, who is usually waiting at such an opportunity in the warehouse.

The same procedure is followed when a regular member of the driver retires unexpectedly. Holidays are scheduled on a specific day. However, sometimes a driver is not obeyed because he or she is still in transition or does not have a relief camp. It is a good practice to give each employee one day off a week, unless it is a legal procedure. And if that employee needs to provide service on his rest day, he is entitled

to the same premium pay as working on vacation. The following Table (3.3) shows the human resource of bus company.

Table (3.3) Human Resource of Public Bus Company

Name of Department	Position	Employee
Operations	Driver	750
	Controller	100
Maintenance	Preventive Maintenance	250
	Electro-Mechanical	25
	Repairs and Body Technician	100
	Planning & Control Staff	50
	Materials Inventory Clerk	25
Administration and Finance		200

Source: Yangon Bus Public Co., Ltd, 2019

The Maintenance Department advises the Operations Department if a bus leaves at any time to inspect or change the oil. Sometimes maintenance embargoes the car when needed to maintain it. Adherence to the bus service schedule, such as holidays for bus attendants, depends on reserve buses. More buses are needed on the route, but when the available units are shorter, tensions between maintenance and operation sometimes erupt. In such cases, one policy should prevail over the other.

(D) Safety Transportation of Yangon Bus Service

Under the control of the Yangon Bus Service (YBS), routes are divided into two groups: urban and suburban to ensure safe transportation. Some buses run on the main roads within the city center. Due to the differences between the two main thoroughfares of the city and the suburbs, daily commuters from the suburbs to the city center are usually time-saving and cost-effective. Under the old Ma Hta Tha Bus system buses were privatized and all buses went to private bus companies. Therefore, Ma Hta Tha the practice of drivers arriving at the next bus stop or parking at the bus stops may not effectively eliminate long bus rides to carry as many passengers as possible.

Ma Hta Tha was replaced by YBS, the system was changed to a one-route one-bus system to accommodate new passengers as needed. Although, Bus owners

are still reluctant to accept the transition to privatization of private bus companies to public bus companies. In addition, the change forced bus owners to convert former bus owners into public bus company employees. YBS also eliminated conductors. Therefore, the implementation of YBS is very difficult due to the interests of bus owners and the unemployed drivers and lightning problems.

There are two types of bus lines under public buses. Company-owned buses are buses owned by the company and privately owned under the company name. Company-owned buses are monitored by companies and drivers and conductors are now company employees. Private bus owners drive their buses under their own names for company services.

All bus fares are pocketed. They also appoint drivers for their buses. There is another bus line that is not operated by public bus companies. They are called private bus owners' groups and are licensed by the YRTA. YRTA could not stop them. Because they lost business and took time to transition.

Only public and private buses are operated by public companies, and only company buses stop racing and provide good service to passengers. YBS's goal of operating all buses under the ownership of public companies remains a challenge ahead of reckless driving and bus racing.

The plan to ensure the safety of passengers is to set up a GPS system and CCTVs. Company buses and buses running under the company name may be equipped with GPS and CCTV systems in accordance with YRTA regulations and standards, but private buses cannot monitor them. To improve bus service, they introduced a payment system for drivers and bus owners based on the number of kilometers they drove. Another system that provides better bus service is the Real Time Information System, which provides accurate information on the exact arrival time of each bus at every bus stop for three hours and five minutes.

3.2.2 Railway Transportation Service

The railway transportation service is largely provided by the government of the Union of Myanmar, especially for lower income people. It is important to know the performance and efficiency of the Myanmar Railways. Based on this knowledge, it is necessary to study industrial development to facilitate the development of the

country. Myanmar Railways belongs to Ministry of Transportation and Communication.

The organization set up of the Myanmar Railways is based in departmental system. The Chief Executive Officer and Chairman of the Management Committee is the Managing Director, with the support of 13 General Managers. The eight main departments are Technical and Administration Support, Planning and administration, Commercial, Finance, Inspection, Operation, Civil, Mechanical and Electrical.

The railway system is divided into 11 divisions and further integrated into the lower and upper regional administrations. The key features of this structure reflect the direction towards a more decentralized decision-making process, which focuses on the planning and distribution of products and services from consumers through market responses.

Currently, Yangon Region has a total of 149 km of railway services and 59 stations using the conventional system. There are eight lines and a dedicated branch line for cargo services for Yangon Port. The characteristics of the main lines are briefly as follows:

(a) Circular Line: This line is divided into two parts. Insein (20.3 km and 21 stations) from central Yangon and from the west side of the ring road in the middle of the west. From the Middle East to Insein to Daingon. There are 25.8 km and 17 stations.

(b) Pyay Line: This stretches from north of Da Nyin Gone to Hmawbi, Six stations 26.5 km north of Nyin Gone and a 3.0 km junction extend to Hmawbi which serves the Computer University of Yangon.

(c) Yangon–Mandalay Line Section in Yangon Area: This is part of the north-south main route from Yangon to Mandalay. From Central Rangoon to Dabin, seven stations with section 36.0 km and a 6.4 km junction connect Dagon University in northeastern Rangoon.

(d) Thilawa Line: This is a 26.7-kilometer route connecting to the industrial zone southeast of Yangon, with five stations and a 5.0-kilometer junction. In charge of East Yangon University.

The development of the railway in Yangon should be viewed not only from the perspective of transportation but also from the perspective of urban development.

Yangon Railways could be the main driving force and catalyst for urban development and the development of the desired location. The development of a high-quality urban rail can also generate tremendous opportunities for Transit Oriented Development (TOD) when properly designed and can capture the value from those developments, thereby improving people's mobility, infrastructure accessibility, and public convenience.

3.2.3 Inland Waterway Transportation Service

Traffic jams in Yangon have worsened in Yangon due to the increase in the number of cars, buses, trucks, and etc. which is associated with rapid economic growth. In addition to freight, passenger transport is one of the reasons for the worsening traffic congestion. Therefore, it is necessary to take action from the logistics sector for passengers and cargo. Industry through the Thilawa SEZ and other industrial zones is expected to increase the flow of goods passing through Yangon.

There are three major water transport routes in Yangon. These are the routes connecting Yangon and the opposite side of the river. The present condition of the jetties and ships that operated in these routes. Besides the three, there is a service transporting passenger for short distances at Yangon Port using small boats.

The Yangon Region Transport Authority is planning to ease congestion in Yangon by using high-speed vessels on the Hlaing and Ngamoe Yeik rivers. Two local joint ventures have submitted bids to YRTA.

In October 2017, the first Yangon Water Bus was launched between Insein and Botahtaung area. The second phase (Botahtaung from North Dagon) and the third phase (from Botahtaung to Thanlyin) are scheduled to begin in 2018. The first phase of the operation is scheduled to target about 20,000 passengers every 20 minutes from 6 a.m. to 6:30 p.m. Recently, the company has revised its schedule several times and reduced service frequencies to meet passenger demand. Thirteen boats will be connected to seven jetties and the entire Insein township as the first phase of the project.

The Yangon Region Government has promised to deliver YBS buses to ports. In addition to regular transportation, additional trips to Thanlyin and Twantay townships are planned on Saturday and Sunday. It costs 6,000 kyats per person to go

to Thanlyin and 7,000 kyats to Twante. The cruise on Yangon River at sunset costs Kyat 3000.

3.3 Sexual Harassment Criminal Offences in Myanmar

Myanmar's main law on violence and related crimes is the 1860 Penal Code defines women as female of any age (Myanmar Laws and CEDAW, 2013). Criminal practice dates back to the British colonial era. Not surprisingly, there are few provisions specifically referring to gender-based violence. Statements of related crimes do not focus on the main problem. Violations of women's integrity may be viewed as suspicious of victims' behavior or as socially motivated by violence. The use of the Penal Code of criminal procedure is governed by the Code of Criminal Procedure, 1898 and the Evidence Act, 1872 (Myanmar Laws and CEDAW, 2013).

Many sexual chapters of the Code of Criminal Procedure address criminal offenses that may result in sexual assault or harassment. Section 354 punishes the offense with the intent to provoke the modesty of a woman (Myanmar Laws and CEDAW, 2013). The person faces up to two years in prison and a fine. Section 509 deals making song, anyone who does something by showing objects or behaviors or by insulting a woman's modesty is liable to imprisonment and fine (Myanmar Laws and CEDAW, 2013).

Since modesty is not required by law, it is not clear which offenses are involved in these provisions. In one case, a four-year-old boy was sentenced to three years in prison for sexually assaulting a worker under 323.13 and 354.16 (Myanmar Laws and CEDAW, 2013). Another was a girl who beat a boy at school and fell in front of a crowd, embarrassing her shame (Myanmar Laws and CEDAW, 2013). The boy was charged under sections 323 and 354 of the Penal Code for raping her modesty (Myanmar Laws and CEDAW, 2013). A third time, a man was charged under Section 354 for taking a nude photo of a woman (Myanmar Laws and CEDAW, 2013).

Anti-Violence Against Women Laws can provide provisions to explicitly complement rape and other forms of sexual violence (Myanmar Laws and CEDAW,

2013). They can provide appropriate legal protection to victims of rape in connection with the prosecution of cases that alleviate unnecessary suffering and support justice (Myanmar Laws and CEDAW, 2013). These issues of discrimination and violence against non-compliant women can also be addressed (Myanmar Laws and CEDAW, 2013).

3.4 Protection of Sexual Harassment on Public Transportation

Sexual harassment is a form of gender discrimination and consists of any unwanted, offensive or humiliating behavior related to a person's gender. It includes but is not limited to the following: (a) unwanted touching, (b) coercion to engage in sexual acts, (c) display of sexually explicit materials (d) offensive comments or acts that reference a person's gender and (e) repeated unwanted invitations to social activities.

Sexual harassment on public transport in Yangon is a well-known problem. The regional government has announced that it is introduced only buses later this year to protect women travelers. Women's rights activists welcomed the initiative, but emphasized it was not the solution to sexual harassment in the country. The women gave the others a bus in a windmill and told them to use it if someone attacked them. The idea is that a quiet muffled voice will block the molester and alert other passengers that a woman is in trouble.

The rate of harassment on buses is not suspected, but most women do not report incidents to the police, so official numbers cannot be obtained. The impact of the women's campaign, which began two years ago cannot be quantified, but participants say the results have been positive. For most women participating in the campaign, it is the first time the women have made a public statement about a problem affecting everyday life. Many jokes have been made about white cloth, but it has also raised public awareness of sexual harassment.

Sexual harassment is a problem in Myanmar and even riding in the front seat of a taxi or waking on the street exposes women to the threat of abuse. Under Myanmar's penal code, sex offenders can receive prison terms of up to a year, but often the court favors men and offenders are not convicted. If a man is charged with a crime, a woman's reputation is tarnished. It prevents women from filing in court.

CHAPTER IV

SURVEY ANALYSIS

4.1 Survey Profile

Yangon, the former capital of Myanmar with a population of 6.2 million (as of 2017), is the country's largest commercial hub. Traffic and transportation conditions in the capital have deteriorated rapidly, especially since the new government came to power. Yangon traffic is increased especially from private cars and buses, has contributed to air pollution and accidents. The urban area is also expected to expand into the surrounding areas, with Yangon into a megacity with a population of 10 million in the future.

Yangon Region is a key importer of Myanmar's socio-economic activities with increasing economic and population growth, increased traffic demand and revenue. Private vehicle ownership rates will increase. The pressure on urban and transport development will be even greater.

Many trade and services are located in the interior of the city, including the main business area and to the north, including the urban area. Productivity growth is concentrated in the city's suburbs, northwest and northeast. Administratively, the city is divided into four districts (North, East, West, and South) and 45 townships. The essential religions in Yangon are Buddhism, Hinduism, Christianity and Islam.

4.2 Survey Design

The sampling method used a convenient sampling method form for the survey questionnaire. The survey was conducted by NGO (CBO) and CBO (community-based) workers, on visitors and members of the organization. Because COVID 19 occurred in Yangon Region during the survey period. The population is made up of women and girls using public transport in urban area.

The survey was designed as part of a survey of about 200 women using public transport in Rangoon Region. The survey was conducted from June to July 2020 for this study, based on volunteer collaboration.

The survey questionnaire is divided into four sections to ensure accurate measurement of views on transportation in Yangon. The first section asks for personal information, such as the participant's age, education level, occupation, marital status, and place of residence.

The second section aims to understand the respondents' public transportation behaviors. In this section, the survey seeks to identify why and how women use public transportation, what their preferred mode of transportation is, average duration trips, number of trips, preferred time for using transportation, and cost.

The third section of the questionnaire aims to explore the views and opinions of women by considering their experiences and how public transport affects their socio-economic life. The last section of the questionnaire sets out suggestions and solutions for improving public transport for women.

The survey was designed as part of the quantitative research and targeted a sample of 200 women who use public transportation in Yangon Region. The survey was based on the voluntary cooperation and interviewed between June to July 2020 for this study.

The survey questionnaire had a number of questions to choose from and the researchers provided a choice of answers. Two dichotomous questions with only two responds were answered to Yes or No. And also used five points 'Likert Scale' (Very Dissatisfied = 1, Dissatisfied = 2, Neutral = 3, Satisfied = 4, and Very Satisfied = 5). The questionnaire was first written in Myanmar and then translated into English questionnaire had attached in Appendix.

4.3 Survey Findings

According to the survey questionnaires, findings of the survey are presented below four sections such as Part (I) Socio-economic Features of the Respondent, Part (II) Using Public Transportation, Part (III) Personal Harassment and Part (IV) Women's View of Public Transportation.

4.3.1 Socio-Economic Features of the Respondent

The following Table (4.1) is Socio-economic features of the women respondents include age level, marital status, level of education, occupation, monthly income and place of residence in Yangon.

Table (4.1) Socio-Economic Features of Respondents

Particular	No. of Respondents	Percentage
Age Level		
Less than 20 years	25	12.5
Between 20 years to 30 years	30	15.0
Between 31 years to 40 years	118	59.0
Between 41 years to 50 years	27	13.5
Total	200	100
Marital Status		
Single	44	22.0
Married	156	78.0
Total	200	100
Level of Education		
Under Graduated Level	16	8.0
Graduated Level	141	70.5
Post Graduated Level	43	21.5
Total	200	100
Occupation		
Student	15	7.5
Private Employee	159	79.5
Government Employee	16	8.0
Business Owner	10	5.0

Total	200	100
Monthly Income		
Under 500,000 Kyat	108	54.0
Above 500,000 Kyat	92	46.0
Total	200	100
Particular	No. of Respondents	Percentage
Place of Residence in Yangon		
Eastern District	9	4.5
Western District	34	17.0
Southern District	61	30.5
Northern District	96	48.0
Total	200	100

Source: Survey data, 2020

Above from Table (4.2), the age level of the total 200 respondents shows that 25 respondents (12.5%) were less than 20 years, 30 respondents (15.0%) were between 20 years to 30 years, 118 respondents (59.0%) were between 31 years to 40 years and 27 respondents (13.5%) were between 41 years to 50 years. Therefore, the majority of respondents age level was between 31 years and 40 years. Most of respondents were married.

In the education level of 200 respondents, 16 respondents (8.0%) have under graduated level, 141 respondents (70.5%) have graduated and 43 respondents (21.5%) have post graduated in the study.

For occupation, the largest number 159 respondents (79.5%) have worked at private organization. But 16 respondents (8.0%) of the total are working in government service, and 15 respondents (7.5%) were student. The rest of 10 respondents (5.0%) of total have worked their own business.

Monthly income situation of total 200 Respondents, 108 Respondents (54.0%) have got under 500,000 Kyat and 92 Respondents (46.0%) have got above 500,000 Kyat. The majority of respondents are living at Northern District followed by Southern District, Western District and Eastern District in Yangon Region.

4.3.2 Using Public Transportation

Total 200 respondents were asked to select reasons for using public transportation in their daily commuting as shown in Table (4.2).

Table (4.2) Reason for Using Public Transportation

Particular	No. of Respondents	Percentage
Work	164	82.0
Education	36	18.0
Total	200	100

Source: Survey data, 2020

Respondents were asked to select reasons for using public transportation in their daily commuting, 164 respondents (82.0%) showed that work was the most common reason for using public transportation and 36 respondents (18.0%) were using public transportation for education. The mostly respondents said that reason for using public transportation is low cost.

Table (4.3) Usually Take During One Trip

Particular	No. of Respondents	Percentage
Two	68	34.0
More than three	132	66.0
Total	200	100

Source: Survey data, 2020

From Table (4.3), the study of 200 women usually took during one trip, 68 respondents (34.0%) of total were required two routes to reach their work and 132 respondents (66.0%) took more than three routes. All respondents said that the bus was the most popular type of transportation option. It is safe to ride with passengers as it is the cheapest form of public transport. But taxi used when the respondents are an urgent need to travel.

Table (4.4) Days per Week Used Public Transportation

Particular	No. of Respondents	Percentage
Every day	184	92.0
Three days a week	16	8.0
Total	200	100

Source: Survey data, 2020

According to result of Table (4.4), the number of days per week they use public transportation. Total 200 respondents answered that almost evenly split between two categories, the highest respondents said that they are using public transportation from Monday to Sunday in the week for going to work and other activities. The lowest respondents and 16 respondents (8%) are using three days a week for their education, shopping and other activities.

Table (4.5) is presented the women using public transportation in their daily life. All of the women said that they use public transportation alone. Sometime they are travelling with their family, friends and colleagues. Furthermore, those who answered this question were asked to explain the reasons for travelling with other people. The most common reasons mentioned by the respondents was related to safety and security.

Table (4.5) Public Transportation Using Time

Particular	No. of Respondents	Percentage
Peak hours	186	93.0
All the time	14	7.0
Total	200	100

Source: Survey data, 2020

Above from Table (4.5), using public transportation during peak hours was 186 respondents (93.0%) out of the total 200 women and 14 respondents (7%) for using public transportation all the time. According to this sample, the least reported time that women use public transportation was night hours. The main time in which working women use public transportation to get to their work was during morning peak hours and evening peak hours.

Table (4.6) Walking Distance of Bus Stations

Particular	No. of Respondents	Percentage
Less than fifteen minutes	129	64.5
Half an hour-one hour	71	35.5
Total	200	100

Source: Survey data, 2020

Regarding Table (4.6), 129 respondents (64.5%) out of total 200 women said that they walk less than fifteen minutes to reach the desired bus station and 71 respondents (35.5%) said they walk between half an hour and one hour. All of the respondents said that they have less than fifteen minutes waiting time of public transportation per trip at the bus station. It should be noted that employed respondents filter out those who say they use the desired station for public transport to work on their daily commute.

All of the respondents said that they are waiting between fifteen minutes to half an hour for their public transportation per trip. One woman mentioned that if she missed the bus then she would have to wait another half an hour for the next available bus. Another woman said she often had to wait for the bus to fill up at her workplace.

Table (4.7) Spending on Daily Public Bus Transportation

Particular	No. of Respondents	Percentage
Less than 500 Kyat	134	67.0
More than 500 Kyat	66	33.0
Total	200	100

Source: Survey data, 2020

According to result of Table (4.7), 134 respondents (67.0%) answered that they have spent less than 500 Kyat on public transportation daily and 66 respondents (33.0%) said that they spend more than 500 Kyat.

Table (4.8) Evaluating Cost of Public Bus Transportation and Monthly Income

Particular	No. of Respondents	Percentage
Adequate	71	35.5

Low	129	64.5
Total	200	100

Source: Survey data, 2020

Table (4.8) is related to evaluating the cost of public transportation with regards to monthly income of 200 women in the study. The majority of respondents said that the cost of public transportation was lower than their monthly income.

Some respondents said that using public transport could not afford to buy their own car. Furthermore, respondents expressed their satisfaction with the cost of public transportation in relation to their income.

4.3.3 Personal Harassment

The following Table (4.9) shows the women security using in public transportation in Yangon Region.

Table (4.9) Personal Harassment of Respondents Using Public Transportation

Particular	No. of Respondents	Percentage
Different Experience of Man		
Yes	107	53.5
No	93	46.5
Total	200	100
Harassed Using Public Bus Transportation		
Yes	88	44.0
No	112	56.0
Total	200	100
Type of Harassment		
Verbal abuse	60	30.0
Physical abuse	67	33.5
Stalking	73	36.5
Total	200	100
Location of Harassment		
On the street while walking to bus station	88	44.0
At the bus station	112	56.0

Total	200	100
Particular	No. of Respondents	Percentage
Time of Harassment		
Morning peak hours	60	30.0
Evening peak hours	67	33.5
Night hours	73	36.5
Total	200	100
Acting after Harassed		
Walk faster	66	33.0
Confront the person	134	67.0
Total	200	100
Number of Harassment		
Few times or less annually	82	41.0
Once a month or less	118	59.0
Total	200	100
Harassing Person		
Passengers	105	52.5
Money collectors	95	47.5
Total	200	100

Source: Survey data, 2020

From Table (4.9) result shows that, 107 respondents (53.5%) out of total 200 women answered yes and 93 respondents (46.5%) answered no for different experience of man using public transportation. As a result of 200 women for the harassed using public bus transportation, 88 respondents (44.0%) said that they have been harassed using public transportation. Although 112 respondents (56.0%) have not harassed using public transportation.

Respondents were asked to choose the type of disturbance, knowing that they could choose more than one type of disturbance when used on public transportation. All the women reported receiving inappropriate matches from them. This was followed by stalking, physical abuse and verbal abuse.

In the study of 200 women when using public transportation with type of harassment. Their answered is followed by stalking abuse with 73 respondents (36.5%), physical abuse with 67 respondents (33.5%) and verbal abuse with 60

respondents (30%). Few respondents asked people to ask for their phone numbers or tell them anything else. They try to talk to someone to avoid such harassment.

Total 200 women were asked to select the place where they encounter harassment when using public transportation with their knowledge to select more than one answered. Result of total respondents, there were 112 respondents (56%) were being harassed at the bus station followed by 88 respondents (44%) on the street while walking on the way to public bus station. To avoid street harassment, people adopt unaffordable modes of travel, such as using the first available means of transportation, as opposed to the most appropriate and efficient option.

All of the women mentioned that they were afraid to use public transportation at night. Most women are afraid that men will be harassed by men because there are no women on the bus at night. Regarding from 200 women, 60 respondents (30.0%) have been harassed during morning peak hours when using public transportation, 67 respondents (33.5%) were during evening peak hours and 5373 respondents (36.5%) were during night hours.

The women asked to select how they react after being harassed when using public transportation. there were 134 respondents (67%) out of total 200 women said that they have confront the person and 66 respondents (33%) answered that they walked faster. Many of the women mentioned that preventative action they take such as talking on the phone with someone, putting a bag between them and asking to change seats.

The result of 200 women experiences the number of harassment while using the public transportation. According to result of 200 women, 81 respondents (54%) said few times or less annually with harassment using public transportation followed by 69 respondents (46%) answered once a month or less.

Respondents' increased depression and stress due to the use of public transport have adversely affected their mental and physical health. Another source of frustration is harassment. Others have argued that society views women as objects, not human beings, which as affects the way they treat male passengers while using public transport.

Total 200 women were asked to select the person who harasses them when using public transportation with their opinion. The majority of respondents, 105

respondents (52.5%) answered the passengers and 95 respondents (47.5%) said the money collectors.

Furthermore, a little woman mentioned that she feels a negative stigma around public transportation users. She said that those who use the public transportation system are often cheap, poor and low-class.

4.3.4 Women View of Public Transportation

The following Table (4.10) is presented the respondents opinion on level of satisfaction when using public transportation in Yangon Region.

Table (4.10) Mean Value for Respondents Opinion Using Public Transportation

Particular	Mean
Speed	3.27
Comfortability reliability seats	3.41
Shelters ease of use	2.61
Travel information easy	2.45
Waiting time	3.57
Safety	2.35
Public Transportation Services	2.34
Overall Mean Value	2.86

Source: Survey data, 2020

Above from Table (4.10), the study of speed mean value (3.27) result showed that the public bus is high speed in the study. The comfortability reliability seats mean value (3.41) mentioned that the public bus seats system is comfortable using for travelers.

The mean value (2.61) shelters ease showed that the respondents have not satisfied and travel information mean value (2.45) is not easy to use for traveler. The waiting time mean value (3.57) is the respondents have satisfied.

In the study of safety mean value (2.35) showed that the respondents have dissatisfied because the public bus is very old model and the safety system is dangerous situation for travelers. And also, public transportation services mean value (2.34) mentioned that the respondents have dissatisfied level on this situation.

Respondents were asked those who explained how public transportation affected their daily commute or commute to school. Regarding the negative aspect. Lack of up-to-date public transportation has led to a growing response to being late for work or school.

Respondents also said that public transportation is a waste of time. Some said they left their homes early in the morning to catch up on long routes and stops. Some respondents stated that they did not want to go to work or school due to poor public transport services.

Poor services include overcrowding, uncleanliness, insecurity, includes long routes and many stops. In addition to the poor services, respondents stated that harassment also affects their mood and self-esteem.

The following Table (4.11) is related to respondents' perception on whether public transportation is integral for women economic participation and social participation.

Table (4.11) Public Bus Transportation is Integral for Women's Economic Participation

Particular	No. of Respondents	Percentage
Economic Participation		
Yes	108	54.0
No	92	46.0
Total	200	100
Social Participation		
Yes	133	66.5
No	67	33.5
Total	200	100

Source: Survey data, 2020,

In the study of 200 respondent's perception on whether public transportation is integral for women's economic participation or not, 108 respondents (54.0%) believed

that public transport is integral for women’s economic participation while only 92 respondents (46.0%) have not believed.

Regarding 200 respondent’s perception on whether public transportation is integral for women’s social participation or not, 133 respondents (66.5%) believed that public transport is integral for a women’s social participation while only 67 respondents (33.5%) have not believed.

Table (4.12) Mean Value for Women View to Improve Public Bus Transportation

Particular	Mean
Safer Buses	2.01
More Frequent Buses	3.62
Availability of Modern and Equipped Bus Stations	2.74
More Bus Stations	3.47
Cleaning Buses	2.35
Overall Mean Value	2.84

Source: Survey data, 2020

Above from Table (4.12), all of respondents answered that public transportation in Yangon Region is not suitable for people with disabilities and not suitable for senior citizens or the elderly people.

CHAPTER V

CONCLUSION

5.1 Findings

The survey was designed as part of the quantitative research and targeted a sample of 200 women who used public transportation in Yangon Region. The survey questionnaire is collected with both online and email system. The population was composed of a representative sample of women who use public transportation, including women enrolled in universities, working women and women from urban areas. The majority of respondents age level was between 31 years and 40 years. Most of respondents were married. The majority of respondents are living at Northern District followed by Southern District, Western District and Eastern District in Yangon Region.

Regarding from 200 respondents, 164 respondents (82%) shows that work was the most common reason for using public transportation and 36 respondents (18%) were using public transportation for education. The mostly respondents said that reason for using public transportation is low cost.

The highest respondents were using public transportation every day of the week. All of the respondents said that they have less than fifteen minutes waiting time

of public transportation per trip at the bus station. The majority of respondents said that the cost of public transportation was lower than their monthly income.

Respondents were asked to choose the type of disruption they face in public transport because they knew they could choose more than one type of harassment when using public transportation. All the women reported receiving inappropriate matches from them. This was followed by stalking, physical abuse and verbal abuse.

Result of total 200 women, there were 112 respondents (56%) were being harassed at the bus station followed by 88 respondents (44%) on the street while walking on the way to public transportation. All of the women mentioned that they were afraid to use public transportation at night. Most women are afraid that men will be harassed by men because there are no women on the bus at night. Many women take precautionary measures by talking on the phone with someone; preventive measures were taken between them, such as dropping a bag and requesting a change of seat. The majority of respondents, 105 respondents (52.5%) answered the passengers and 95 respondents (47.5%) said the money collectors.

In the study of safety question, mostly respondents answered that the public bus is very old model and the safety system is dangerous situation for travelers. All of respondents answered that public transportation in Yangon Region is not suitable for people with disabilities and not suitable for senior citizens or the elderly people.

Poor services include overcrowding, uncleanliness, insecurity, includes long routes and many stops. In addition to the poor services, respondents stated that harassment also affects their mood and self-esteem.

Respondents also said that public transportation is a waste of time. Some said they left their homes early in the morning to catch up on long routes and stops. Some respondents stated that they did not want to go to work or school due to poor public transportation services.

5.2 Recommendations

Yangon is growing rapidly and will continue to do so in the future. The urban population is dependent on natural development and employment in other parts of the country. Higher education; Migration due to new businesses and other opportunities

will increase both. People's income will increase. As the economy grows, lifestyles will continue to change. The market strengthens its international connectivity.

Transportation is used for socio-economic activities; Land use; Transportation plans need to be integrated into urban development strategies, as they have a huge impact on the environment and public financing. And the development of new cities and subcenters.

The Yangon transportation system is equipped with new advanced features such as a railway network. It is designed in many ways to accommodate highways and modern buses. These methods combine to ensure people's safe and affordable movement. Must work as a coordinated system. YRTA needs to increase its operations and capacity as the sole governing body for the management and management of the transportation system in Yangon.

Moreover, increasing public transportation as an opportunity to tackle rampant crime in public transportation, recent developments in Yangon reflect the government's commitment to improving the people's movement. More importantly, the government recognizes the need to promote more effective spatial communication between different sectors and peoples and productive movements in Yangon Region. Therefore, the safety and adequacy of public transportation services were examined primarily by the severity of the crime and the fear of crime, transport infrastructure, location and condition of bus stations, condition of walking distance when traveling services and needs of other services.

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SURVEY QUESTIONNAIRE

I am studying Master of Public Administration at Yangon University of Economics. I have designed the following questionnaire for “**A Study on the Women Sexual Harassment in Using Public Transportation (A Case Study of Yangon**

Bus Service)” which requires for my thesis work as an integral part of the study to complete the Mater Program.

The survey questionnaire is designed to obtain information about the criminal activities in the use public transport passengers in Yangon Bus Service. I would highly appreciate if you answered the following questionnaire. It will take 15 – 20 minutes. I expect your kind cooperation and thanks for your time. Please make (X) a box for each question.

Part A – Socio-Economic Features of Respondent

No.	Question	Answer
1.	Age Level	(a) Less than 20 years <input type="checkbox"/> (b) 20 -30 years <input type="checkbox"/> (c) 31 – 40 years <input type="checkbox"/> (d) 41 – 50 years <input type="checkbox"/> (e) 51 Years and Over <input type="checkbox"/>
2.	Marital Status	(a) Single <input type="checkbox"/> (b) Married <input type="checkbox"/>
3.	Level of Education	(a) Undergraduate level <input type="checkbox"/> (b) Graduated level <input type="checkbox"/> (c) Post Graduated level <input type="checkbox"/>
4.	Occupation Status	(a) Student <input type="checkbox"/> (b) Private Employee <input type="checkbox"/> (c) Government Employee <input type="checkbox"/> (d) Business Owner <input type="checkbox"/> (e) Housewife <input type="checkbox"/> (f) Professional <input type="checkbox"/>
5.	Monthly Income	(a) Less than 200,000 Kyat <input type="checkbox"/> (b) 200,001 – 300,000 Kyat <input type="checkbox"/> (c) 300,001 – 400,000 Kyat <input type="checkbox"/> (d) 400,001 – 500,000 Kyat <input type="checkbox"/> (e) Above 500,000 Kyat <input type="checkbox"/>
6.	Place of Residence	(a) Eastern District <input type="checkbox"/> (b) Western District <input type="checkbox"/> (c) Southern District <input type="checkbox"/> (d) Northern District <input type="checkbox"/>

Part B – Using Public Transportation

No.	Question	Answer
7.	What is the reason for using public transportation in your daily life?	(a) Work <input type="checkbox"/> (b) Education <input type="checkbox"/>

		(c) Visiting friends and family <input type="checkbox"/> (d) Shopping <input type="checkbox"/> (e) Treatment <input type="checkbox"/> (f) Other <input type="checkbox"/>
8.	Why do you use public transportation in your daily life?	(a) Speed <input type="checkbox"/> (b) Lower cost <input type="checkbox"/> (c) Secure <input type="checkbox"/>
9.	How many routes do you usually take during one trip?	(a) One <input type="checkbox"/> (b) Two <input type="checkbox"/> (c) Three <input type="checkbox"/> (d) More than three <input type="checkbox"/>
10.	Specify the type of public transportation used in every part of the trip.	(a) Bus <input type="checkbox"/> (b) Mini Bus <input type="checkbox"/> (c) Private Taxi <input type="checkbox"/> (d) Grab Taxi <input type="checkbox"/>
11.	How many days per week do you use public transportation?	(a) Every day of the week <input type="checkbox"/> (b) One-two days a week <input type="checkbox"/> (c) Three days a week <input type="checkbox"/>
12.	When do you use public transportation?	(a) Peak hours <input type="checkbox"/> (b) Night hours <input type="checkbox"/> (c) All the time <input type="checkbox"/>
13.	With whom do you usually use public transportation?	(a) Alone <input type="checkbox"/> (b) Along with a family <input type="checkbox"/> (c) Friend or colleague <input type="checkbox"/> (d) Other <input type="checkbox"/>
14.	How far is the distance you usually commute on foot to reach the bus stations?	(a) Less than fifteen minutes <input type="checkbox"/> (b) Fifteen minutes-half an hour <input type="checkbox"/> (c) Half an hour-one hour <input type="checkbox"/> (d) More than one hour <input type="checkbox"/>
15.	How long do you wait for the means of transportation per trip?	(a) Less than fifteen minutes <input type="checkbox"/> (b) Fifteen minutes - Half an hour <input type="checkbox"/> (c) Half an hour - One hour <input type="checkbox"/>

		(d) More than one-hour <input type="checkbox"/>
16.	How much do you spend on public transportation daily?	(a) Less than 500 Kyat <input type="checkbox"/> (b) More than 500 Kyat <input type="checkbox"/>
17.	How do you evaluate the cost of public transportation in regard to your monthly income?	(a) High <input type="checkbox"/> (b) Adequate <input type="checkbox"/> (c) Low <input type="checkbox"/>

Part C – Personal Harassment

No.	Question	Answer
18.	Do you have a different experience than that of a man when commuting with public transportation?	(a) Yes <input type="checkbox"/> (b) No <input type="checkbox"/>
19.	When using public transportation, are you harassed for being a woman?	(a) Yes <input type="checkbox"/> (b) No <input type="checkbox"/>
20.	If yes, please specify type of harassment?	(a) Verbal abuse <input type="checkbox"/> (b) Physical abuse <input type="checkbox"/> (c) Stalking <input type="checkbox"/>
21.	Where are you harassed?	(a) On the street, while walking to public transportation <input type="checkbox"/> (b) At the bus station <input type="checkbox"/> (c) In the bus <input type="checkbox"/> (d) In taxi <input type="checkbox"/>
22.	While using public transportation, when are you harassed?	(a) Morning peak hours <input type="checkbox"/> (b) Evening peak hours <input type="checkbox"/> (c) Night hours <input type="checkbox"/>
23.	How do you act after being harassed?	(a) I walk faster <input type="checkbox"/> (b) I confront the person <input type="checkbox"/> (c) I submit a complaint <input type="checkbox"/> (d) I choose a special seat <input type="checkbox"/> (e) I look at a certain place <input type="checkbox"/>

24.	While using public transportation, how often are you harassed?	(a) Never <input type="checkbox"/> (b) Few times or less annually <input type="checkbox"/>
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		(c) Once a month or less <input type="checkbox"/> (d) Several times a month <input type="checkbox"/> (e) Several times a week <input type="checkbox"/> (f) On daily basis <input type="checkbox"/>
25.	If harassed, who is the one harassing you?	(a) Driver <input type="checkbox"/> (b) Passengers <input type="checkbox"/> (c) Bus collector <input type="checkbox"/> (money collectors)

Part D – Women View of Public Transportation

No.	Question	Answer
26.	Speed	(1) Very dissatisfied <input type="checkbox"/> (2) Dissatisfied <input type="checkbox"/> (3) Neutral <input type="checkbox"/> (4) Satisfied <input type="checkbox"/> (5) Very satisfied <input type="checkbox"/>
27.	Comfortability reliability seats	(1) Very dissatisfied <input type="checkbox"/> (2) Dissatisfied <input type="checkbox"/> (3) Neutral <input type="checkbox"/> (4) Satisfied <input type="checkbox"/> (5) Very satisfied <input type="checkbox"/>
28.	Shelters ease of use	(1) Very dissatisfied <input type="checkbox"/> (2) Dissatisfied <input type="checkbox"/> (3) Neutral <input type="checkbox"/> (4) Satisfied <input type="checkbox"/> (5) Very satisfied <input type="checkbox"/>
29.	Travel information easy	(1) Very dissatisfied <input type="checkbox"/> (2) Dissatisfied <input type="checkbox"/> (3) Neutral <input type="checkbox"/> (4) Satisfied <input type="checkbox"/> (5) Very satisfied <input type="checkbox"/>
30.	Waiting time	(1) Very dissatisfied <input type="checkbox"/> (2) Dissatisfied <input type="checkbox"/>

		(3) Neutral <input type="checkbox"/> (4) Satisfied <input type="checkbox"/> (5) Very satisfied <input type="checkbox"/>
31.	Safety	(1) Very dissatisfied <input type="checkbox"/> (2) Dissatisfied <input type="checkbox"/> (3) Neutral <input type="checkbox"/> (4) Satisfied <input type="checkbox"/> (5) Very satisfied <input type="checkbox"/>
32.	Public bus transportation services	(1) Very dissatisfied <input type="checkbox"/> (2) Dissatisfied <input type="checkbox"/> (3) Neutral <input type="checkbox"/> (4) Satisfied <input type="checkbox"/> (5) Very satisfied <input type="checkbox"/>
33.	How does public transportation impact your daily commute to work or school?	(a) Negatively <input type="checkbox"/> (b) Positively <input type="checkbox"/> (c) No impact <input type="checkbox"/>
34.	How do you describe society's perception of women using public transport?	(a) Negatively <input type="checkbox"/> (b) Positively <input type="checkbox"/> (c) No impact <input type="checkbox"/>
35.	Do you believe that public transport is integral for a women's economic participation?	(a) Yes <input type="checkbox"/> (b) No <input type="checkbox"/>
36.	Do you believe that public transport is integral for a women's social empowerment?	(a) Yes <input type="checkbox"/> (b) No <input type="checkbox"/>
37.	Do you believe that public transportation in Yangon is suitable for people with disabilities?	(a) Yes <input type="checkbox"/> (b) No <input type="checkbox"/>
38.	Do you believe that public transportation in Yangon is suitable for senior citizens?	(a) Yes <input type="checkbox"/> (b) No <input type="checkbox"/>

Thank you for your response.

