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Abelim PASSOLI^{1*}, Coffi AHOLOU²

URBAN SPRAWL AND ACCESSIBILITY IN DOWNTOWN LOMÉ: MOBILITY ISSUES AND SOCIO-SPATIAL INEQUALITIES

Summary. This study analyzes the impact of urban sprawl on accessibility to downtown Lomé, with a particular focus on mobility issues and socio-spatial inequalities. By adopting a mixed-methods approach that combines field surveys and cartographic analyses, the research shows that the centralization of economic and administrative services, coupled with uncontrolled spatial expansion, exacerbates traffic congestion and limits access to essential services. The results reveal a strong dependence on individual transport modes in suburbs, reflecting the lack of effective public alternatives. The findings highlight major issues for territorial equity and the sustainability of urban mobility and emphasize the need for polycentric planning as well as targeted improvements in transport infrastructure.

1. INTRODUCTION

African cities are experiencing rapid and often unplanned urbanization, resulting in major constraints in urban mobility. Lomé, the capital of Togo, exemplifies this phenomenon perfectly. The population of the Autonomous District of Greater Lomé is estimated to be around 2.1 million inhabitants in 2025, with an annual growth rate of nearly 3%. This sustained demographic growth is accompanied by significant spatial expansion, characterized by urban sprawl that fragments space and increases distances between peripheral areas and the city center.

This uncontrolled extension of the urban fabric complicates accessibility to the center, which remains the economic, administrative, and social heart of the capital. Essential services such as health, education, administration, and commerce are highly concentrated there, forcing residents of the peripheries to make long daily commutes, which are often costly and time-consuming.

Several studies have highlighted the poor spatial distribution of infrastructure and services in African cities, exacerbating socio-spatial inequalities. In Lomé, urban mobility largely relies on informal modes of transport, particularly motorcycle taxis and shared taxis, which absorb a significant portion of daily travel demand. Although flexible, these modes significantly contribute to traffic congestion, especially during peak hours—typically from 7:00 a.m. to 9:00 a.m. and from 5:00 p.m. to 8:00 p.m. —when home-work and home-school flows saturate road infrastructures. The lack of a structured mass public transport system further exacerbates these constraints and reinforces households' dependence on individual or semi-collective solutions.

Previous work on mobility in Lomé has mainly focused on either the sectoral diagnostics of transportation or the evolution of land use through satellite imagery. However, few studies simultaneously explore urban sprawl, daily mobility practices, and socio-spatial inequalities in access to services. This gap limits the overall understanding of mobility dynamics and restricts the possibilities for developing effective public policies. The present study aims to fill this gap by adopting a mixed

¹ University of Lome; Cities, Environment and Society in Africa Research Laboratory (VESA); 01 PO BOX 1515, Lome 01, Togo; e-mail: opassoli@yahoo.fr; orcid.org/0009-0001-8357-7803

² University of Lome; Regional Center of Excellency on Sustainable Cities in Africa (CERVIDA-DOUNEDON); 01 PO BOX 1515, Lome 01, Togo; e-mail: caholou@gmail.com; orcid.org/0009-0002-1661-3533

* Corresponding author. E-mail: opassoli@yahoo.fr

methodological approach, combining multi-temporal cartographic analyses (1986–2023) and field surveys among households. It is structured around three objectives: (i) to assess the impact of urban sprawl on daily commuting, (ii) to analyze the modes of transport used and their effects on congestion, and (iii) to examine the socio-spatial inequalities in access to essential services. The central question is, “To what extent do urban sprawl and the centralization of services in the downtown area exacerbate mobility problems for peripheral populations?” The originality of this work lies in the combination of recent quantitative and qualitative tools—namely, it uses satellite imagery to track spatial dynamics, accessibility mapping to measure gradients of inequality, and empirical surveys to estimate the actual cost (time and money) of daily commuting.

Unlike previous studies that have been limited to descriptive or sectoral approaches, this research provides updated and multi-scale evidence that directly links urban sprawl to mobility inequalities. Thus, it contributes to enriching knowledge about urban mobility in West Africa while offering operational perspectives for local decision-makers and technical and financial partners regarding sustainable urban planning.

2. LITERATURE REVIEW

Urban sprawl and mobility have been the subject of numerous studies in Africa, where rapid population growth and inadequate infrastructure create complex accessibility challenges. According to [10], the expansion of African cities, often unplanned, leads to longer commuting distances and increased reliance on motorized transport. [11] emphasized that urban mobility is largely ‘constrained’, as travel is primarily related to work, education, or access to essential services, which exacerbates congestion and reduces urban efficiency. Several studies have focused on Lomé. [12] highlighted the effect of urban sprawl on daily commutes, while [13] analyzed mobility flows by showing that the concentration of economic activities in the city center generates heavy traffic. More recently, [14] applied spatial analysis to study inequalities in access to urban services, highlighting the marginalization of peri-urban populations. Although important, these works often remain descriptive and incorporate little of both spatial data and the social perceptions of users.

On a larger scale, [15] and [16] showed that African cities share common characteristics: the weight of informal transport, socio-spatial inequalities, and low investments in sustainable modes. [17] and [18] also emphasized the need to further integrate social dimensions into urban planning and to strengthen public transport infrastructures.

This study stands out by proposing a mixed-methods approach, combining statistical surveys, semi-structured interviews, and cartographic analyses. Unlike previous studies, the current study emphasizes socio-spatial inequalities (gender, age, socio-economic status) and establishes a direct link between urban sprawl, travel constraints, and daily accessibility. Thus, the novelty of this work lies in the articulation of spatial and social dimensions to better understand mobility dynamics in Lomé.

3. METHODOLOGY

Data were collected between January and June 2024 using a mixed approach combining quantitative and qualitative methods. This methodology made it possible to cross-reference objective data such as the number of trips, the distances traveled, and the modes of transport used with users’ perceptions of their mobility difficulties. As [19] pointed out, a mixed approach offers a richer understanding of urban mobility dynamics by cross-referencing quantitative and qualitative results.

Primary data were collected using two main methods:

1. *Semi-structured interviews*: a sample of 100 transport users, composed of suburban residents, shopkeepers, students and employees, as well as institutional actors (municipalities, transport services), was interviewed. These interviews highlighted the main challenges encountered in daily travel, particularly in terms of access to the city center during rush hour. The interviews

were analyzed using a thematic approach, with the responses coded to identify the main concerns of users.

2. *Questionnaire survey*: A sample of 500 people was randomly selected, divided between the outlying areas and the city center. The questions focused on the modes of transport used, the reasons for travel (work, studies, care), as well as the constraints encountered during the journeys. Socio-demographic variables, such as age, gender, occupation, and level of education, were included to enrich the analysis.

Secondary data were obtained from institutional reports (e.g., those of [20]) and academic literature, including the work of [10] and [12] on urban mobility in Lomé. These sources helped contextualize the results and uncover general trends of mobility in the region.

The data analysis employed a mixed-methods approach, combining quantitative, spatial, and qualitative methods. The data from the questionnaires were processed using SPSS, which enabled the production of descriptive statistics (means, frequencies, and cross-tabulations) to characterize movement flows, modes of transportation, and difficulties encountered. At the same time, the use of geographic information systems enabled the mapping of flows to the city center, the identification of congestion areas, and the relationship between accessibility and spatial dynamics. Finally, the semi-structured interviews underwent thematic analysis through coding, enabling the identification of main mobility challenges and variations in perception according to socio-demographic groups. The combination of these three approaches ensured methodological triangulation, strengthening the validity of the results and providing an integrated understanding of urban mobility issues in Lomé.

4. RESULTS OF THE STUDY

4.1. The administrative city marked by the continuous concentration of services and activities

An administrative and economic hub, Lomé dominates the rest of Togolese cities on all levels. Administrative and financial services employ 2.58% of the population of Lomé compared to 1.04% for all the other regions of the country [21]. All the administrative services and most of the banking institutions are located in Lomé, sometimes without any branches in the interior of the country. School facilities and school enrolment rates, as well as health facilities, follow the same pattern of spatial inequalities. This shows the overwhelming weight of Lomé in terms of the economic, political, administrative, military, intellectual, industrial, financial, and cultural functions that it plays in relation to the other cities of the country, reinforcing inequalities and causing a growing attraction of the capital.

The intellectual and training functions are materialized by the existence of both public and private universities and training institutes. Fig. 1 shows the various school infrastructures in the city of Lomé. These include the Université de Lomé, the largest university in Togo, the Catholic University of West Africa (UCAO), ESTEAO and DON-BOSCO, the African School of Architecture and Urban Planning (EAMAU), the Regional Center for Cultural Action (CRAC), the École Supérieure des Affaires (ESA), the technical and vocational training centers that are the National School of Medical Auxiliaries (ENAM), and the École Nationale d'Administration (ENA).

Lomé is also home to the headquarters of national financial and insurance institutions (BTCI, UTB, BPEC, BRS, GTA-C2A) and regional institutions (ECOBANK, BOAD, ECOWAS, SIAB, BIA-Togo, CICA-RE). It also houses the auxiliaries of international banks (BSIC, ORABANK, Banque Atlantique, Diamond Bank, BCEAO, Bank of Africa, ESR-Togo). The city is also home to the headquarters of microfinance companies such as COOPEC, ECSC and FUCEC.

On the economic and industrial levels, the dominance of the capital city over the cities of the interior is measured by the existence of the Free Zone and the establishment of public works companies and construction and production units. In 2010, 88.5% of industrial companies established on Togolese territory were located in Lomé [12]. The capital's preponderance of commercial facilities and services is reflected in the country's two largest markets, those of Adawlato and Hédzranawé, and transport facilities with continental and intercontinental influences, such as the General Gnassingbe Eyadema International Airport (AIGE) and the Autonomous Port of Lomé (PAL).

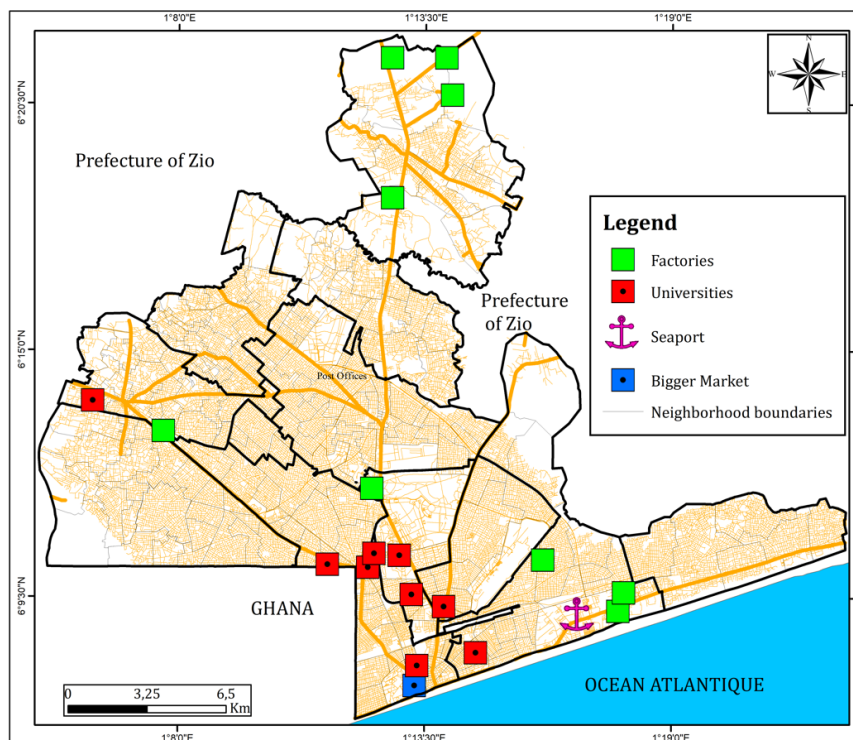


Fig. 1. Locations of factories and universities in Greater Lomé. Source: [20]

In terms of telecommunications and information, the Togolese capital also dominates the other cities of the country with a set of press networks and information and communication technology (ICT) companies such as Togocom, Moov and Café Informatique, all of whose headquarters are in Lomé.

The latter shows that agencies are more concentrated in the city center. This metropolis is home to 83.3% of the country's television channels, more than 44% of radio stations, and 96% of media outlets [13]. These facilities, which are secondary and tertiary sectors, reinforce the weight and autonomy of Lomé and its position as a national metropolis.

4.2. Lomé's city center, an area that is difficult to access during rush hour

The city center of Lomé, the economic and administrative heart of the capital, is characterized by a high concentration of activities. It thus represents a preferred destination for many residents who work there or access social services. To address these challenges, efforts must focus on modernizing road infrastructure (widening and maintaining major highways; developing reserved lanes for public transport, improving intersections); and promoting alternative and sustainable modes of transport such as collective minivans, a high-level bus service (BHNS) system, bike lanes, and pedestrian pathways. Such measures would facilitate access to urban services, diversify mobility options, and reduce the pressure on the existing road network.

According to the BCEAO, 73% of Togo's economic activities are concentrated in Lomé. This concentration is especially noticeable in the heart of the city. This forces all inhabitants who do not live there to travel to meet their needs. The organization of the city center dates to the birth of the city. The city center, at its origin, was organized around two poles, namely, "Yovo Kome" to the west and the Adawlato Grand Market sector to the east. As we pointed out above, the first is for administrative purposes, while the second is intended for commercial activities. The two hubs attract all users of public and commercial services. This massive influx of inhabitants from the different sectors of the city converging on the two main poles generates a significant daily traffic.

The increase in the number of cars, as well as the growing importance of two-wheeled means of transport, particularly the phenomenon of motorcycle taxis and other forms of transportation, is leading

to congestion on the main access roads to the city center. Defined in the mornings between 7:00 a.m. and 9:00 a.m. and in the evenings from 5:00 p.m. to 7:00 p.m., rush hour is the most difficult period for many people wishing to access the city center. The central role played by the economic and commercial sectors of downtown Lomé leads thousands of urban dwellers to move to these neighborhoods every day. A high concentration of services and other functions gives the city center a strong centrality (i.e., a power of command and decision in the economic, administrative and financial fields), as well as a strong attraction and great dynamism. Observation of the urban landscape of Greater Lomé makes it possible to identify the functional organization of the agglomeration thanks to a fairly fine spatialization of urban functions and activities. The layout of the urban fabric distinguishes between the city center, the peri-central area of the suburbs, and the peri-urban area, which is constantly evolving.

From south to north, a distinction is made between the city center, the pericenter, the suburbs and the peri-urban area. The latter continues to become denser over time.

The center of the Lomé agglomeration is effectively merged with the historic center. This area constitutes the real urban center of Lomé. There are administrative districts and the commercial area. The two sub-spaces constitute the original core of the city. Enclosed in the ring of the circular boulevard, these districts are still distinctly perceptible today in the urban landscape.

The central core of Lomé is an important decision-making center that concentrates the main political, legal, administrative, economic and cultural decisions. Thus, the administrative district, the place of political power, still concentrates almost all the central services of the State, particularly the ministries and central directorates, diplomatic representations and international organizations, the presence of historical monuments and large collective, cultural, socio-educational, leisure, and health facilities [10]. The administrative district, by virtue of its function, holds most of the city's administrative jobs.

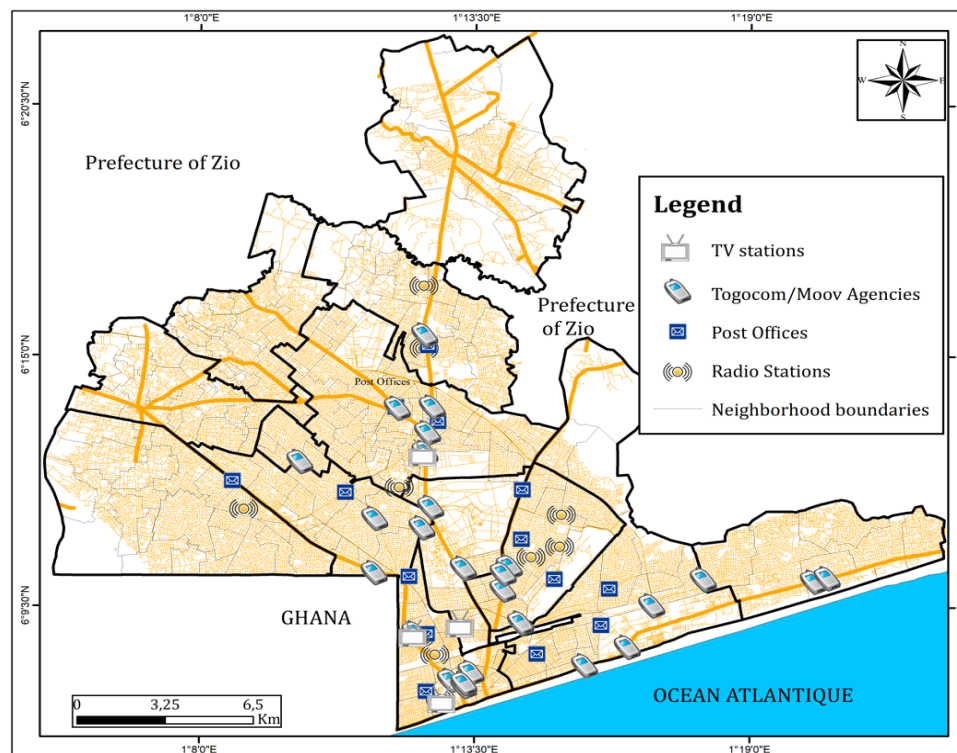


Fig. 2. Location of telecommunications infrastructure. Source: [20]

From a commercial point of view, the center of Lomé is home to the Grand Marché d'Adawlato. As a result, it is home to most of the local businesses, insurance and financial institutions, as well as a wide range of services. This functional vocation of business explains that, in the central core, only two out of ten concessions are intended for residential purposes. It should be noted that the pericenter plays

a nearly identical role and tends to merge with the actual center. It is a small peri-central ring located in the space between the front of the Tokoin Plateau to the south and the Boulevard de la Kara to the north, spanning an average distance of hardly more than five kilometers. The two urban areas (city center and pericenter) comprise neighborhoods with an urban character that concentrate services of the same scale and play practically the same roles as urban centers. These different districts are difficult to dissociate. Due to the spatial and functional characteristics of these neighborhoods, the pericenter can be considered the city center because it plays a practically identical role to the center and has the same infrastructure. There are several reasons why commuters visit these central neighborhoods.

4.3. The question of accessibility within the city of Lomé

Urban space is considered a system of functional elements (housing, economic activities, places of study and leisure) linked by a network of movement and mobility. This space embodies the concept of accessibility, which, according to [10], is "one of the most important factors in the functioning of a territory." The driving force behind accessibility is distance. It mainly coordinates travel and is linked to the physical aspect of the area. A place is more accessible when the sum of the distances separating it from other places is small.

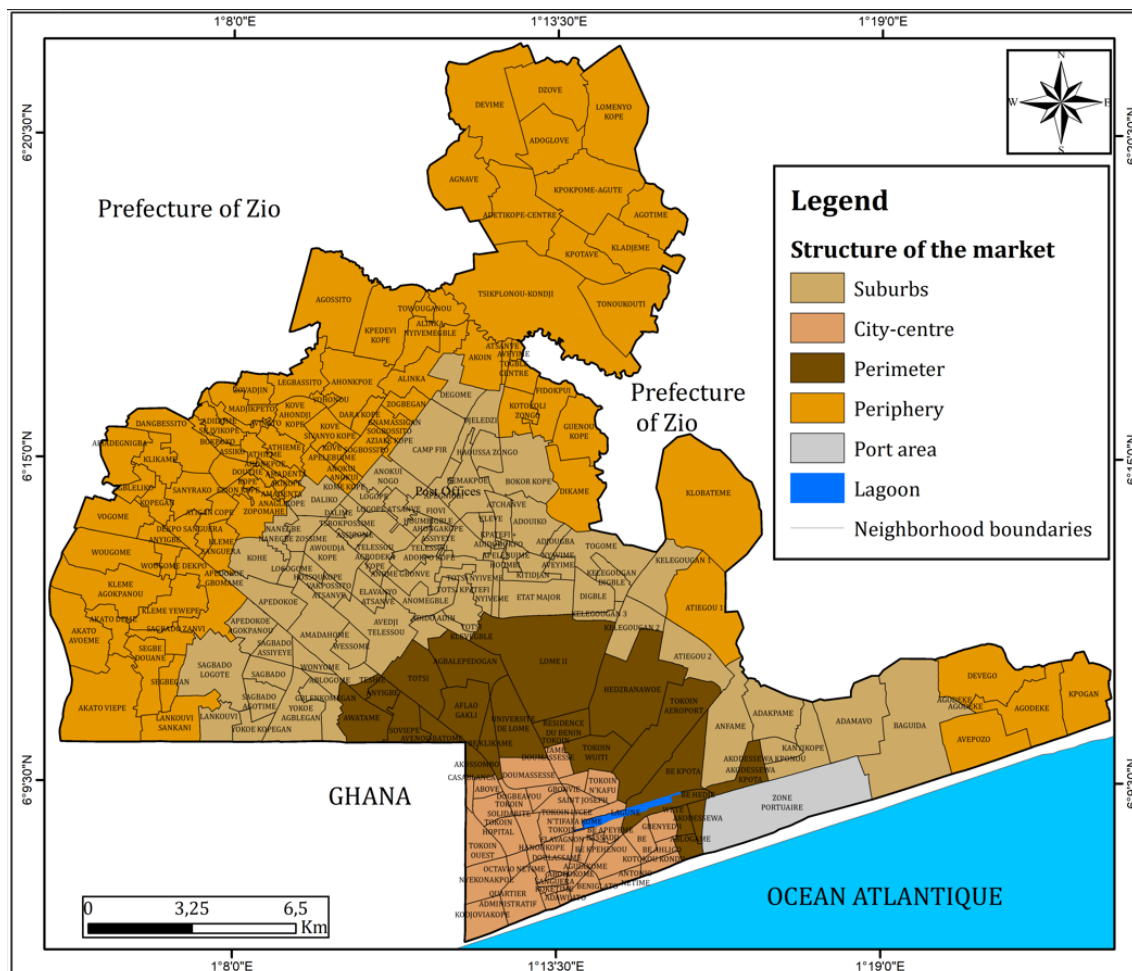


Fig. 3. The main areas of the city of Lomé. Source: [6]

Other socio-economic indicators can be associated with distance to better understand the notion of accessibility. These include the population, transportation infrastructure, the number of jobs, the condition of schools, healthcare facilities, and commercial establishments, as well as the utilization of

resources. Thus, potential accessibility considers both geographical and socio-economic variables or indicators. In Lomé, accessibility is strongly influenced by existing modes of transport. Urban dwellers use various means of transportation to commute to the urban center for work or study.

4.3.1. Reasons for access to the downtown core

The observation that is made in the streets of Lomé during the day is the constant displacement of populations. This urban population travels all day long using different modes of transport for various reasons. Mobility is determined by the main reasons for more or less precise daily journeys, such as accompaniment, leisure, shopping, schooling, medical care, and work [10]. These reasons justify the trips and characterize the person who makes them. A person's reasons for mobility reflect the person's daily activity schedules. These programs depend on certain characteristics of individuals in the life cycle. This study provides some answers as to the category of people concerned, as well as the reason for their travel (Fig. 4).

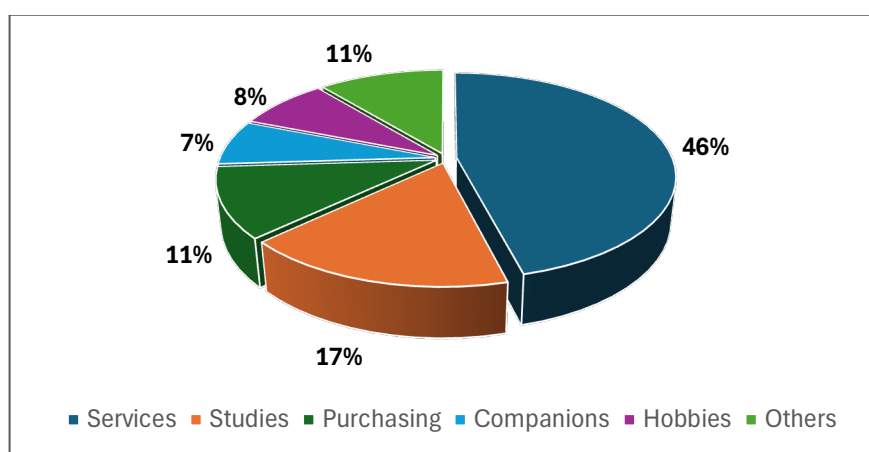


Fig. 4. Motivations for trips to the city center

Fig. 4 illustrates the reasons for urban dwellers moving to the city center. According to the figure, 46% of the people surveyed travel to the city center for work, 17% travel for studies and 11% for shopping in the city. These data show that civil servants travel more during rush hour in Lomé. Home-to-work journeys are also referred to as commuting [10]. They are one of the most restrictive types of mobility. Trips between the place of residence and the place of work, study or training are of paramount importance for the functioning and dynamics of the metropolis, because of the "constrained" and massive nature of the movements generated. The following are thus implicated:

- the constraints imposed by the working hours to be respected, situations that themselves depend on the distances to be travelled, the modes of transport and the traffic;
- the concentration of home–work travel over time and on specific routes, influencing location choices and punctuating the daily lives of populations.

Cyclical movements, including mobility, which are mostly daily, imply both a renewal of the process over time and a return to the starting point [11]. This type of mobility corresponds well to so-called "constrained" travel. The expression refers to daily trips that urban workers are obliged to make. Generally, more than 50% of these trips are made at specific times, known as "rush hour."

Field surveys have shown that 70% of trips are made at peak times (between 6:15 a.m. and 8:30 a.m. and between 5:30 p.m. and 7:30 p.m.). In Lomé, peak hours are observed twice during the day. These are between 6:15 a.m. and 8:30 a.m. and between 5:30 p.m. and 7:30 p.m. (i.e., two hours and 15 minutes in the morning and two hours in the evening). During these times, the influx of vehicles on the urban roads towards either the centers or the dormitories (suburbs and outskirts) is greater, especially on the main roads, particularly Boulevard Gnassingbe Eyadema, Boulevard de Zio, Boulevard du 30 Août and Boulevard Jean-Paul 2. Field surveys have shown a predominance of males.

4.3.2. Mobility is gender

Gender has a significant impact on the mobility of inhabitants in Greater Lomé. Due to their social role, women travel less frequently than men: 35% of women are non-mobile, compared to less than 20% of men (Fig. 5). This has an impact on their daily mobility rate, which is 2% for women and 2.6% for men.

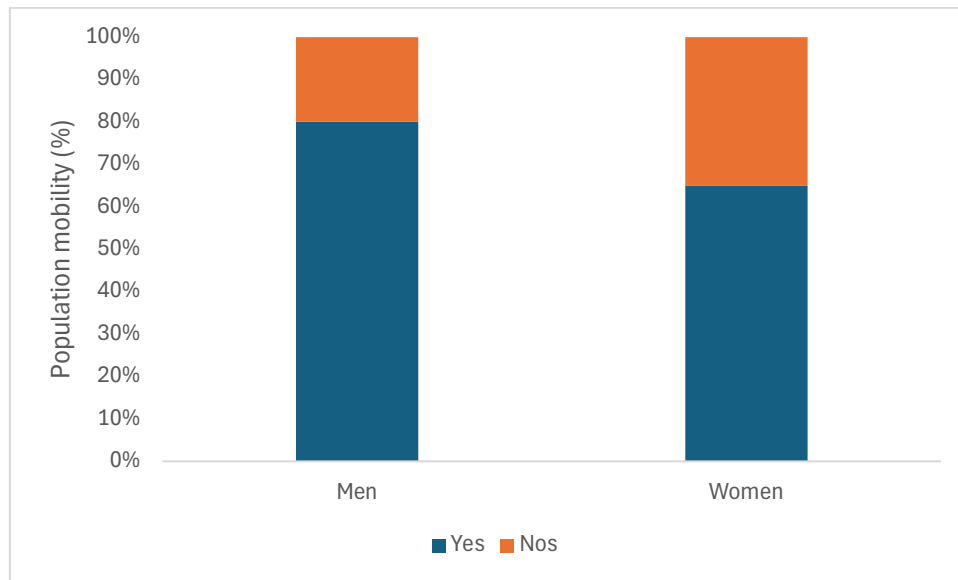


Fig. 5. Mobility rates by gender (non-motorized vs. motorized modes)

The characteristics of trips (modes, distance, price, etc.) are also different according to gender: women travel much less frequently using a personal mode of transport (motorcycles, cars, etc.) than men. As a result, more women use alternatives, mainly walking and informal modes of transport. This inequality in access to transport is reflected in the distances travelled and the associated costs: women travel 25% less than men, but access to transport is more expensive for them.

The time spent on transport is nevertheless similar, which means that the average speed of travel for women is lower than that of men. Women, on average, travel less frequently and for shorter distances than men. However, they spend as much time traveling as men (i.e., they move more slowly). They also spend more on transport (the offer that meets their specific needs is more expensive). An opinion survey conducted by Systra confirms that being a woman influences mobility choices. In addition, women are still underrepresented in the transport sector, although this sector can represent an opportunity for integration for the most disadvantaged.

It is also observed that beyond the age of 50, travel to downtown Lomé becomes very limited. In our sample, these travels were nonexistent for women (compared to 5% for men).

In order to avoid any overlap between classes, the age groups have been defined in a mutually exclusive and exhaustive manner: ≤ 20 years, 21–30 years, 31–40 years, 41–50 years, and > 50 years. This categorization ensures that individuals aged 30 or 40 belong unambiguously to a single class.

The analysis of the age distribution of transport users reveals that individuals encounter travel difficulties due to their advanced age. These obstacles, for example, are related to limitations in functional autonomy and loss of sensory acuity. This is why an overall trend towards a reduction in the number of trips, as well as the frequency of outings, is observed among older people regardless of their gender. Travel then depends on gender and sex in the city of Lomé. The use of the city center is of less interest to the elderly, particularly women. Therefore, it is unknown whether the urban transport policy in the Togolese capital considers the mobility needs of the elderly who are part of the category of people with reduced mobility (PRM).

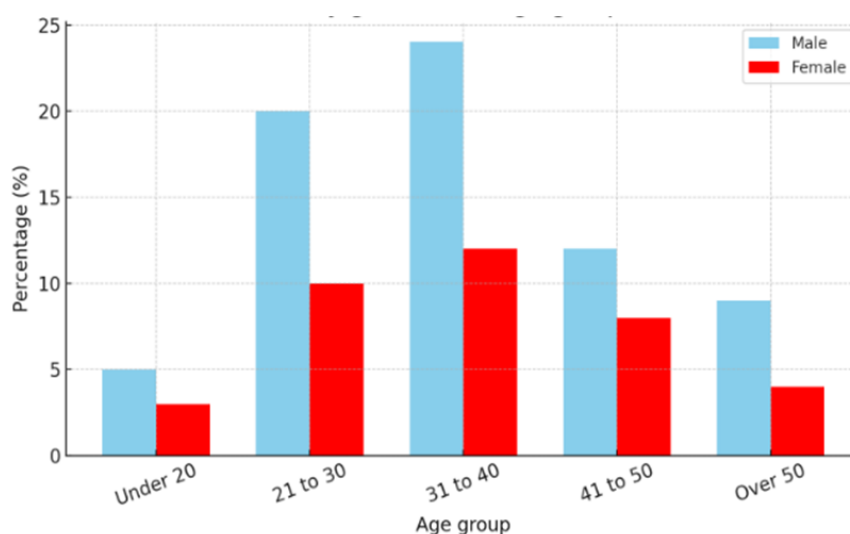


Fig. 6. Distribution of respondents by age group

A transport policy that prioritizes the physical accessibility of people with reduced mobility should take the concerns of users into account. The distribution by gender and marital status is important in the quantitative analysis of urban mobility in Lomé. [22], states that "in developing countries, it is women who take care of household work and consequently have less mobility than men, particularly for work-related travel." Married men who are in charge of family needs are more constrained as shown in Fig. 7.

Fig. 7 shows a distribution according to marital status. It confirms the dominance of the bride and groom, who represent 53% of the captives interviewed. This situation can be explained by the fact that they have a family responsibility that obliges them not to stay put. They feel obliged to travel every day to make a living. The level of education of users is a discriminating factor in mobility. The increase in the average level of education of the study area's population contributes to the development of various activities over time and in urban spaces, thus leading to increased mobility. Automobile mobility shows a clear correlation with the level of education of respondents (Fig. 8).

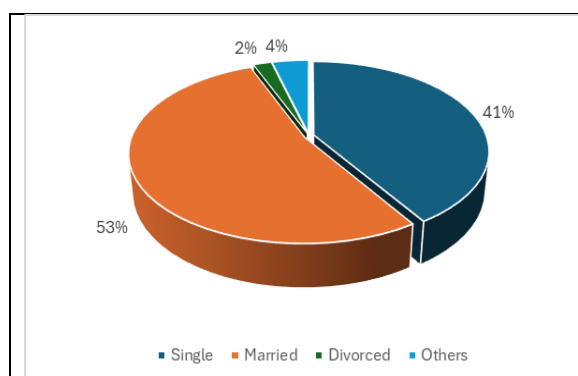


Fig. 7. Distribution of users by marital status

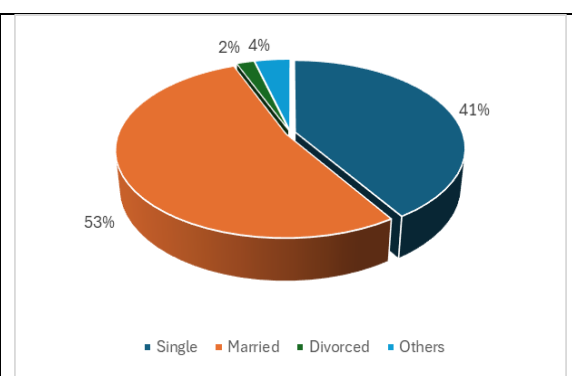


Fig. 8. Distribution of respondents by level of education

As illustrated in Fig. 8, 81% of the respondents have received some form of formal education, while 19% have not. Among the educated group, 49% completed secondary school (middle or high school), 18% completed primary school, and 14% completed higher education. This relatively high level of education is closely linked to urban mobility patterns: educated populations are more likely to travel regularly for purposes such as higher education, vocational training, internships, or employment in companies and industries.

By contrast, respondents with little or no formal education exhibit lower levels of regulated mobility, as their commuting patterns are less structured by institutional or professional obligations. The socio-professional analysis of mobility highlights the role of the Lomé city center as an economic and educational hub, attracting daily flows from both educated and less educated groups.

Fig. 9 shows the distribution of users in Lomé according to their socio-professional status. It shows a small proportion of respondents working in the primary sector. Farmers represent 1.3% of the working population, reflecting a strong change in the population. Commercial activities occupy 27% of the respondents, crafts occupy 17.7%, civil servants occupy 21%, and other professions, freelance workers, and retirees represent 17.2%, 9.6%, and 9%, respectively. This high proportion of respondents highlights the commercial centrality of the city of Lomé. The major schools, business activities and major training centers are concentrated there. This strong polarization is largely due to commercial activities. All these daily mobilities of urban dwellers are configured, according to [19], by three kinds of constraints. First, insofar as more than 95% of the working population works outside their home, their mobility is largely constrained by employment. Second, the rhythms of compulsory education constitute another very restrictive dimension for many households, marking their daily journeys in a remarkable way. Third, spatial access to consumption, understood in the broad sense as "free" uses of services (shops, administrative services, leisure, cultural activities, tourism, etc.), is also strongly structured by the locations and temporalities of these services. These professional, academic, and consumer constraints place mobility under the sign of the requirement for organization, coordination, and respect for very precise schedules. The spatial division of activities better explains the fact that places where jobs are concentrated are generally located in the city center, because, as [10] stated, "urbanisation goes hand in hand with the tertiarisation of jobs and administrative centralisation." It can therefore be seen that the city center is particularly attractive for these activities. The various activities carried out by the population provide them with incomes of less than or equal to 100,000 FCA for 28% of the respondents.

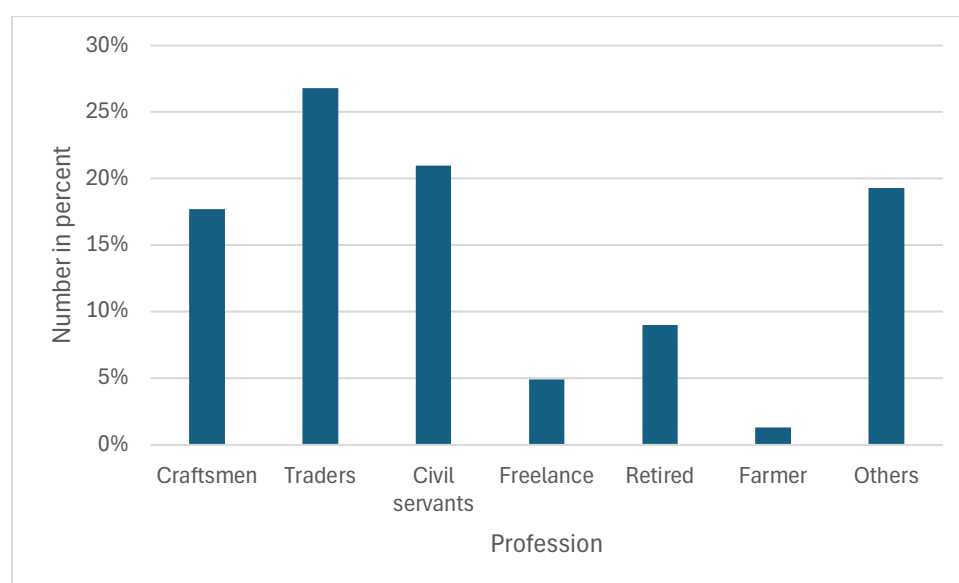


Fig. 9. Distribution of respondents by activity

By way of comparison, at the national level, the average monthly income is estimated at 51,000 FCFA. The guaranteed interprofessional minimum wage (SMIG), which was previously 35,000 FCFA, has been raised to 52,500 FCFA as of 2023. According to official statistics, 56% of households live on less than 50,000 FCFA per month, while only 10% have an income exceeding 100,000 FCFA (or about 150€). These figures confirm that the low incomes observed in the sample surveyed are part of a national trend.

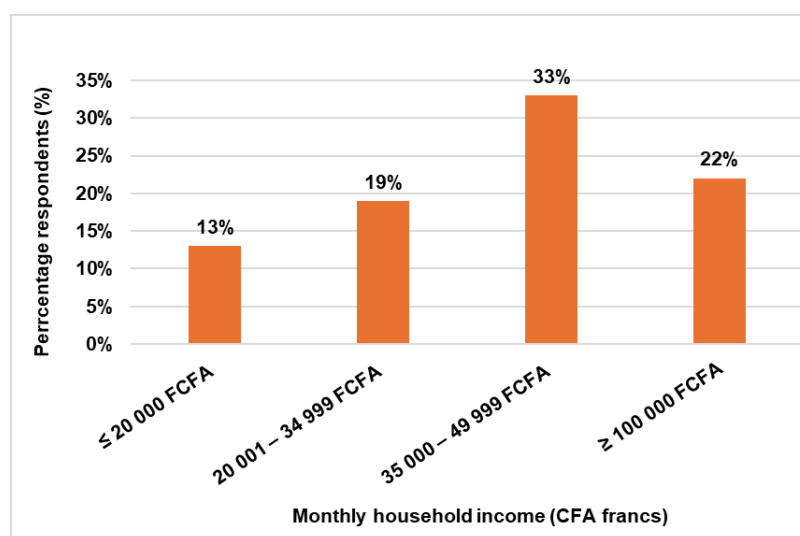


Fig. 10. Distribution of the population by income range

Fig. 10 illustrates the distribution of surveyed households by exclusive and non-overlapping monthly income intervals. The results indicate that 13% of households have an income of $\leq 20,000$ FCFA, 19% fall within the 20,001–34,999 FCFA range, 33% within the 35,000–49,999 FCFA bracket, while 22% report a monthly income of $\geq 100,000$ FCFA. These results highlight the prevalence of modest incomes within the sample, reflecting a limited economic capacity in the face of urban mobility dynamics.

In the Lomé urban area, housing is predominantly concentrated on the outskirts, while employment, training, education, and leisure centers are in the city center. This spatial organization leads to recurring directional flows, from the outskirts to the center in the morning and from the center to the outskirts in the evening. Such mobility patterns rely on both intensive and socially differentiated use of transportation means, reflecting the socio-economic inequalities in access to mobility.

5. DISCUSSION

The results indicate that urban congestion in Lomé is a complex phenomenon resulting from the interplay of several interconnected factors, including urban sprawl, the centralization of economic and administrative activities, inadequate transportation infrastructure, and the expansion of the vehicle fleet. Urban sprawl, which has led to the rapid integration of formerly rural areas into urban agglomerations, significantly increases commuting distances and makes peripheral populations dependent on motorized modes of transportation to access services located in the city center. This situation, also highlighted by [2] and [5], illustrates the direct effect of spatial expansion on mobility: the majority of residents in peri-urban areas commute daily to the center for professional, educational, or health-related reasons. The concentration of these movements during peak hours, particularly on major roads such as Boulevard Gnassingbé Eyadéma and Boulevard du 30 Août, places significant pressure on infrastructures and causes recurring traffic jams [20].

This dynamic is exacerbated by the centralization of strategic functions in the urban heart. Indeed, Lomé concentrates more than 73% of the country's economic activities, creating a typical macrocéphalism of major African cities, where the development of the center is made at the expense of the periphery. This spatial imbalance forces residents of the suburbs to converge massively towards the center to meet their daily needs.

Field data reveals that 46% of trips are related to work and 17% to studies, which intensifies congestion at certain hours. This situation is comparable to that observed in Accra, where difficulties accessing city centers slow down economic activity and reinforce the importance of the informal sector,

to the detriment of urban unity. It is also similar to the case of Cotonou, where time lost on major roads averages 45 minutes per day, with direct economic consequences for users and for the country.

Regarding transportation modes, the study confirms the predominance of the informal sector, particularly motorcycle taxis (*zémidjans*) and shared taxis, which account for most urban travel. These services, while flexible and tailored to the needs of the population, significantly contribute to congestion and the deterioration of the road network. The absence of a structured public transport system forces residents to rely on these solutions, whose proliferation increases traffic volumes. Other constraints also contribute to this significant reliance, including low accessibility of stops in the periphery, irregular service, insufficient spatial coverage, and relatively high ticket prices compared to the average household income. These factors increase people's dependence on private vehicles and motorbikes, which intensifies pressure on already saturated infrastructures. Population growth and the increase in the number of vehicles exacerbate the situation: in 2024, nearly 88% of industrial companies and 70% of administrative services remain concentrated in the city center, generating a daily flow of vehicles. Finally, the issue of socio-spatial inequalities in access to services emerges as a major element of the mobility problem in Lomé. Women and elderly people, in particular, face social and economic constraints that limit their mobility. According to Kugbega et al., women generally travel shorter distances but spend a larger share of their income on transportation costs, while elderly people reduce their trips due to physical and financial constraints. These findings confirm that urban mobility cannot be understood solely from the technical perspective of infrastructure but also raises issues of spatial and social justice. In this regard, the work of Coulibaly [24] shows that difficulties in accessing urban centers exacerbate territorial inequalities and compromise equity in access to essential services. Thus, congestion in Lomé appears to be the result of a combination of uncontrolled urban sprawl, centralization of activities, dependence on informal modes of transportation, and persistent socio-spatial inequalities. Therefore, the solutions to consider must extend beyond simple road improvements to integrate a comprehensive approach to polycentric planning, the development of a genuine public transportation system, and the reduction of social and territorial disparities.

6. CONCLUSIONS

Lomé, like many major African metropolises, holds a central place in the Togolese urban system, concentrating the majority of economic, administrative, and socio-cultural functions. This centralization, combined with rapid and poorly planned urbanization, has led to a marked spatial expansion that exacerbates urban mobility issues. The results of this research show that congestion is not only the result of population growth and the increase in the vehicle fleet but also the product of urban sprawl, the concentration of activities in the city center, the predominance of informal transport modes, and persistent socio-spatial inequalities.

The increase in home-work distances, combined with the absence of a structured public transportation system, reinforces dependence on motorcycle taxis and private vehicles, which increases pressure on already saturated road infrastructure. Furthermore, the specific constraints faced by certain social groups, particularly women and the elderly, highlight the need to integrate the inclusive and equitable dimension into mobility policies.

Three priority action areas emerge from this study. First, the development of a structured, effective, and accessible public transport system appears essential to reduce dependence on the informal sector and ensure balanced service for the outskirts. Secondly, promoting polycentric urban planning, which encourages the distribution of economic and administrative activities beyond the city center, is a strategic approach to limit urban macrocephaly and its effects on congestion. Thirdly, taking social and spatial inclusion into account, particularly through physical and financial accessibility to transport services, is essential to ensure equitable and sustainable mobility.

Ultimately, the management of mobility in Lomé poses a significant challenge to economic competitiveness, social cohesion, and the quality of life of its residents. An integrated approach, combining investments in infrastructure, institutional reforms, and territorial equity, seems necessary to sustainably transform urban mobility into a lever for development and a factor of social justice.

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