

Problem of the resurgence of two-wheeled vehicles in urban transport in Bamako: The case of motorcycle taxis (Telimani)

Mahamadou CISSE^a, Bakary Dagno^b, Ibrahima Dembele^c, Moussa Adama Coulibaly^d, Alassan Keïta^e, Alibourou Guirou^f, Abdoulaye Togo^g

^a Doctor in local development

^b Doctor in Environmental Control and Protection

^c Specialist in Local Development, Decentralization and Governance

^d Doctoral student, Institut de Pédagogie Universitaire

^e Doctoral student at ED-DESSLA, Bamako

^f Doctoral student at ED-DESSLA, Bamako

^g Doctoral student at ED-DESSLA, Bamako



Article Info

Article history:

Received: 07-08-2024

Revised: 17-08-2024

Accepted: 02-09-2024

Keywords:

Bamako
Two-wheeled vehicles
Motorcycle cabs
Telimani
Public transport

ABSTRACT

This article is part of the urban dynamics. Indeed, African cities are mostly confronted with public transport problems, which has a considerable impact on socio-economic life in the various agglomerations. Faced with the demographic growth in cities such as Bamako and the inadequacy of means of transport, other types of transport have appeared to compensate for the deficit in terms of urban transport. Given the stakes of the problem, we used a mixed approach that consists of questioning the actors of the public transport sub-sector and obtaining the opinions of users of these devices in relation to the spread of these devices. The analysis of the data shows that in addition to being an alternative to other means of transport, motorcycle taxis (Telimani) help to combat youth unemployment. They are also considered by many Bamako residents as an effective way to bypass traffic jams and get to rough areas where other vehicles cannot go. This facilitation of maneuvers constitutes the support of the populations with regard to its propagation in the urban dynamic. In addition to these elements, the difficulties of structuring and mastering the public transport sub-sector remain a concern, especially since the largest number of road accidents concern two-wheeled vehicles due to the inadequacy of safety measures and non-compliance with highway codes.

This is an open access article under the [CC BY-SA](#) license.



Corresponding Author:

Mahamadou CISSE

doctor in local development, teacher-researcher at ESCAE and Bazo universities, Bamako (Mali).

Email: mahamadoucisse57@yahoo.com

1. INTRODUCTION

In the majority of African cities where they are used, the emergence and spread of motorcycle taxis is mainly made possible because there is a mismatch between the supply of an efficient transport service and the strong demand generated by the rapid urbanization of most cities [1]. The phenomenon of motorcycle taxis began in West Africa around 1976 in the Porto-Novo region of Benin before spreading to the rest of the sub-region [2]. Seen here and there in urban public transport, motorcycles (two-wheelers) and motorcycle-tricycles (three wheels) have ended up invading all cities [3]. Indeed, population growth in West African regions accentuates a strong demand for transport, especially since most socio-economic activities are located in urban centers. Intended mainly for individual transport, the motorcycle is now used as a mode of public transport. In most cases, it is an alternative to the mobility needs of the population. That said, this new means of public transport has taken the city of Bamako, the Malian capital, by storm. The history of urban transport in Mali is not new, several companies have tried to modernize the sector in order to meet the demand of the population in terms of mobility and urban transport. Most of them have failed for various reasons, including the refusal of some drivers to submit to rules that go beyond the simple management of the lines [4]. The Urban Transport of Bamako (TUB) was created by Law No. 64-101 of December 30, 1963. It was a national company with financial autonomy. The objective was to transport civil servants and students [5]. It served the commune of Kati, the Point G hospital, Koulouba and the city center. After the disappearance of public transport, the tarpaulins called "durunis" were installed [2]. Durunis appeared in the second half of the 1960s. The Malian Road Transport Company (CMTR) from 1970 to 1975 was also created by Ordinance No. 39/CMLN of 24 December 1970. Its statute was approved by Decree No. 5/PG-RM of 15 February 1971 [6]. Other companies had tried in their turn such as Bani Transport, Diemé Transport, Zanga, Gana transport, Banimonotie, Diarra Transport, Mariko Transport, Sow Transport, Bamabus, Tababus [2]. These experiences led to a change in urban transport in the 1990s and 2000s. These companies have also been challenged by the mini buses, called in national jargon the SOTRAMA in reference to the former Malian transport company. Today, with the era of great mobility brought about by commuting in the city of Bamako, other alternatives have emerged, including the arrival of motorcycle taxis in the city's urban landscape. The use of motorcycles as a mode of transportation for commercial purposes has developed considerably. Although it has certain advantages that are more or less easy to maneuver, particularly on roads in poor condition and capable of responding quickly to demand [7], the initiative initially came from the company "teliman" which wanted to set up a fast and efficient transport system (parcel delivery, door-to-door) in order to optimize the travel time of users. It is obvious that the road infrastructure in the city is quickly saturated by traffic jams during rush hour, especially between 7 a.m. and 10 a.m. in the morning and between 4 p.m. and 7 p.m. in the evening [8]. This new alternative was quickly taken up by individuals who saw a way to save money and moreover fight against the unemployment that plagues Malian society. Nowadays, we are witnessing an upsurge in these two-wheeled vehicles in the regional capitals and more particularly in the district of Bamako without any real accompanying measures. It is clear that no safety rules are adopted either by the drivers or by the users of motorcycle taxis, who are lax and amicable settlements. For most of the people concerned, they have not received any basic training and this situation contributes enormously to creating insecurity on the roads, clashes that end in violent arguments between the drivers (taxi and mini bus) and the drivers of these motorcycle taxis. This situation is causing difficulties related to road safety in the city, which is hardly decreasing, despite the communication actions of the authorities and despite the coercive measures of government agencies. This sufficiently reflects the lack of control of the public transport sector and the inadequacy of coercive rules that lead to attempts to counter the rules. In addition, this mismanagement, around the motorcycle used as a commercial mode of transport, has also led to traffic management problems, increased noise, air pollution and greenhouse gas emissions. As an objective, this article proposes to analyze the integration of motorcycle taxis in the transport of the city of Bamako and to identify the issues surrounding its growth. As hypotheses, motorcycle taxis have occupied a central place in urban mobility, because they are seen by many Bamako residents as an alternative to existing means of transport. They also generate resources while reducing youth unemployment.

To better understand the phenomenon, we asked ourselves the following questions:

- How has motorcycle taxi transportation played a central role in urban mobility in the city of Bamako?
- What are the stakes related to the increase of motorcycle taxis in the urban dynamics of the city?
- What proposals exist for optimal management of motorcycle taxis in Bamako?

To carry out this research work, we developed a questionnaire and interview guides for motorcycle taximen, the population and the Urban Transport Regulation Directorate in order to identify the central place that motorcycle taxi transport occupies in the urban mobility of the city of Bamako, identify the issues related to their growth and propose strategies for optimal management of motorcycle taxis in Bamako.

2. METHOD

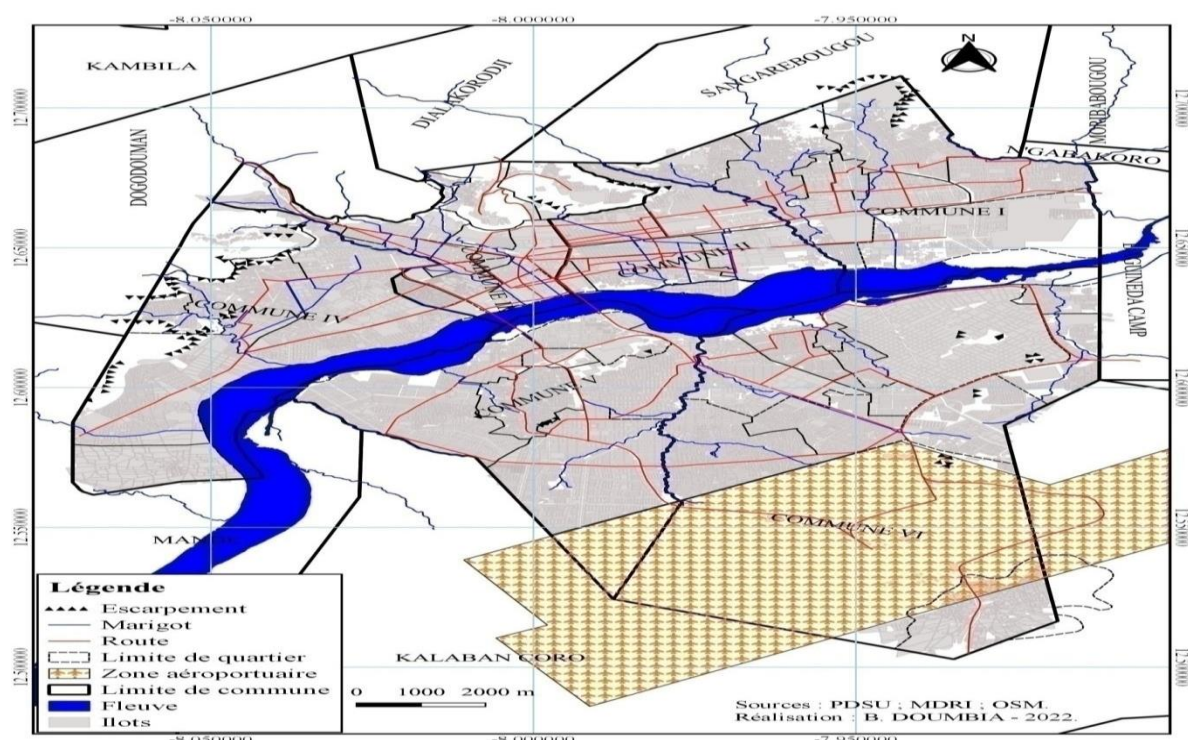
Located between 12°29'57" and 12°42'17" north latitude and 7°54'22" and 8°4'6" west longitude, the city of Bamako developed in the valley of the largest river in West Africa. The District of Bamako includes six communes, the first four of which are located on the left bank and the last two on the right bank of the Niger River [9]. The District is roughly composed of two parts:

-in the north: between the Niger River and Mount Manding in a 15 km long alluvial plain. This part covers 7,000 hectares and is narrowed at both ends;

-to the south: the right bank is a site covering 12,000 hectares.

The District extends over 22 km from West to East and 12 km from North to South. The District of Bamako is the capital of Mali [10]. In 2022, the population of Bamako is estimated at 2,817,000 inhabitants [11] (Map 1).

Map 1: District de Bamako



The relief of the District of Bamako rests on the remaining substrate of the old Precambrian basement. It is essentially made up of the plateau on which Koulouba and the Point G hospital are located, and the plain of the upper Niger, in which the city extends [12]. The District of Bamako is located in an area subject to a Sudanian-type climate characterized by a rainy season from June to October and a dry season from November to May.

The city of Bamako, located in the heart of the Sudanian savannah, despite its urban context, has kept a vegetation specific to the Malian savannahs, the gallery forests punctuating the rivers, but has also acquired vegetation introduced by man, aimed at improving the urban living environment.

The Niger River, 4,200 km long, including 1,700 km in Mali, is the most important river in West Africa in terms of its length. It divides the city in two: the left bank and the right bank and it is overlooked by three bridges connecting the banks [13]. In addition to the Niger River, in Bamako, there are a few backwaters which are: the Woyowayanko backwater, the Sogonafing backwater, the Diafarana backwater and the Korofina backwater.

The current population of the Bamako metropolitan area in 2022 is 2,817,000, an increase of 3.83% compared to 2021. Between 1975 and 2015, the population of Bamako increased by an average of 12.2% per year. The city of Bamako experienced strong urban growth between 1998 and 2009 with an increase of more than 78%. Its rate of urban growth is the highest in Africa and the sixth largest in the world. Life expectancy at birth is constantly changing in Mali (54 years, including 53 years for men and 55 years for women, DNP projections 2015-2020 [11]).

Bamako's economy is mainly made up of small businesses. The main economic activities of the District of Bamako are: industry, trade and tourism, but agriculture and livestock farming are practiced in an insignificant way.

To carry out this research, we have adopted the mixed method, which allows us to collect enough data to achieve the set objective. Thus, we developed a questionnaire that was sent to 50 randomly selected motorcycle taximen who wanted to answer the questions and interview guides were sent to the Urban Transport Regulation Department. That said, in order to enrich the data collected, we also questioned the average population in order to obtain their opinions on the resurgence of motorcycle taxis in Bamako traffic, especially since when we talk about these means of transport, they are the first users.

The interviews lasted a total of two hours. After the information was collected, we proceeded with the coding and the data were entered using the SPSS software, then the tables were drawn up in the Excel software, followed by the comments. The Zotero software was used to facilitate the development of the bibliography and we also used writings on the theme. Thus, the documentary research led us to the national library, and to that of the "Ecole Normale Supérieure de Bamako", in addition to the websites.

3. RESULTS AND DISCUSSION

3.1. The role of motorcycle cabs in urban mobility in Bamako

In developing countries where road infrastructure and public transport are insufficient, motorized two-wheelers (DRM) have become a fast, affordable and efficient transport alternative. For most users of this means of transport in Bamako, it turns out that it is one of the solutions to be able to move easily in a city where traffic jams are almost permanent on all axes. For MD, a thirty-year-old, prefers to use the motorcycle taxi for his trips because: "the trip is easy and we can easily bypass the traffic jams" Beyond this aspect, AF points out that the staff of other means of transport have an unhealthy behavior that pushes customers to prefer the services of motorcycle taxis more than the latter. As for MB, a union leader:

"Today, the motorcycle taxi connects the districts of Bamako quickly and cheaply. Other means of transport cannot access certain places because of certain constraints related to the lack of access roads and the geography of these environments."

This is a reality because the city of Bamako is surrounded by hills and some spontaneous neighborhoods are located on these hills, which are not always easy to access, especially in winter.

Picture: 1



Source: personal picture, 2024

Picture: 2



Source: personal picture, 2024

Beyond this aspect, motorcycle taxis have grown in the district of Bamako in order to respond to the inadequacies of public transport. Before the arrival of two-wheeled vehicles in public transport, the district of Bamako was served by 23-seater minibuses called in national jargon "the sotrama" in reference to the country's former urban transport company, taxis and tricycles also called "katakatani". The latter is more particularly used to serve the distance between the main road and the areas far from the tarmac within the district. Sotrama and Katakatani have some restriction as they are not allowed to use any other route outside of their original route. For AT, who is in her forties and used to minibuses:

"When you are at the da rail (to designate the railway station) to take the sotrama, you have to wait until the vehicle is full so that it can move. For some destinations, you have to take another minibus because it is rare to get the sotrama that goes to the neighborhood."

This explains how limited transport is in the city. It is sometimes obvious to note that some districts have almost no minibuses dedicated to them and if there are any, it is one or two minibuses for the district. This situation has pushed the people of Bamako to quickly join the services of motorcycle taxis which can go anywhere and at

cheaper rates. According to surveys with the drivers of these machines, the rates per service vary from 300 CFA francs to 5000 CFA francs for the entire agglomeration depending on the trips. AF, a student and customer, confirms this: "for a trip between the "Tour of Africa" monument and the University of Bamako in Badalabougou, the fare is 1000 CFA francs. Initially, there is no mini bus that serves this locality even though it is one of the busiest in the city, especially by students.

3.2. Challenges associated with the growth of motorcycle cabs in the city's urban dynamics

The failure of the public transport system and the state of the roads in Bamako facilitated the spread and development of motorcycle taxis in the city. This increase in urban dynamics can be explained in several ways. These include the growing level of unemployment among the population, the deterioration of roads and the inadequacy of the quality of services of conventional means of transport in addition to their limited and obsolete number.

Most motorcycle taxi drivers are young people and often graduates who come from Bamako faculties and who have no other job alternatives. (table 1)

Table 1: age groups of motorcycle cab drivers

Age group	Effective	Rate
19 – 24	3	6,00
25 – 35	29	58,00
36 – 45	11	22,00
46 – 50	7	14,00
50 – PLUS	0	0
TOTAL	50	100,00

Source: field surveys, March 2024

This table shows the age range of the respondents. The majority of respondents are young people and are between 19 and 45 years old, which is relatively consistent with national statistical data [14]. The analysis of the data shows that the vast majority of motorcycle taxi drivers work in the profession to meet their needs.

The following table gives us more information on the reasons that explain the spread of this activity, which concentrates more young people. (table 2)

Table 2: reasons for practice

Reason	Staffing	Rate
Providing for needs	45	90,00
Personal reason	2	4,00
Personal transportation	3	6,00
TOTAL	50	100,00

Source: field surveys, March 2024

These data better explain the importance of the activity for those who carry it out. Beyond being a means of fighting unemployment, it makes it possible to feed these actors. 90% of the respondents believe that they drive motorcycle taxis like TC in order to meet socio-economic needs. This explains how much it is a way to fight against the precariousness of life accentuated by the high level of unemployment and the lack of alternatives for young people. We also found that most have at least a basic education degree. For AS, a motorcycle taxi driver: "I graduated with a degree in administrative sciences two years ago. To be able to bring something to the family, I have to do this job." Today, it is obvious that this is not a choice for many of them, but rather a way to make ends meet. In addition, with the energy crisis that has hit the country for a few months, activity is exploding with new entrants who have retrained to be able to cope with the said crisis. They are tailors, carpenters, sheet metal workers, electricians, welders, etc. to have embraced the profession of motorcycle taxi driver in order to have a way out to respond to the energy crisis in the city of Bamako.

Today, it is clear that it is a rather profitable activity with rates per service ranging from 300 CFA francs to 5000 CFA francs for the Bamako agglomeration and more when the journey is located outside the city. For a day of service, the daily margin may vary from one driver to another. (table 3)

Table 3: daily and monthly margins

Daily margin	Effective	Rate
-5000	7	14,00
5000 – 15000	31	62,00

20000 – plus	12	24,00
TOTAL	50	100,00

Source: field surveys, March 2024

As shown in this table, we can see that overall, it is a rather profitable activity with fairly substantial daily margins. More than the majority of respondents (62%) estimate that they earn between 5000 and 15,000 CFA francs per day. Also, 24% estimate that they have 20,000 CFA francs and more per day.

If we make a projection in the month, some drivers can have at least up to 150,000 FCFA per month and this also varies according to the months and activities beyond working hours. That said, since its advent in 2019, the use of motorcycles in public transport has become an alternative to other means of transport. This is not without consequences because other public transport is seeing a share of its market slip away from them in favor of motorcycle taxis. This situation has an impact on the coexistence of players in the public transport subsector. (table 4).

Table 4: relationship with other public transport systems

Quality of relations	Number	Rate
Less good	16	32,00
Good	11	22,00
Complicated	23	46,00
Other	0	0
TOTAL	50	100,00

Source: personal surveys, March 2024

In this table, we see that opinions are quite divided. There are 32% of respondents who find that the reports are not as good, 22% find that the reports are good and 46% believe that the relationships are complicated. It is important to emphasize the fact that this situation stems from several factors including misunderstanding. For other TCs, drivers of two-wheeled vehicles do not respect the highway code because they weave between vehicles and do not hesitate to brake unexpectedly when they see a customer. This tends to cause accidents on the road, the most serious cases of which concern two-wheeled vehicles according to the DRCTU. Finally, it should also be noted that the number of motorcycle taxis is increasing day by day with the liberalization of the public transport sector and with the ease of acquiring motorcycles. The commercialization of motorized two-wheeled vehicles has been accompanied by an increase in the number of accidents in African cities [7]. Today, in Mali, anyone can get a motorcycle and at relatively average prices depending on the quality (new or used) of the machine. Moreover, few people know the highway code or have studied it before driving these two-wheeled vehicles. As a result, this has a great impact on road safety because the largest number of victims of traffic accidents in Bamako are two-wheeled drivers and particularly affects young people.

Beyond this misunderstanding between public transport, difficulties are almost existent in the context of the operation and organization around the activity. (table 5).

Table 5: difficulties in the profession

Opinions	Number	Rate
Yes	49	98,00
No	1	2,00
TOTAL	50	100,00

Source: personal surveys, March 2024

In this table, opinions are largely based on the fact that motorcycle taxi drivers encounter difficulties (98%). This can be explained in several ways and concerns working conditions, relations with the authorities responsible for regulating traffic, the acquisition of administrative documents, etc.

With regard to working conditions, first of all, there are those who work under contract and who must bring in a daily income of between 2500 and 3000 CFA francs or a weekly income of between 18,000 and 21,000 CFA francs depending on the agreements of the contract. And there are also those who own and do the job for themselves. Among these, there are people who do it full-time and others who do it partially because they have another activity, they work there to optimize their time and diversify their sources of income. For KD, teacher:

"When I'm not in class for lessons, I take my motorcycle and go around the city looking for customers and guaranteeing some of my expenses while waiting for the month's salary." The same author continues: "salaries are slow to arrive, so it is a way to cover family expenses and face difficulties".

As far as relations with the police authorities are concerned, there is a certain difficulty related to non-compliance with the requirements of the Highway Code, in particular overloading, some people can take more than two people on the motorcycle, which visibly causes a danger not only for users but also for the customer and the driver. In addition to these aspects, a representative of the police confided to us that one of the major problems they manage is related to the documents allowing free movement. Indeed, these are the sticker, insurance and parking. Each of these documents is mandatory and necessary to fully exercise the profession of motorcycle taxi. That said, the motorcycle taxi union (UNAMOTO) decries the difficulty of accessing the above-mentioned documents. Only one counter is dedicated to motorcycle taxis to park while the number of drivers is large. According to the same source: "it often takes 48 hours to get the paper given the number of applicants in the ranks". Also, the availability of the sticker is a big problem. Not only was the purchase price multiplied, but the new sticker was only available after six months. This can push some drivers not to comply with the rules, especially since the calendar year is almost halfway. It is obvious that the difficulties stem from misunderstandings and the slowness in the availability of administrative documents which lead to frustration on everyone.

3.3. Proposals for optimal management of motorcycle cabs in Bamako

The spread of motorcycle taxis is a phenomenon that marks the problem of urban mobility in the district of Bamako. It has become an alternative, because it is inexpensive and more efficient in terms of speed and location compared to other existing means of transport. Regulations must be adopted or strengthened in order to better frame the subsector. To do this, a census of drivers is necessary in order to control its spread and take measures for its optimal management.

In organizational terms, there is a trade union represented in the trade union center (UNTM) which defends the interests of drivers. That said, the union must expand to include all drivers, especially since there is a fringe among motorcycle taximen who do not even know the existence of the union and its missions. Reframe small groupings to harmonize the sub-sector and improve working conditions. This requires the intervention of state actors to:

- facilitate the acquisition of documents relating to the exercise of the profession;
- take steps to increase the payment and collection counters for documents relating to parking and stickers in order to avoid speculation in their acquisitions;
- tighten the methods of acquiring motorcycles in order to regulate the sector and avoid certain unorthodox practices;
- require a driver's license to practice the profession and raise awareness among stakeholders on the respect of the highway code and safe practices, including the wearing of helmets and closed shoes.
- structure the public transport sub-sector in order to better organize and take into account the mobility requirements of the population;
- insist on awareness campaigns in order to reduce the risk of accidents and dangers related to traffic.

In addition to these aspects, it is obvious that today, the motorcycle taxi has taken on a great importance in the urban dynamics to the point that they have become key players in the urban transport of the city of Bamako. To this end, the political authorities should have a look at their activity, especially since it is young people, mostly from the country's faculties and higher schools, who often have no guidance and are confronted with the problem of the inadequacy of university training programs and the job market, which remains selective according to relationships and parental ties. Also, their support is necessary insofar as they are easy prey to enlist in the violent extremism present in the Sahel states for decades.

3.4. Discussions

Experiments in structuring the public transport sector have shown their limits. Transit companies ended up abandoning their inter-neighborhood transportation activity to the detriment of more profitable intercity transportation. The payment of Value Added Taxes (VAT) is a difficulty, especially since they seem to be non-existent in the other countries of the sub-region. They are also faced with unfair competition from other carriers, in particular SOTRAMA [15]. In addition, the problem of revenue management, the quality of road infrastructure which is deteriorating day by day without regular monitoring of its maintenance coupled with the narrowness of the roads and the instability of fuel prices are all elements that have contributed to the failure of transport companies and therefore to an optimal structuring of the transport sector in Mali and particularly in the Bamako agglomeration.

In view of this problem of the resurgence of motorcycle taxis in urban transport, it emerges from the analysis that there is a lack of a coherent transport policy that takes into account the evolution of the city given its

sprawl, in fact, one of the fastest in the world because of its galloping growth [8] with a view to better structuring the sub-sector. Faced with this, since their advent in 2019, motorcycle taxis have taken a certain place in public transport in Bamako. They have become essential insofar as they are able to adapt more easily to the needs of populations who suffer from traffic congestion and the difficulty of accessing certain areas and at certain times as well. Its acquisition is a real means of combating unemployment for the many young people who use it, especially since it allows them to meet their needs. The issue of motorcycle taxis as a new mode of transport has been noted in several cities in Africa by other researchers. Recent studies in Latin America address the topic in the same way, as they indicate that owning a two-wheeled vehicle is associated with better employment opportunities [16]. According to S. Agoussou (2003), the spread of motorcycle taxis as a means of transport in Togolese cities is linked to several factors. It is indeed the poor state of the road network which is poorly maintained and impassable by collective motor vehicles. The same author argues that it is indeed a way for people looking for work to obtain a lucrative activity in order to meet expenses. Despite the negative externalities observed here and there in connection with the non-respect of driving principles and the many victims caused by road accidents. Kalieu (2016) defends the maintenance of motorcycle taxis. As for Traoré (2015), he believes that the sector is a real bottleneck that makes it possible to absorb the unemployment rate in cities such as Bouaké in Côte d'Ivoire.

However, given all these aspects, we can understand that the spread of two-wheeled vehicles such as motorcycle taxis in the city of Bamako is the response to the high demand of the population for transport, especially since the infrastructure does not keep pace with urban growth. It is obvious that for the hilly areas and the almost permanent congestion observed on the various roads of the city, users prefer to use the services of a motorcycle taxi commonly known as "telimani" for its speed. Indeed, it is more suitable in terms of accessibility and costs compared to other means of transport.

4. CONCLUSION

Urban traffic congestion and the poor state of road infrastructure in Bamako are the results of a lack of a transport policy adapted to mass mobility. The concentration of centers of activity and trade on the left bank organizes the movement of the population between the left and right banks of the Niger River. Thus, this study allowed us to identify the factors explaining the increase in motorcycle taxis in the urban landscape in Bamako. Some will say that this is an alternative to compensate for the inadequacy of existing means of transport, which are poorly organized and poorly structured due to the lack of a coherent public transport management policy. In addition, it is also a place to fall for young people who see it as a prospect to counter unemployment. The reasons for its acceptance by users are: the ease of driving in hilly places, the relatively low rates per service compared to others, motorcycle taxis as a source of employment and income for individuals who are mostly young graduates. That said, it is imperative to control the subsector by regulating the conditions of acquisition and circulation and by insisting on safety measures for the protection of users. Far from being exhaustive, questions about structuring and socio-economic issues deserve special attention to shed light on the issues of the resurgence of motorcycle taxis in urban transport.

ACKNOWLEDGEMENTS

As part of the completion of this research work, we thank all those who contributed to the completion and materialization of this work. Our thanks go to the government and municipal actors and also to the motorcycle drivers and unions who agreed to help us obtain information on the problem.

REFERENCES

- [1] Chabal P. & Daloz J-P., «L'Afrique est partie! Du désordre comme instrument politique,» 1999.
- [2] I. Fofana et I. Togola, «Urbanisation et nouveaux modes de transport urbain en Afrique de l'Ouest : cas de la ville de Bamako (Mali),» *European Scientific Journal*, pp. 206-223, Juin 2020.
- [3] Kobenan A. C., «les motocycles et moto-tricycles dans le transport public,» 2022.
- [4] Banque Mondiale, «Mobilité urbaine : Étude régionale sur l'organisation, le financement et la rentabilité des micro-entreprises de transport urbain en Afrique sub-saharienne : le cas de Bamako,» 2000.
- [5] Ecole normale supérieure, «Bamako,» *Presses Universitaires de Bordeaux*, vol. Vol. 6, p. 308 p, 1993.
- [6] H. Kouyaté, «La localisation des activités dans la ville de Bamako et son impact sur le transport urbain,» Sénégal, 1990.

-
- [7] A. Kumar, «Comprendre l'importance croissante de la motocyclette dans les villes africaines: Une perspective d'économie politique,» SSATP Discussion Paper No. 13, Urban Transport Series, 2011.
- [8] M. Cissé et A. Traoré, «Planification urbaine et développement local au Mali: les enjeux socioéconomiques liés à la construction de l'échangeur de Yirimadio en commune VI du district de Bamako,» *Revue du laboratoire africain de démographie et des dynamiques spatiales (Géovision)*, pp. 41-54, août 2021.
- [9] D. B. e. al, «Etalement urbain à Bamako : facteurs explicatifs et implications,» *Afrique Science Revue Internationale des Sciences et Technologies*, p. 16, 2021.
- [10] C. STEP, «Le secteur privé dans la gestion de déchets urbains du District de Bamako,» 2018.
- [11] DNP, «Rapport de suivi de la mise en œuvre des actions de la feuille de route nationale du dividende démographique au Mali,» 2018.
- [12] B. D. e. al, *Structure urbaine et dynamique spatiale à Bamako*, Bamako: Donniya, 2003, p. 179 p.
- [13] D. S. e. al, «Etat des lieux de la gestion des déchets District de Bamako,» 2018.
- [14] INSTAT, «Enquête modulaire et permanente auprès des ménages (EMOP),» Bamako, 2017.
- [15] S. K. e. S. Zendal, «Transport sûr et durable: une nouvelle approche des parties prenantes pour le management du TSD,» *European scientific journal*, pp. 458-482, 2014.
- [16] GIZ, «Transport durable : Un guide de référence pour les décideurs dans les villes en développement,» Lena Stiller, Bonn et Eschborn, 2018.
- [17] J. Keutcheu, « Le fléau des motos-taxis,» *Cahiers d'études africaines*, pp. 509-534, 1 janvier 2019.
- [18] D. Rodríguez , M. Santana et C. Pardo, «La motocicleta en america latina: caracterización de su uso e impactos en la movilidad en cinco ciudades de la region,» CAF, 2015. [En ligne]. Available: [http://www.despacio.org/ portfolio/](http://www.despacio.org/portfolio/).
- [19] Y. V. Bamba et C. Koffié-Bikpo , «Les Acteurs Du Transport Des Produits Vivriers Au Marche De Gros De Bouake (Côte d'Ivoire),» *European Scientific Journal*, vol. 15 , n° %12, pp. 169-183., January 2019 edition 2019.