



Analysis of the public transport system in the town of Gbadolite, Province of Nord-Ubangi in the Democratic Republic of Congo

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Abstract

The purpose of this study is to examine the urban transport system in the town of Gbadolite, in the province of Nord-Ubangi in the Democratic Republic of Congo.

For this study, 150 respondents were indexed, numbered but drawn at random to avoid subjectivity, 100 were retained as samples. It was found that the dominance of motorized two-wheelers rated at 54.5%, followed by non-motorized two-wheelers at 37.5% and cars at 8% in the town of Gbadolite.

The town's inhabitants therefore use both private and public means of transport.

Keywords: System, transport, mobility, city, Gbadolite, Democratic Republic of Congo.

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I. Introduction

Transport in general is part of the life of every nation, and a fundamental element of all daily human activity, whether economic, leisure, sport, rescue or military. Transport thus becomes the act of carrying someone or something from one point to another by means of mobile machines (Charcot, 1928).

As for mobility, the literature on the subject has given rise to a multitude of definitions. In its general sense, it refers to a change of location by one or more people; individuals and human groups are faced with the challenge of mastering distance through mobility (Lévy & Lussault, 2003). The sociological dimension sees mobility as the movement of a person within the social group to which he or she belongs (Archambeau, 2002).

In the context of our study, mobility is defined as the average number of trips made by individuals in a given population over a given period of time.

In the Democratic Republic of Congo, urbanization has grown relatively rapidly in recent years. This urbanization is characterized by an increase not only in the size but also in the number of cities.

While in most towns in the Democratic Republic of the Congo, public transport by car is the main mode of transport, in the town of Gbadolite, motorized (motorcycles) and non-motorized (bicycles) two-wheelers are the main means of transport. The predominance of two-wheelers in the town of Gbadolite can be explained in part by the long-observed absence of an organized public transport service. A long-standing absence or inadequacy of a public transport service means that the supply of and demand for transport in a town are mismatched (Mutumbo, 2008).

It was only between 1985 and 1995, through the influence and initiative of the late Marshal MOBUTU, that the city was first equipped with a public transport company. This was the Société d'Investissement et de transport Zaïroise (SITAZ). Due to political problems, this transport company closed its doors (Mairie, 2018). After the fall of the Mobutu regime in 1997, no structure was set up to resolve these problems in the town of Gbadolite. And in the meantime, bicycles and hardly any motorcycle cabs are the only means of urban transport. The city of Gbadolite is characterized by population growth. This growth is largely due to the relatively high demographic increase resulting from migration and war.

According to the city's 2017 and 2018 demographic report, Gbadolite's urban population rose from 284,956 to 331,584, representing an estimated growth rate of 16.36% (CAID, 2020).

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That's why our concern in this work is to alleviate the problems of moving the population from their homes to services in complete safety and comfort.

This is due to the spatial organization of the town of Gbadolite, which is well-equipped, with basic infrastructure, networks (roads, water, electricity, etc.) and administrative facilities; and a periphery whose residents are moving away from homes and services as the town expands.

From this, our main question can be stated as follows: What underlies the dominance of two-wheelers on the public transport system in the town of Gbadolite?

Specifically, this study seeks to answer the following specific questions:

- What is the dominant mode of transport in the city of Gbadolite?
- Under what conditions is public transport carried out in Gbadolite?
- How mobile are the inhabitants of Gbadolite?

II. Materials and methods

Research environment

This study was carried out in Gbadolite, the capital of Nord-Ubangi Province, in the Democratic Republic of Congo.

In 1967, Gbadolite was a hamlet with just a few huts. The native Mobutu Sese Seko transformed Gbadolite into a luxurious town, often referred to as the "Versailles of the jungle". He built a dam and hydroelectric power station on the Ubangi River, an international airport that could accommodate Concorde, and three huge palaces. The region's roads were among the best maintained in the country. The town's inhabitants found themselves particularly privileged, especially when it came to finding employment, usually as household staff.

The town of Gbadolite was created by ordinance-law no. 87-007 of January 10, 1987. It is headed by a mayor.

The town of Gbadolite is the capital of the province of North Ubangi, subdivided into three communes (commune of Gbadolite, commune of Molegbe and commune of Nganza) with 27 districts, and 5 groupements (Lite, Gbau, Bakpa, Gobeles and Mbanza-vuluzi) (Tilouine, 2018).

The town of Gbadolite covers an area of 278 km² and is located in the middle of the equatorial forest, a dozen kilometers south of the banks of the Ubangi River. It is in the north of the province on the RN24 national road, 1,147 km northeast of the capital Kinshasa as the crow flies.

The geographical coordinates of Gbadolite are as follows: Latitude North 4° 16' 41"; Longitude East 21° 00' 18"; Altitude 300 m and 500 m. (CAID, 2023).

Equipment

The materials used in this study consisted of means of transport, survey questionnaire, interview and data processing software (Ms Excel 2016).

Methods

A mixed-methods approach was adopted for this study, using statistical and analytical methods (Ngbolua et al., 2021). Interview, survey, observation and documentary techniques were used. For financial reasons, 150 respondents were indexed and numbered, but drawn at random to avoid subjectivity. 100 were retained as samples.

Observations and surveys focused on :

- Reasons for travel: study, service, commerce, sport and leisure, visiting, medical care and religion ;
- Travel time ;
- Mobility frequency: by gender, household position, age, marital status, socio-professional category, monthly income. □ Means of transport: bicycle, motorized two-wheeler and car.

III. Results and discussion

Resultats

The reasons for travel were taken from the survey, and the results are shown in graph 1.

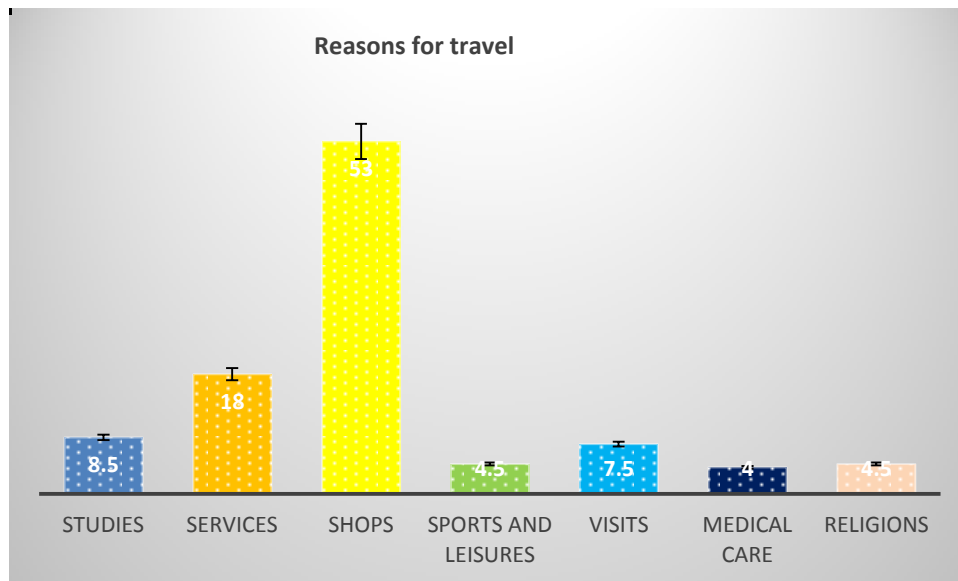


Figure 1: Distribution of respondents by trip purpose.

The survey revealed that 53% of respondents travelled for business purposes, 18% for services, 8.5% for study, 7.5% for visits, 4.5% for religion and sport/leisure and 4% for medical care in the town of Gbadolite.

Travel time

Travel time is shown in figure 2.

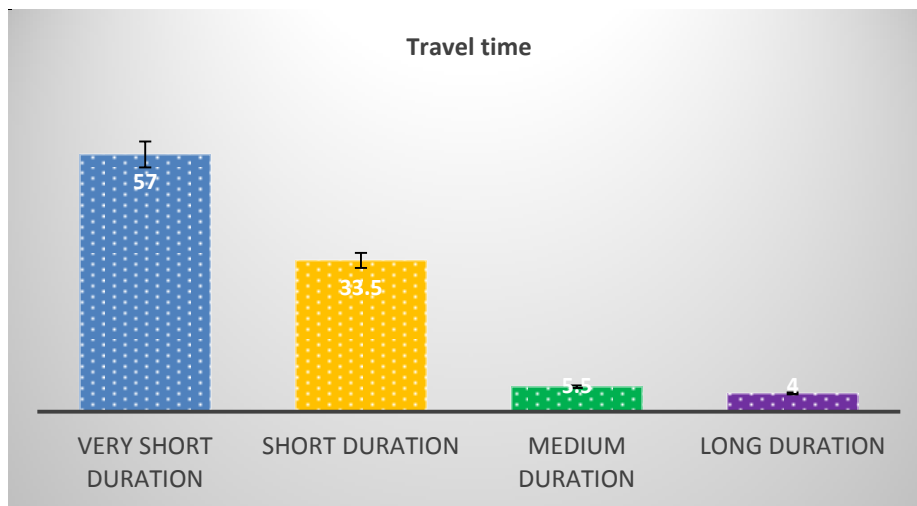


Figure 2. Distribution of respondents by trip duration

A study of this graph shows that very short trips are in first place at 57%, followed by short trips at 33.5%, medium trips at 5.5% and long trips at 4%.

Mobility frequency (trips)

The frequency of mobility by gender is shown in figure 3.

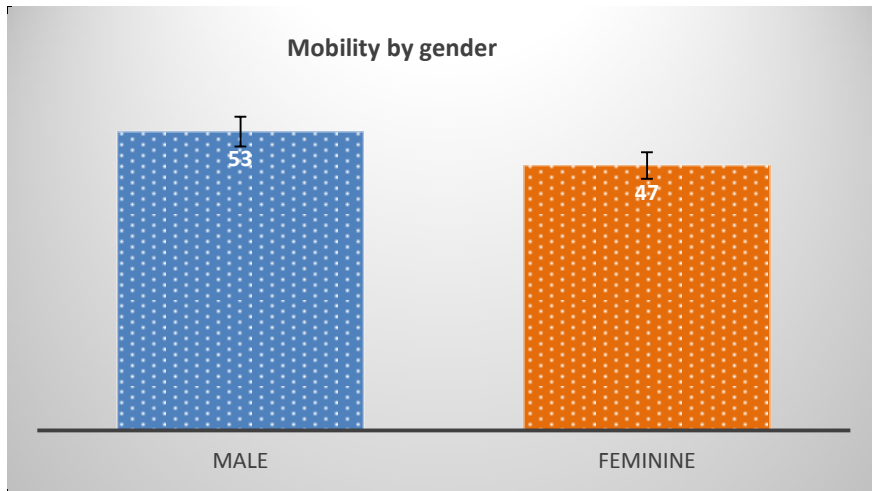


Figure 3: Distribution of mobility by gender.

As shown in figure 3, men dominate with 57% and women with 43%.

Mobility frequency by age

Figure 4 shows the mobility of respondents by age.

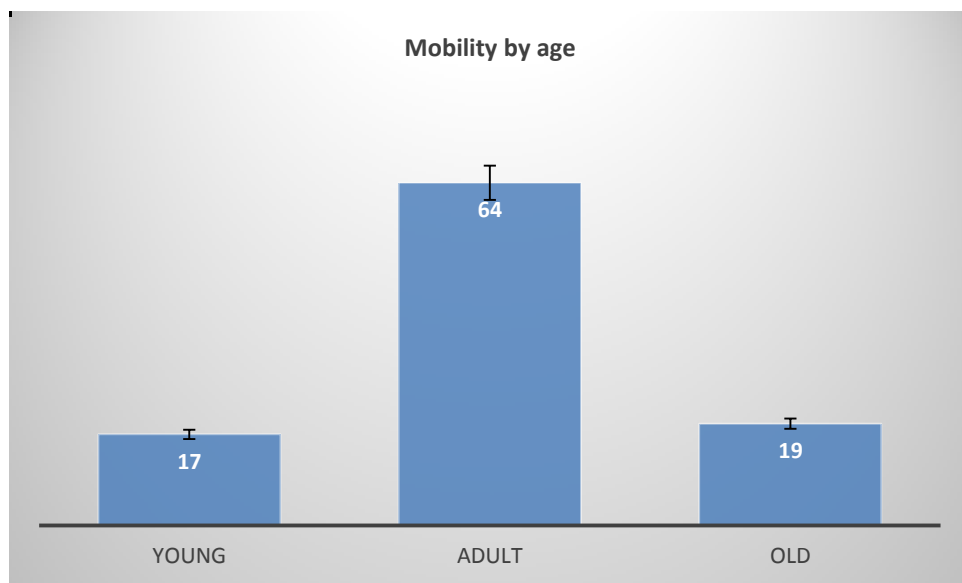


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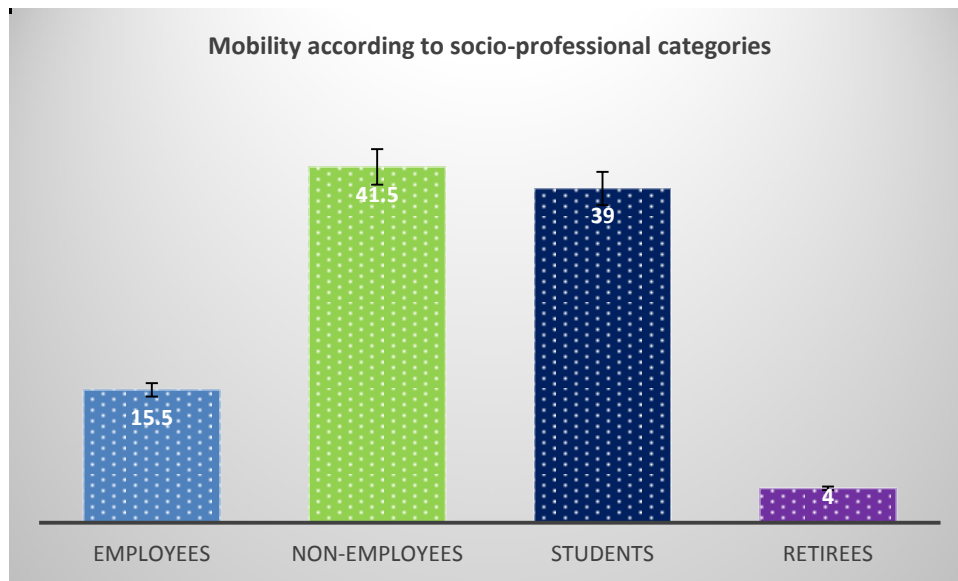


Figure 5: Breakdown of mobility by socio-professional category.

Analysis of this graph shows that the self-employed are in first place with 41.5%, followed by students at 39%, salaried employees at 15.5% and then retired people at 4%. Means of transport Figure 6 illustrates the means of transport adopted by respondents.

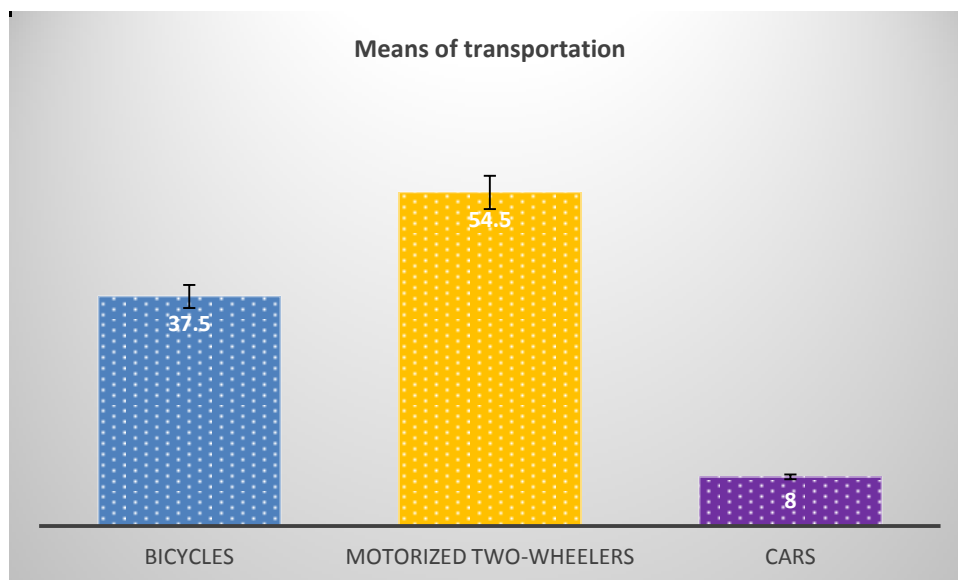


Figure 6. Distribution of respondents by means of transport.

This graph shows the dominance of motorized two-wheelers at 54.5%, followed by non-motorized two-wheelers at 37.5% and cars at 8%.

V. Discussion

It has been observed that the motive for travel for commerce is very high compared to other services. This high level of commercial travel is explained by the fact that most of the city's working population is unemployed, and must travel from day to day in search of daily bread (Mputu, 2005). It has been noted that the duration of people's movements is very short. This situation of very short travel times is justified by the city's very small surface area (Omasombo, 2019). On the other hand, journeys lasting thirty minutes or more are generally made on foot or by bicycle from one commune to another.

Our graph shows that males are more mobile than females. This high frequency of mobility is justified by the fact that men are the heads of the family and must move at all times to seek the survival of the household or family, unlike women who are often at home looking after household chores (Sagnon, 2008).

It has been observed that adults are more mobile than the old and young. This high level of mobility can be explained by the fact that people in this age bracket are active and therefore move around more. In most cases, they own a means of transport on a permanent basis.

Unlike young people, they are generally under parental guardianship. As a result, they are not totally free to come and go at any time; moreover, the elderly, people of retirement age, hardly ever engage in activities that require permanent travel.

It has been observed that the self-employed travel more than students, employees and retirees. Non-salaried workers have a very high commuting rate compared to salaried workers, students and retirees. This can be explained by the fact that self-employed people are looking for a regular income to survive, which is a prerequisite for high mobility. It was noted that motorized two-wheelers are the most widely used means of transport in the area, compared with non-motorized two-wheelers and cars.

This high level is explained by the flexibility and efficiency of motorized two-wheelers, which can reach any point in the city. This reflects the freedom and speed that this means of transport offers users. On the other hand, to facilitate urban mobility, it is imperative to have good, high-capacity public transport systems that are well integrated into a multimodal scheme, with transport access points located at reasonable distances from homes and workplaces, for all (UN-Habitat, 2022).

On the other hand, non-motorized two-wheelers appear to be a transitional mode for people on low incomes. In addition, the car is an efficient, fast and comfortable means of transport, protecting the user from the risk of accident, theft or bad weather. Its only disadvantage is that it is very expensive, making it unaffordable for the vast majority.

However, it must be recognized that even if cars and motorized two-wheelers have many advantages, non-motorized two-wheelers remain a clean, non-polluting means of transport and enable people to get around at lower cost (Papon, 2012; Martin, 2021).

V. Conclusion

This study was initiated to analyze the public passenger transport system in the town of Gbadolite, North Ubangi, Democratic Republic of Congo.

The results show that the public transport system in the town of Gbadolite, despite the technological advances of the twenty-first century, remains uncomfortable due to the dominance of two-wheelers whose operation does not meet conventional standards. It should be noted that cabs and buses will have a hard time imposing themselves due to the importance of motorized two-wheelers in traffic and the very low purchasing power of the population.

The main difficulty lies not only in the very low purchasing power of the city's population, characterized by high unemployment, a meagre wage bill and the phenomenon of, and I quote, "unpaid mechanization", but also in the advanced state of disrepair of the city's primary, secondary and tertiary road networks, coupled with the poor road maintenance policy implemented by the city's political and administrative authorities.

Cars are only used by a minority of people, as the use of this means of transport requires enormous expenditure. In terms of reasons for travel, the people of Liège are generally on the move for income-generating activities, shopping or visits.

Most of these trips are of short duration. The high frequency of mobility per person and per day is explained by the large number of individual vehicles in household equipment.

However, this mobility is a function of socio-demographic (gender, age, etc.) and socio-economic (level of education, income, etc.) characteristics.

The opinions of Litéens are favorable to individual means of transport, especially motorized two-wheelers and private cars.

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