

Igniting Urbanization and Development of Mamfe Town through Road Infrastructure: Case of the Bamenda-Mamfe Highway

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Abstract

Road infrastructure is set to be a catalyst to urbanization and development in Sub-Saharan African towns. This article hypothesises that the Bamenda-Mamfe highway has contributed to the urban growth and development of Mamfe. The paper reveals that spatial growth, socio-economic development and trade of Mamfe town have been triggered by the highway. A multi-spectral Landsat satellite imagery of 1986 and 2020 were used to determine the spatial expansion of the town over a period of 34 years. Some 110 questionnaires were administered to households of 7 neighbourhoods in Mamfe to determine the outcome of expansion. Field observation and interview sessions were done to have information on the socio-economic development of the town. An in-depth secondary data collection was done to gather information on the rate of population growth in Mamfe. The data was processed to generate maps through the ArcGIS 10.4 and MapInfo soft wares and tables through SPSS 17 for results and analyses. Results from findings propound a rapid increase in the spatial expansion of Mamfe instigated by the construction of road as the urban space increased from 21% in 1986 to 59% in 2020. This was accompanied by a population upsurge of 119,000 inhabitants from 18,000 in 1987 to 137,000 inhabitants in 2020. There has been a remarkable increase in trade and commerce influenced by the construction of the road as people and goods can move in and out of the town with ease. The socio-economic development of Mamfe has as well improved with the presence of commercial centres, schools and health units. The development of Mamfe is however faced with planning challenges and urban ills which might escalate if not controlled. This paper recommends that stringent majors are taken to implement planning and proper security in Mamfe with the hope to render the town sustainable for living.

Keywords: Urbanization, development, road infrastructure, planning, trade, Mamfe.

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1. INTRODUCTION

Road infrastructure is a vital factor in the development of an area. It does not only serve as a tool to improved accessibility into an area, but also as a business ability to provide goods and services. Classified as the oldest and most used mode of transport in the world (Jean Paul, 2017), road infrastructure has made the human society to become attractive and modern. It is more advanced, sophisticated and accessible in the developed world and at an improved state in the developing world. A popular statement holds that; "where a road passes, development follows". This statement's validity has been verified from local, national and international levels to be true. This is seen from the advancement of economic growth in Britain, USA, Germany, France and several developed countries as exchange of goods and services and access to jobs have enabled people to move (Matt Rosember, 2018). Improvements in road infrastructure in South Africa, Nigeria, Ghana, Egypt as well as Algeria and Morocco

make these countries to be the economic giants in Africa (Pathiphan, 2020). Road infrastructure from all indication leads to the economic growth of an area. The influence of road infrastructure has improved on the poverty situation of several inhabitants in African countries (Sununtar Setboonsarng, 2010) as it has provided employment opportunities. Some have been employed by the transport companies while others have indirectly found employment through the sales of their goods and services.

According to the ministry of transport/public works (Harris James Patrick, 2011), there are about 50000km of roads in Cameroon of which 5000km are paved. The road network both paved and unpaved is poorly maintained. The country's road density is estimated at 7km for each 1000km². During the wet season, only the paved roads remain passable. Traffic on the unpaved road may be restricted by rain barriers. The road fund of Cameroon was created in 1996 in order to

implement the Government policy on the road sector. Government efforts to improve the state of condition of Cameroon road are faced on a network of 2700km and the process is being undertaken. Road infrastructure in Cameroon is an essential factor in the transformation of an area. It has orientated the spatial, economic and social development of several towns and regions in the country (Fofiri Nzossie, 2012). The road has not only become a catalyst in the amelioration of the standard of living to many unemployed Cameroonians, but has also become a factor of spatial construction to some, and deconstruction to others.

The construction of the Bamenda-Mamfe highway linking the southwest and northwest regions of Cameroon and as well Cameroon to Nigeria through the Mamfe corridors has been a success on the Governments plan on road construction. The Bamenda-Mamfe highway construction has ignited the development of Mamfe town and triggered the urbanization process of the area. This article reveals that the spatial growth of Mamfe town and the socio-economic development of the

area have been due to the construction of the highway. This urbanization and development process though good is facing challenges which are to be addressed. It is the hope of this paper that results from findings can be used to address the challenges accrued.

Mamfe is a town and capital of the Manyu a Division in the South West Region of Cameroon. It is located 60km from neighbouring Nigeria, on the Manyu River. It has a population of about 36,500. It is known as a centre for traditional religion and traditional medicine. It used to be known for its bad infrastructure especially roads which however were recently tarred and presently, they are in good conditions within the city limits. This town is located between longitude 8°40 and 9°20 east of the prime meridian and Latitude 5°05 and 6°10 North of the Equator. It's over shaped thrust it out Northwest ward from Ndian in the South West region making it a wedge between West and Central Africa. It is bounded by the North West Region to the South by Meme and Ndian Division (Figure 1).

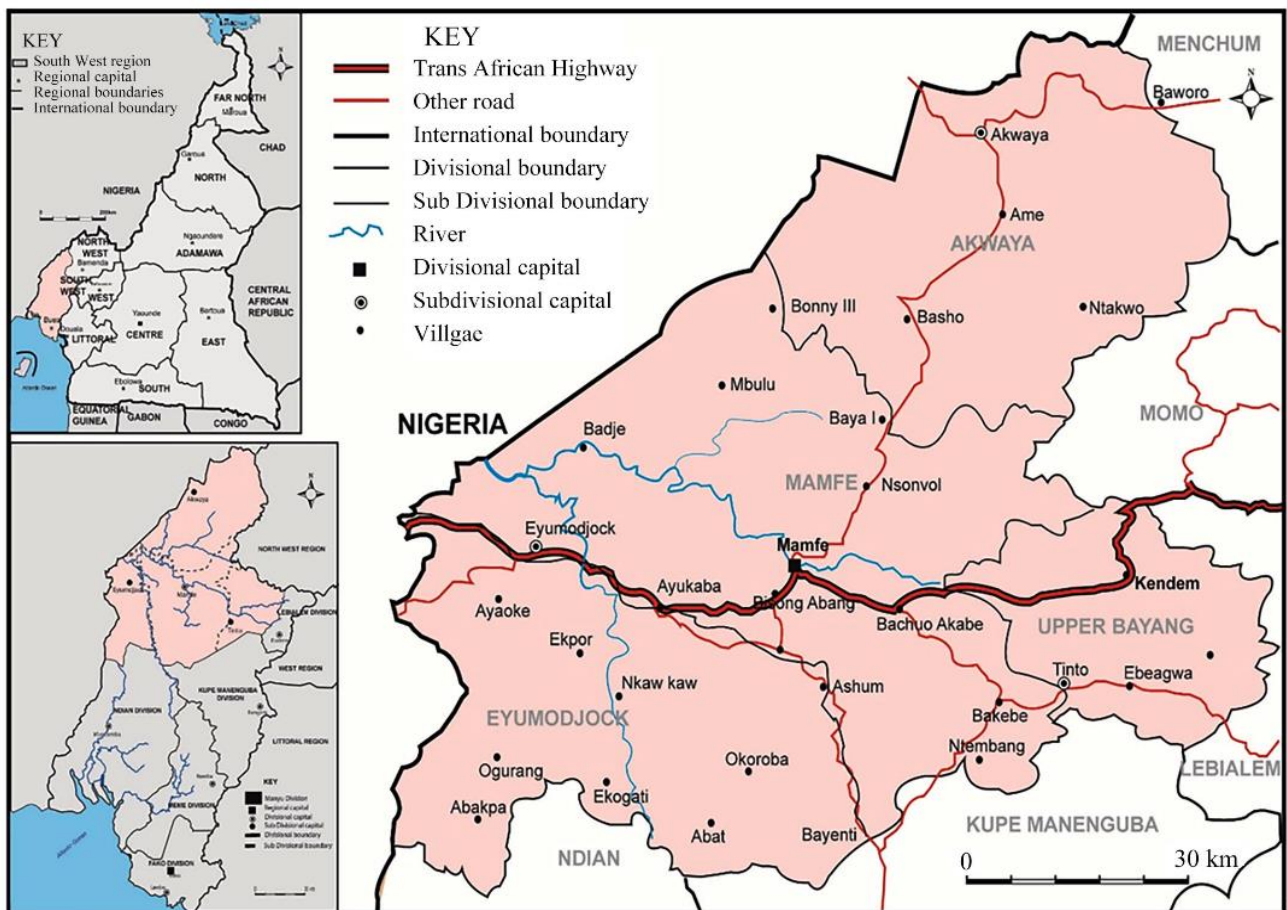


Figure 1: Location of the study area
Source: Modified from NIC, 2021 by Bouba

2. MATERIALS AND METHOD

Data collection was done through primary and secondary sources for a qualitative and quantitative

research. In order to determine the spatial expansion of the city, satellite images for two different periods were used. The Landsat MSS for 1986 and Landsat OLI for

2020 satellite images were used. These images were chosen because of availability and possibility to have better results in the diachronic analyses. Primary data was obtained through field observation, interviews and questionnaire administration. Field observation was done in order to identify the Mamfe growth spots, capture GSP points for maps as well as take photographs for results presentation. Interviews with the 7 Mamfe quarter heads were done to confirm the various changes in their neighbourhoods for the past years. Focus group discussions were done to have first-hand opinion on the advantages and disadvantages of the road infrastructure

to the town. Some 110 questionnaires were administered to households of the Mamfe sub-division to collect information on the challenges of development to the town. A 4% sample (Oloyo, 2001) of the total of 4244 households (BUCREP, 2005 and 2010 projections) was used to arrive at this result. The localities sampled for the study were; Main street, Hausa Quarter, Nchang, Mile one, Eshobi, Banso Quarter and Mamfe town. The selection was based on the proximity of these area or localities to the high way and their benefits to the high way (Table 1).

Table 1: The population of the study area and effective respondents

Number	Localities	Population	Households	4 % sample size	N/Eff. Res.
1	Mamfe town	13046	322	12	8
2	Banso quarter	1783	432	17	15
3	Hausa quarter	1587	392	15	13
4	Main street	2161	627	25	23
5	Nchang	2478	583	23	18
6	Mile one	2839	592	24	19
7	Eshobi	2214	403	16	14
Total		26108	3351	132	110

Source: Field work, 2020

An in-depth secondary data collection was done to have information on the total population. Statistical information on the economic activities and maps of Mamfe were gotten from the National Institute of Cartography, Yaounde, Cameroon. Consultations at the level of the Mamfe local council and the Bamenda city council were done to have information on the growth of the city over the years. All these data from primary and secondary sources were treated through the ArcGIS 10.4 and MapInfo software to generate maps for analyses. Furthermore, the SPSS 17 and Excel 2010 were used to treat statistical data used to generate tables and diagrams for analyses.

3. RESULTS AND DISCUSSION

Results from findings propound that the Bamenda-Mamfe highway has triggered spatial expansion, population growth and socio-economic development of the Mamfe town.

3.1: The Bamenda-Mamfe Highway and its influence on urbanization to the Mamfe town

Results from findings revealed that the town of Mamfe was mostly rural in 1986 and become urban after the construction of the highway rapid development especially as many people were now moving into the town. It is important to note that efficient transport infrastructure facilities act as catalysts to development and urbanization. Such is the case in Mamfe as growth and development is observed in the town due to the construction of the highway. This growth is further

observed through the spatial increase of the town which has witnessed a tremendous increase in thirty four years (Figure 2).

Figure 2 indicate a change in the built-up area from 21% in 1986 to 52% in 2020 depicting an increase in the urban space of Mamfe influenced by the highway construction. This is closely followed by a perpetual drop in the vegetation from 67% in 1986 to 26% in 2020 revealing a colonisation of the vegetation by built-up. The town of Mamfe which was predominantly rural in the 1980s has recently become urban with an improvement in the social and economic development of the area.

Several factors can be advanced for urbanization in Mamafe. Results from findings revealed that trade and commerce stand as the leading factor as 31% of respondent analyses adhere to that fact. Results from figure 3 shows that after the construction of the Bamenda-Mamfe highway, trade and commerce (31%) was the main reason why so many people were moving into the town of Mamfe in order to sell or buy goods. This is because the high way gave an opening for many people from faraway places to come and buy or sell their goods especially agricultural products. This is also partly because agriculture does very well in Mamfe. Interviews conducted to this effect confirmed to this fact as a good number of respondents ascertained that trade and commerce were largely responsible for urbanization in Mamfe town and the Sub-division in general (Figure 3).

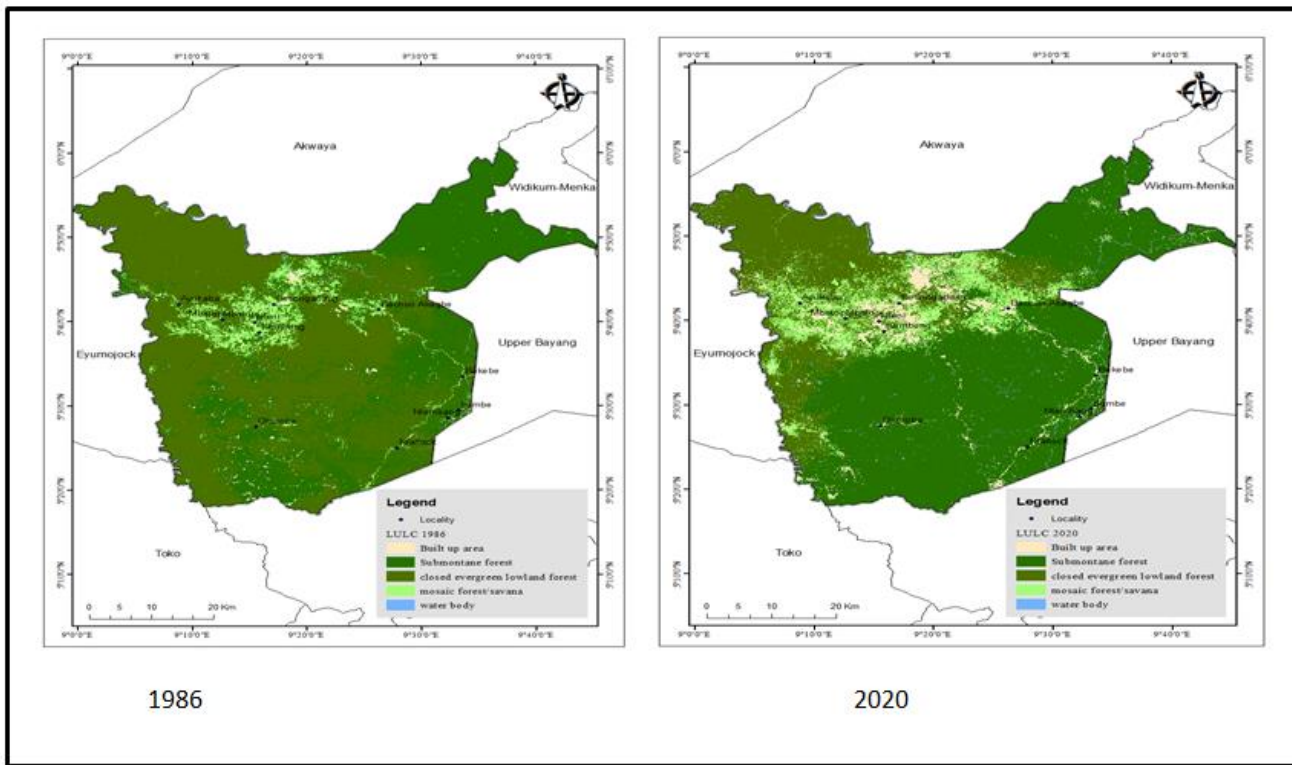


Figure 2: Land use/land cover of Mamfe town from 1986 to 2020
 Source: Landsat images of 1986 and 2020 modified from NIC by Bouba

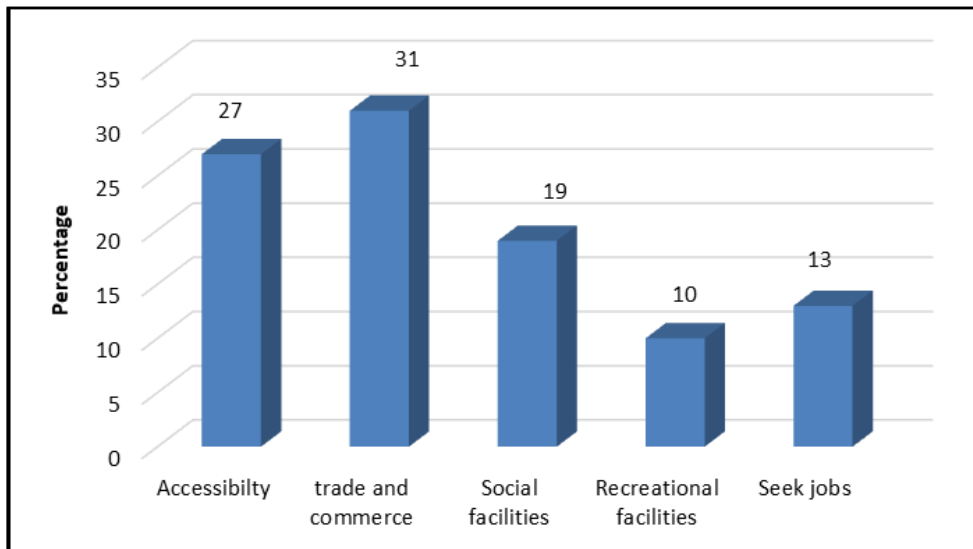


Figure 3: Determinants of urbanization in Mamfe after the construction of the high way
 Source: Field work, 2020

Furthermore, accessibility (27 %) was also one of the outstanding reasons why most people were moving to the town of Mamfe after the construction of the Bamenda-Mamfe high way project. This is because people could easily move their goods and circulate easily in Mamfe and the neighbouring towns which further influenced trade and commerce in the Sub-division. This has improved on the urban proximity and transport

accessibility of the town (Dena, 2017). The presence of social facilities (19%) in Mamfe resulting from the construction of the high way also represents a significant pull factor that brought people to the town. Some of the social facilities include hospitals, pipe born water, electricity in some areas that was extended because of the coming of the high way and a host of others (Plate 1).



Plate 1: The Mamfe District Hospital resulting from the high way construction
Enow, 15th November 2021

Plate 1 illustrates the Mamfe District hospital that was expanded and improved upon when the high was constructed. This was because of an increase demand of health services since a great deal of people were now coming into the town of Mamfe. Interviews conducted the some medical personnel in the hospital indicated that the construction of the high way has really played a leading role in the improvement of the hospital especially given the fact that people can easily reach the hospital and they are treated. Recreational facilities (10 %) and job seeking (13%) are all driving factors that contributed greatly to urbanization of Mamfe. Jobs have been created at different dimension in Mmafe and there

also exist a wide array of recreational facilities which have enhanced the socio-economic development of the Sub-division in general. These driving forces of urbanization in Mamfe have simultaneously contributed to the socio-economic development of the Sub-division in diverse ways.

Associated to the spatial expansion and growth of the Mamfe town is the population upsurge over four decades. The population evolution of Mamfe from 1976 to 2020 reveals a persistent increase in the population over the years (Figure 4).

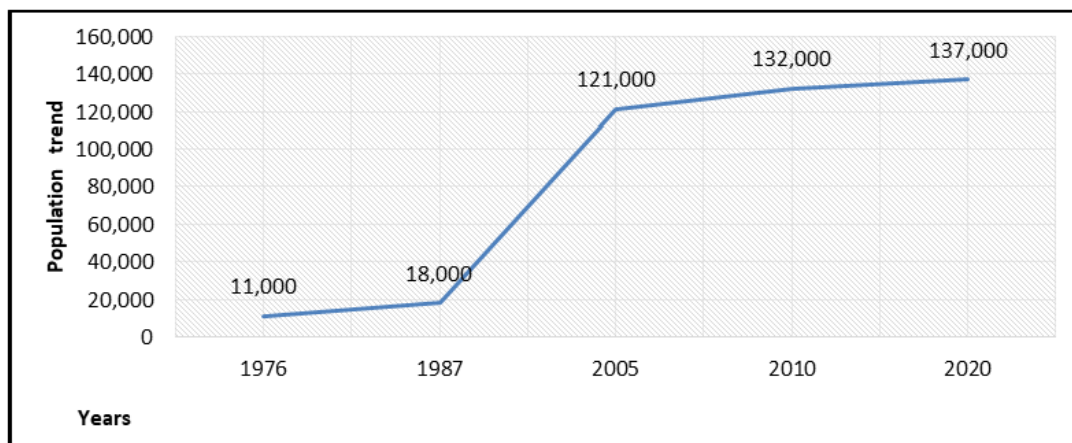


Figure 4: Population evolution of Mamfe from 1976-2020
Source: Compiled from BUCREP and Mamfe council, 2021

Results from figure 4 reveal that from 1976 to 1987, the population increase by 8000 inhabitants. From 1987 to 2005 when the project stated the population increased by 103,000 inhabitants. The rate of urbanization began to be stable from 2005 to 2010 when the project was finally executed. From the year 2010 to 2020, the rate of urbanization reduced. This was partly linked to the socio-economic challenges of the North

West and South West Regions of Cameroon. The spatial growth and population increase of Mamfe has led to the social and economic development of the town.

3.2: The Bamenda-Mamfe highway and socio-economic development of Mamfe

Urban growth is a complex process that involves spatial and temporal changes of urban areas and

their socio-economic and physical components. These changes are triggered by many drivers and underlying factors. Among these factors is transport that is

considered one of the main factors of urban growth which ignited the socio-economic development in Mamfe in different ways (Figure 5).

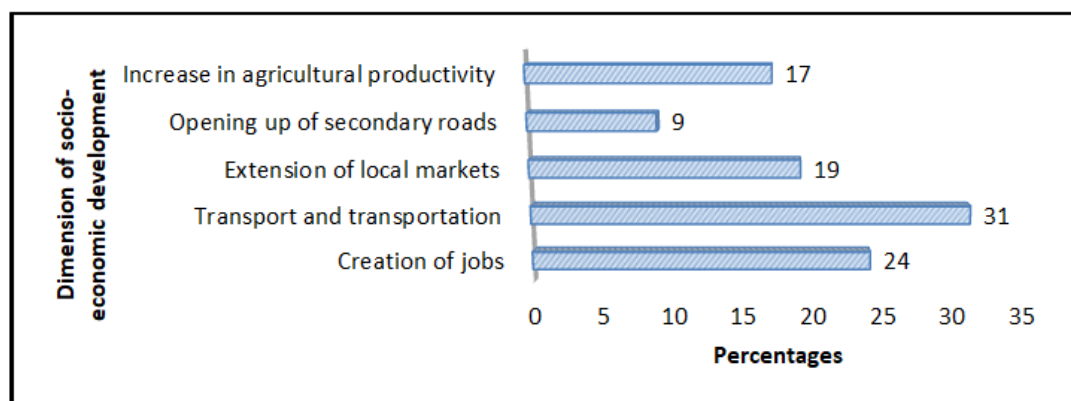


Figure 5: Dimensions of socio-economic development Mamfe town

Source: Field work, 2021

Figure 5 illustrates that the construction of the Bamenda-Mamfe high way has contributed to agricultural productivity (17 %). This is through the transportation of agricultural products from farms to markets and homes which at first was a very difficult task because of the enclave nature of the area. Interviews with some farmers who practice farming along the high way confirmed that the high way is playing an important role in the transportation of agricultural products in the town. This has gone a long way to enhance livelihood and food supply of the area especially given the fertile nature of the soils in the locality. Opening up of secondary roads (9%) as a result of the construction of the high way has also been an important element that has contributed to enhance accessibility in Mamfe. These roads have also contributed in the general circulation of goods and services in the Sub-division and opening up of related social infrastructures such as hospitals, schools, markets shops and financial institutions which were absent before the construction of the high way in 2011. The high way also contributed in the extension of local markets into international markets. Road infrastructure plays a vital role in the social and economic development of an area (Eva, & Jana, 2019).

Transport and transportation services (31 %) have been the outstanding advantage of the construction of the Bamenda-Mamfe high. Commercial transport and private movements have improved because of the construction of the high way which has also seen the opening up of secondary roads. Vehicles can easily leave from far and wide to the town of Mamfe as well as people simply because of the construction of the high way project in 2011. The main road which is the Bamenda-Mamfe high way that runs through this Sub-division especially in the town of Mamfe has also contributed to the opening of other secondary roads that did not exist until the creation of the high way in 2011. Most Sub-sections of the road are concentrated at the Mamfe town especially in the southern which is partly explained by the ease of construction of the areas linked to the type of relief. More so, a wide range of jobs have been created (24%) resulting principally from the activities induced by the construction of the high way project (Figure 6).

Several job opportunities have been created by the influence of the road infrastructure in Mamfe town (Table 2).

Table 2: Transport services, number and average incomes in Mamfe in 2022

Transporters	Number	Average income/person (daily) in FCFA
Motorbike riders	2000	3500-5000
Taxi drivers	1700	15000-20000
Truck drivers	72	40000-80000
Clandestine drivers	N/A	-

Source: Compiled from the Mamfe council and interviews from the transporters, 2021

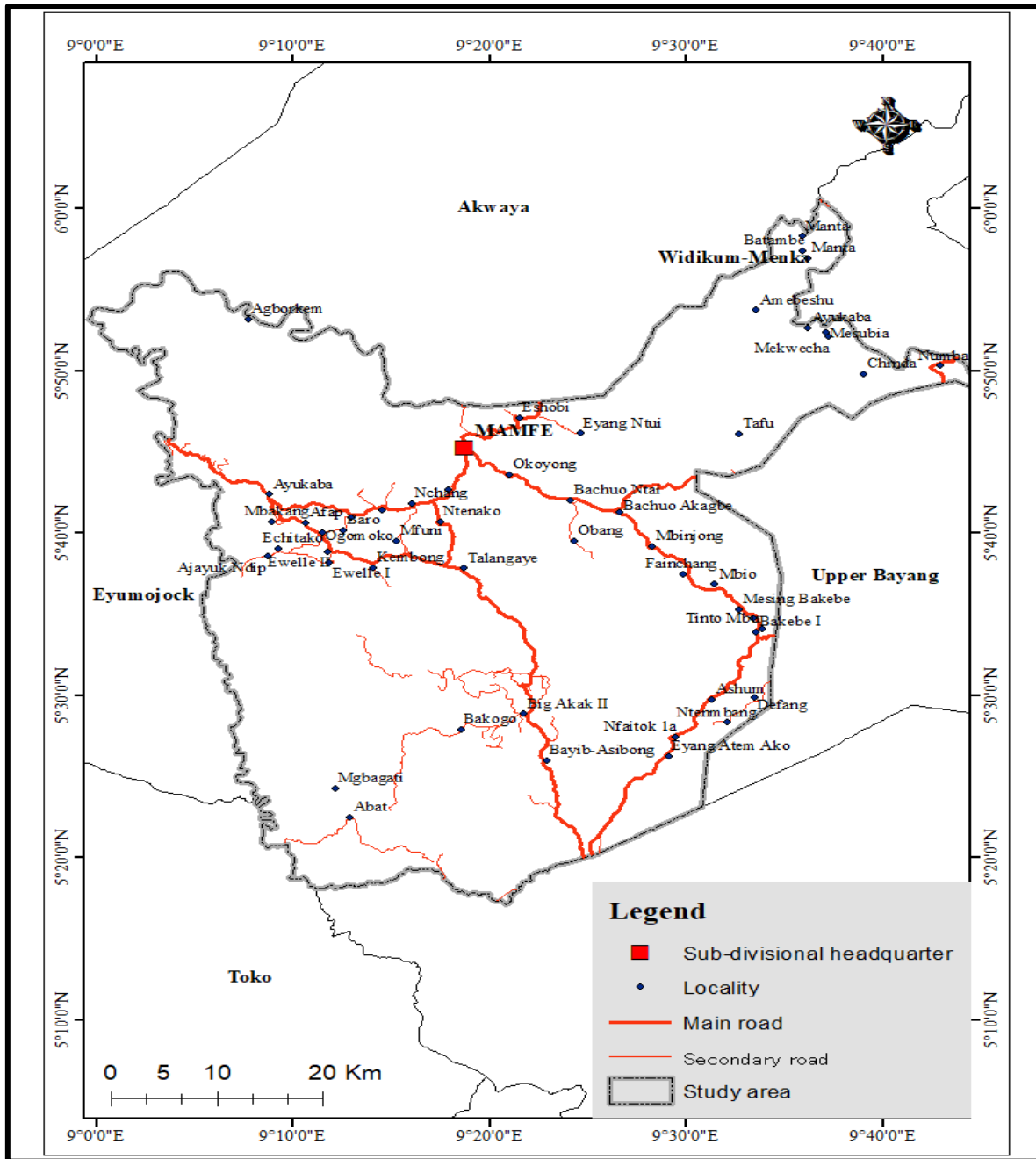


Figure 6: The road network of Mamfe town
 Source; Modified from NIC by Bouba, 2022

Table 2 shows that close to 3,772 transport related jobs have been created in Mamfe resulting from the construction of the high way. Commercial motorbikes alone represent over 2000 jobs earning between 3,500 to 5,000 Francs CFA on daily basis as well as taxi drivers who have increased in the town resulting from the construction of the high way. Filed revelations show that about 1700 drivers earn averagely the sum of 15,000 to 20,00Francs CFA on a daily basis. Truck drivers too who now ply the high way are about 72 in number and earn averagely about 40000-80000 on a daily basis. Before the construction of the high way, a greater part of the Mamfe town was enclave and such

activities were not very common. However, with the construction of the highway, they have come to light all of such activities creating many jobs to people in this area.

Many economic establishments in Cameroon now consider Mamfe a potential market centre. CONGELCAM, the main dealer in frozen fish in the country opened a branch in the town of Mamfe in 2015. This has not only facilitated the acquisition of fresh fish at all times, but has spurred other related fish businesses such as the roasting of fresh fish around bars, snacks, off-licenses and nightclubs that have cropped up to handle

the teeming population. These villages hitherto depended on fish from the rivers, which was seasonal, and on the ability to catch. Most of the villages such as Kembong, Afab, Besonabang Ossing, Afap have developed hotspots where most young girls (80% of them not from Manyu Division but from the Bassa tribe in the Littoral Region of Cameroon) employ themselves in roasting fish near the bars. Several other businesses have emerged due to the influence of the road and the traffic flow of the area has become dense. This dense traffic has triggered the development of traffic patterns which leaves much to be desired in Cameroonian towns (Fogwe, & Ntumngia, 2014). There has been an increase in the standards of living due to trade development since people can now consumed a variety of goods. Interviews and field informants reliably informed the study that incomes of most traders have increased in Mamfe because of the cross-border trade development triggered by Bamenda-Mamfe high way.

3.3: Road infrastructural development challenges in Mamfe

The Bamenda-Mamfe road users in Mamfe are confronted with a wide range of challenges. These setbacks range from socio-economic, communication as well as administrative challenges. The execution of the Bamenda-Mamfe road linking Bamenda-Mamfe-Ekok also involved the construction of some secondary roads which were latter exploited by the local councils and expanded them to give accessibility especially to enclave areas in Mamfe. It was observed that most roads are very poor during the rainy season and equally very dusty during the dry season. The poor state of roads has limited most users in accessing certain areas in the Sub-division even around the town of Mamfe. More so, the high way

itself was noticed to contain potholes in some section which continue to widen especially during the raining season. The very advanced state of deterioration of the road, coupled with the heavy traffic, have hampered all maintenance and resurfacing works from producing an acceptable level of continuous service on the road.

Travelling through the major highways across Ekock-Bamenda-Mamfe in Cameroon could be an experience that offers passengers the rare opportunity to have a glimpse of very beautiful and natural scenery. Unfortunately, in the face of growing insecurity caused by highway armed bandits, robbers and kidnappers, travelling experience is not the best. The road users are confronted with a wide range of socio-economic challenges ranging from prices of spare parts, fuel prices and availability, packing sheds for their vehicles amidst others. Socially, accidents and armed robbery were pointed out to be the main issues suffered by the Bamenda-Manfe high way road users. The socio-political crises in the two Anglophone regions of Cameroon have also played negatively along the Bamenda-Manfe high way. This is manifested in the form of road blockages, ghost towns where road users finds it very difficult to use the road. It can also be said that the crises has also helped to fuel the crises along this high way. The impacts on this stretch of road are far reaching as trade and passenger flux along this road is disrupted immensely.

Road accidents are observed along the road which affects the growth of the Mamfe town. These road accidents emanate from excessive speed, drug/alcohol consumption and the poor state of roads were among the causes of road accidents (Figure 7).

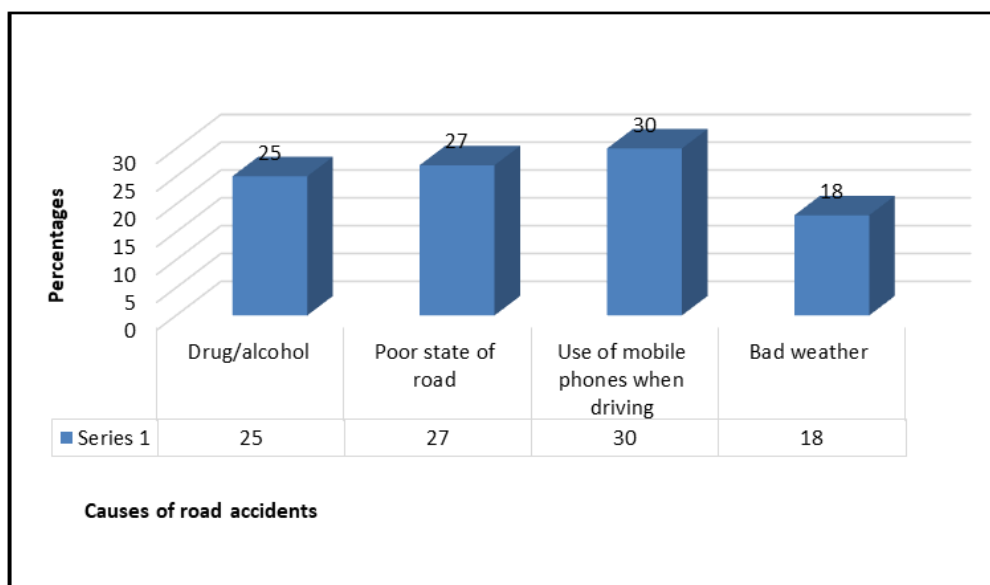


Figure 7: Causes of road accidents along the Bamenda-Mamfe high way

Source: Field work, 2021

Results from figure 7 show that the use of mobile phones (30%) is the major cause of accidents along the high way. To this effect, if the state official concerned with transport and road security can sensitize and re-sensitize high way road users on the dangers of using mobile phones when driving it will go a long way to reduce accidents and its accompanying socio-economic ramifications. This is closely followed by the poor state of the roads with potholes from left to right. Mending the road and filling the potholes is another sustainable way of reducing road accidents. Drinking alcohol or taking drugs before driving is very detrimental to the lives on board and the goods on the carriage. So, limiting the taking of drugs and alcohol consumption before and during driving is very important to mitigate road accidents. The Bamenda-Mamfe high way construction has triggered social and economic development of the Mamfe town. It is therefore important to control the growth in order to avoid challenges that might hamper development.

4. CONCLUSION AND RECOMMENDATION

This paper which was aimed at revealing the contribution of the Bamenda-Mamfe high way construction to the urbanization and development of Mamfe town can adequately conclude that the town has developed thanks to the influence of the road. Results from analyses gotten on the field showed how the town of Mamfe expanded in space over 34 four years because of the influence of the road. This spatial expansion was accompanied by a rapid population upsurge with an increase which doubled over the years. The Mamfe town therefore expanded in space and increased in the number of people which served as an igniting factor to urbanization and development. The town of Mamfe also experienced a social and economic development with the presence of social amenities and improvement in trade and commerce. It can adequately be concluded that the road is a tool for development especially in most African cities (ADB Group, 2014). Evidence of such conclusions has been x-rayed in Mamfe and the town is experiencing economic boom thanks to the influence of the highway. The urbanization and development of Mamfe how ever did not work without challenges. The influence of the highway instigated the movement of people into the town which has caused the unplanned settlement observed. Urban ills such as insecurity and high crime wave and illicit transportation of goods have become the order of the day. The situation has become worse with the current instability in the area which has slowed-down growth.

Faced with such urban disorder, this article recommends stringent control measures on the development of the town. It is important that the growth and settlement of the town be controlled and monitored by the local authorities according to the urbanization and housing norms in Cameroon. In this way any defaulter

will be stopped and the expansion of the town will be planned. Security and control of goods and services should be tightened in order to curb the movement of illicit and contraband goods. Education and sensitisation should constantly be encouraged in order to maintain awareness on the necessity to have a developed town. These suggestions and more if implemented will render Mamfe an economic hub in the south west region as well in Cameroon.

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