
Original Paper

Road Infrastructure and Development Imbalance of Melong over Kekem Activated by the National N^o 5 Highway in Cameroonian

Tende Renz Tichafogwe^{1*}

¹ Department of Geography, the University of Yaounde, Cameroon

* E-mail: renztende@yahoo.com

Abstract

The Douala-Melong-West Region road infrastructure has elicited the development advancement of Melong to the unfortunate reversion of Kekem from the Douala-Kekem-West Region road infrastructure deviation. This paper posits that while Melong is improving in spatial growth and socio-economic development, Kekem is dwindling. A multispectral Landsat satellite imagery of 1978, 2001 and 2018 were used to determine the spatial expansion of the towns over a forty years period. Some 170 questionnaires were administered to households of the towns to determine the socio-economic impact of the road. Field observation and focus group discussions were done to have first-hand information on the influence of the road to the towns. An in-depth secondary data collection was done to have information on the contribution of road infrastructures to the growth of towns. The data was processed to generate maps through ArcGIS 10.4 software and tables through Microsoft excel spread sheet for results and analysis. Results from findings divulge an increase in the population of Melong from 10,091 inhabitants in 1976, to 48,180 in 2005 and 61,270 in 2020 with an upsurge of 607% increase in 44 years. This has been accompanied by the spatial growth of Melong as the built-up space has increased from 149 hectares in 1978 to 3,532 hectares in 2018. On the contrary, the population of Kekem that increased from 26,623 inhabitants in 1976 to 45,010 in 2010 witnessed a drop to 43,210 inhabitants in 2020. The built-up area of Kekem that increased from 137 hectares in 1978 to 2,937 in 2001 has slightly changed to 2,363 ha in 2018, indicating a stagnant progression in the spatial growth with abandonment of property and housing. Melong is experiencing an economic boom while that of Kekem is regressing. This paper advocates for an economic re-awakening of Kekem to save the town from city decay.

Keywords: spatial growth, socio-economic development, road infrastructure, deviation, Melong and Kekem

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 (Claudia et al., 2015). Road infrastructure from all indication leads to the economic growth of an area.

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. Such is the case with the Ngaoundere-Toubo-Moundou road infrastructure (Fofiri Nzossie, 2012), the Douala-Boumnyebel-Yaounde road infrastructure as well as the Yaounde-Makenene-Bafoussam road infrastructures (Caroline Dominguez and Vivian Foster, 2011), in Cameroon. This article probes into the aftermaths of the National N^o 5 highway deviation to Kekem and Melong towns. The paper posits that while Melong is experiencing a growth in its development as it has become a pole of attraction, Kekem is experiencing a decline in its development as several people have moved out of the area to neighbouring towns. Solving this puzzle is the main issue that remains for a comfortable margin of tolerance to be drawn between road infrastructure and the spatial construction and deconstruction of the Melong over Kekem in Cameroon.

2. Literature Review

The contribution of transport infrastructure to economic growth and spatial construction and the causal relationship between them has received great attention from empirical studies in transport and economic studies. Works on road infrastructure and influence on spatial construction and deconstruction, its socio-economic consequences as well as problems and possible solutions were studied. Road infrastructure has been a major tool in the configuration of urban and rural areas in the world. It has not only contributed to the spatial reconfiguration of regions in Europe Bersdorf and Salet (2007), but has as well provoked urban governance difficulties. Road infrastructure as a factor of spatial configuration has influenced economic activities in the Adamawa region of Cameroon Fofiri (2012). Trade within Ngaoundere and its satellite towns have increased leading to improved livelihood. It is the case with the Kekem town Epanda (2015), which experienced economic boom during the period when the road linking the Littoral and West regions was channelled through it. However, with the deviation through the Melong town Kemetcho (2017), economic growth shifted from Kekem to Melong. The work of Jean Paul (2017), explained how the road being the oldest and most widely used mode of transport has expanded economic growth in both the developed and developing countries.

Further research from the Asian Development Bank (2016), revealed how the less privileged or poor through road side vending generate income to feed their families and improve on their livelihood. The economic effects of roads to small and medium size communities show how the local community change level from petit trading Susan and Karl (2003). Since, road infrastructure facilitates accessibility of goods and services from one region to the other, it is considered as a major enhancement to economic growth Matt (2018). Studies on the relationship between poverty and economic growth have revealed that the transport infrastructure helps to reduce poverty hence, economic development Sununtar (2010). Results gotten from China and Japan show how improvements in transport have caused the employment of many persons thereby reducing poverty. In a working paper of the World Bank, the authors found out that good governance and advanced transport systems will lead to development. Nevertheless, when the politics of road development doesn't facilitate the movements of goods and services, economic growth is slowed-down Haris (2011), and Fogwe et al. (2014), as it is the case in Cameroon. This explains why some inhabitants in enclave and less accessible regions in Cameroon still live in perpetual poverty Marie and Gael (2009). Ameliorating road transport infrastructure for a sustainable development is one of the objectives of this present research. The work of Fogwe and Ntumngia (2014), revealed that the infrastructural development of roads in Cameroon if not checked would lead to traffic congestion, slow delivery and supply of goods and services. Njimant and Mbohjim (2014), showed how intense traffic congestion in Douala has led to road accidents from violation of traffic controls and road depreciation. Meanwhile, Arend de Haas (2017) found out that, though road infrastructure has brought economic benefits to Cameroon and Nigeria, it has unfortunately caused forest degradation which is a problem to the environment. This explains why the CNSC (2015) report raised awareness on the dangers of road transport to both the home and host countries.

The paper discovered that, the work of other authors discussed above have similar problems with that of Melong and Kekem. The national N^o 5 highway has provoked traffic congestion, urban anarchy, insecurity and stealing, as well as commercial sex activities along the transit corridor and in the Melong town. Forest degradation is observed and land tenure conflicts are becoming recurrent in the area. Abandoned and dilapidated buildings are noticed in Kekem as some parts of the town are becoming deserted. There is need for prompt action to salvage the situation so as to enable the Melong and Kekem towns to develop in a sustainable manner.

3. Method and Study Area

This paper draws inspiration from the concepts of accessibility and attractiveness. Accessibility is the measure of the capacity of a location to be reached by or to reach different locations Barney Warf (2010). Accessibility is focused on capacity of the Melong town to be reached by the migrant population. It reveals the different advantages that the national N^o 5 highway has created for the Melong town to have more migrants. Location and distance dimensions are highlighted through population and economic activities as well as time gained, cost reduction and energy spent in the course of movements. Furthermore, the concept of attractiveness deals with the ability of an area to draw and hold people. An areas' attractiveness is closely related to its population growth and decline. When an area is perceived to be attractive than its surrounding environment, its population will increase as many people settle there in preference to other areas. Attractiveness in this paper highlights the pull factors that have brought people into Melong and the push ones which have sent them out of Kekem.

A multi-spectral imagery of 1978 (Landsat MSS), 2001(Landsat TM), and 2018(Landsat OLI), was used to determine the land use and land cover change of the Kekem and Melong towns over 40 years. This method permitted the assessment of the spatial growth of the areas. The GPS was used to capture points for the realisation of maps through the ArcGIS 10.4 and MapInfo software. Some 170 questionnaires were administered to households of the towns to determine the socio-economic impact of the road. In order to arrive at this sample size, a 5% sample Oloyo (2001) households of the Melong and Kekem towns from the total BUCREP (2005, 2010 projections) was done. A 5% sample of 1290 households in Kekem (64.5 households), and 2116 of Melong (105.8 households), hence 170 were administered questionnaires. The data collected was treated through Microsoft excel spread sheet to generate tables for results and analyses. Furthermore, focus group discussions, interviews and field observations were conducted to have first-hand information of the manifestations in the towns. This permitted the identification of interesting features captured through photographs for results. An in-depth documentary research was done with the use of contemporary works and research to acquire useful information on the contribution of road infrastructures to the growth of towns. All data collected was subjected to descriptive and inferential treatment for analyses, presentation of results and discussions.

The Melong and Kekem towns are located between latitudes 5^o10' and 5^o22' North, and longitudes 9^o52' and 10^o30' East in the Mbo plains of the Mounjo Division in the Littoral region and the Haut Nkam Division in the West region of Cameroon respectively (Figure 1). They are bounded by Nguti to the north, Manjo and Nkongsamba to the south, Bafang to the east and Bangem to the west.

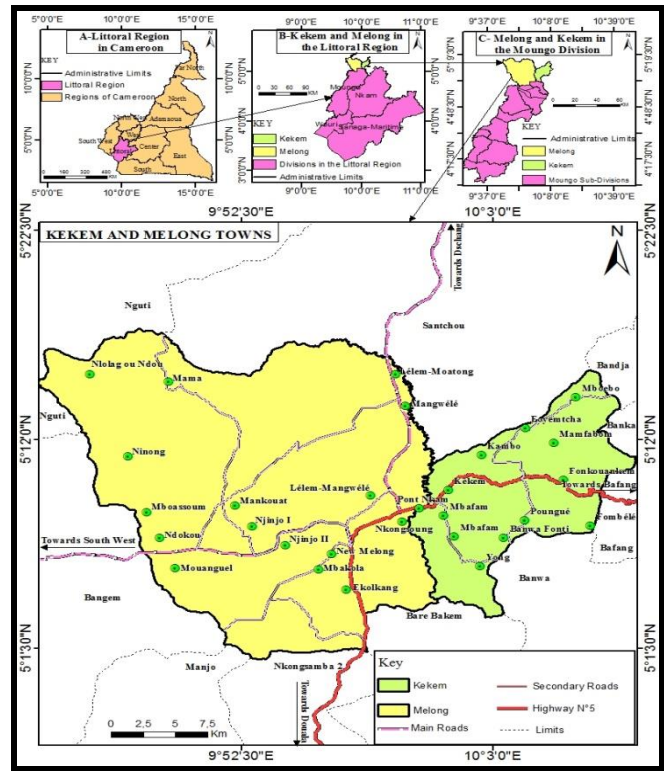


Figure 1. Location of Kekem and Melong from Cameroon

Source: Modified by Tende from National Institute of Cartography, 2019

4. Results and Discussion

Results from findings propound that population growth, spatial expansion and socio-economic development are indicators of development advancement in Melong and reversion in Kekem influenced by the national N⁰ 5 highway.

4.1 Population Evolution and Influence in Kekem and Melong

Population evolution depicts a change in the population size overtime Barney Warf, (2010). It can either influence the development progression of a town or cause its regression. Once the size of the population of an area is on a perpetual increase, it indicates some level of attraction as opposed to when is begins to dwindle. Such a phenomenon has been observed in Melong and kekem over the years. Kekem which officially was experiencing population increase from 1976 to 2010 experienced a population decrease after the creation of the deviation in 2007 (Table 1).

Table 1. Population Evolution in Kekem and Melong from 1976 to 2020

Year	Population growth Kekem	Population growth Melong
1976	26623	10091
1987	33152	51272
2005	35001	48180
2010	45010	52560
2020	43210	61270

Source: BUCREP, 2005 and 2010 projections

Kekem before the creation of the road deviation was economically booming due to her role as a transit town to people moving from the Littoral to the West and North West regions of Cameroon. This explains why the population was on a persistent increase since it served as an attractive pole to in-migrants from the West and North West regions in search for a livelihood. The population of Kekem increased from 26,623 inhabitants in 176 to 45,010 in 2010. As time evolved, it has dropped to 43,210 inhabitants in 2020 indicating a regression. Field revelations showed that one of the causes of this drop is the deviation of the National N^o 5 highway which left from Douala-Kekem-West Region to Douala-Melong-West Region. Kekem loosed its attractiveness as several youths and the active commercial population moved to Melong for their businesses.

As opposed to that of Kekem, the population growth of Melong is experiencing a persistent increase. The population has increased from 10,091 inhabitants in 1976 to 51,272 in 1987. In between the years 1987 to 2005, it dropped to 48,180 instigated by the drop in the prices of Cocoa and coffee which were the dominant pull vectors in this agricultural population. After the creation of the deviation which diverted from Kekem to the advantage of Melong, the population increased from 48,180 in 2005 to 52,560 inhabitants in 2010 with a marginal increase of 4,380 inhabitants in five years. This progression is an indication that Melong has now become the pull city with a high level of attractiveness as many in-migrants came to improve on their livelihood. The change in the population of Kekem and Melong has influenced the spatial expansion of the towns by ameliorating in Melong and deteriorating in Kekem.

4.2 Spatial Expansion and Incidence to Kekem and Melong

The spatial growth of Kekem and Melong towns serves as an indicator of growth to Melong and decline to Kekem from the built-up space. A statistical analyses of the satellite images of 1978, 2001 and 2018 available images at the time of the research revealed that built-up space in Kekem is on a downward trend while that of Melong is on an upward one (Table 2).

Table 2. Land Use / Land Cover Change in Kekem and Melong from 1978 to 2018 in Hectares

Designation	Kekem			Melong		
	1978	2001	2018	1978	2001	2018
Built-up space	137	2937	2363	149	1984	3532
Vegetation	37758	34958	35590	101094	99259	97711
Total	37895			101243		

Source: Satellite images of 1978, 2001, 2018

Kekem and Melong are towns dominated by agricultural activities. This work has focused on the spatial growth of the town influenced by road infrastructure and will concentrate entirely on the built-up space and socio-economic development. Within the traditional years of 1978, the built-up space of Kekem and Melong was largely insignificant. These towns were mostly dominated by farmers who were focused on the production of coffee and cocoa for exports (Figure 2).

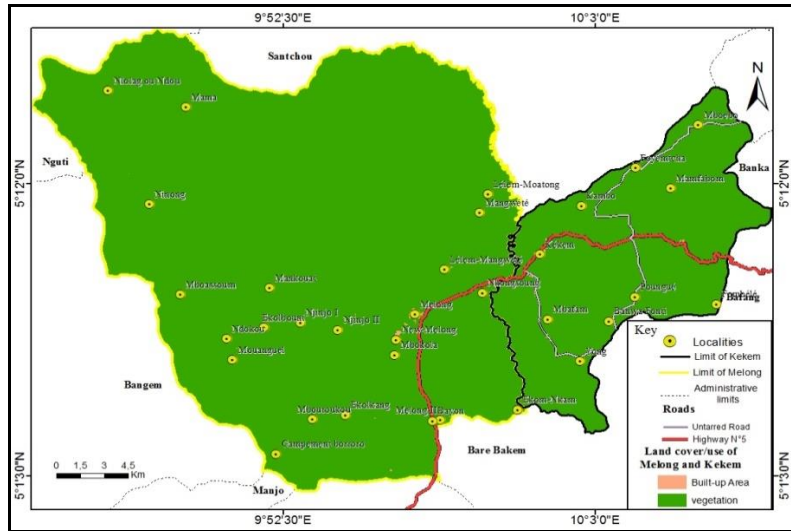


Figure 2. Land Use/ Land Cover Evolution of Kekem and Melong in 1978

Source: The 1978 Landsat MSS Image of Kekem and Melong

Revelations from Table 1 indicate that Kekem was more progressive in built-up colonisation of vegetation from 137ha in 1978 to 2927ha in 2001. During these same periods, the built-up space of Melong as well increased from 149ha to 1984ha in 2001(Figure 3).

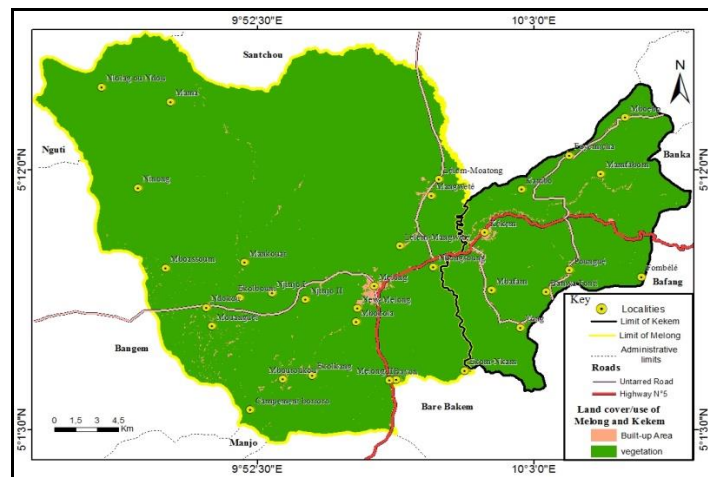


Figure 3. Land Use/ Land Cover Evolution of Kekem and Melong in 2001

Source: The 2001 Landsat TM Image of Kekem and Melong

The dominance of vegetation in figure 3 reflects the major activity practiced in Kekem and Melong before the 1980s. The increase in built-up space from 1978 to 2001 was more for Kekem than Melong since the National N° 5 road infrastructure was operational through Kekem with all its ramifications. Social and economic attractions and an eventual development were more visible in Kekem than Melong at the time. One could observe the concentrated linear settlement in Kekem dominated by commercial activities along the Fondjomoko, Balembo, Fonkouakem and Mboebo neighbourhoods along the road infrastructure stretch. Kekem during this period witnessed an increase in its population and new residential spaces were being created. With much life and hope manifested in the traders who

were available in the day and at night, one could easily conclude that poverty was reduced at best Marie et al. (2009). Owing to the creation of the road deviation in 2007, these attractions shifted from Kekem to Melong. Built-up space progression became dominant in Melong and improved from 1984ha in 2001 to 3532ha in 2018 as opposed to that of Kekem which dropped from 2937ha in 2001 to 2363 in 2018 (Figure 4).

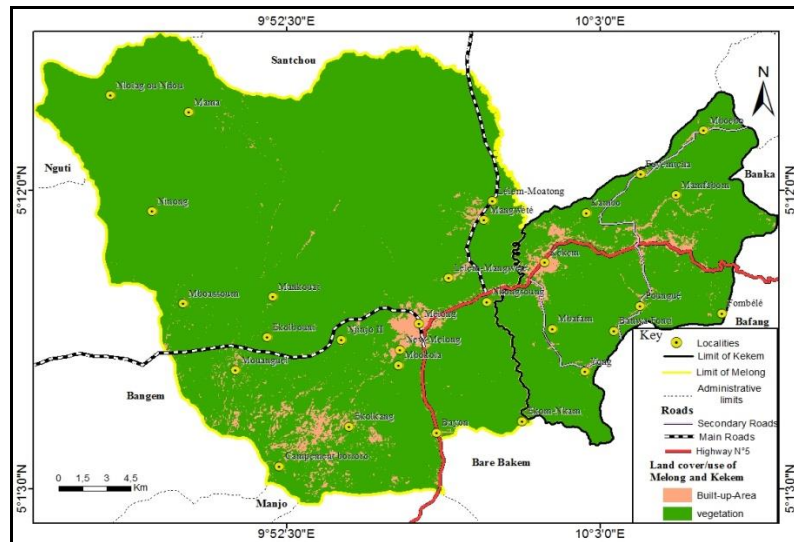


Figure 4. Land Use/ Land Cover Evolution of Kekem and Melong in 2018

Source: The 2018 Landsat OLI Image of Kekem and Melong

Built-up space in Melong increased over that of Kekem in 2018 as indication of the influence of the road deviation. This politics of road development in Cameroon has become an advantage to one town to the disadvantage of the other Harris James Patrick, (2011). The social and economic boom that existed in Kekem before 2007 has gradually shifted to Melong with traces of abandoned buildings and dilapidated infrastructure. Kekem town is gradually experiencing city decay and if nothing is done, it might regress to a village instead of progressing into a city. Built-up space colonization over vegetation serves as an indicator of spatial growth and development of towns Balgah and Kimengsi (2016). Inspiration from this research work has triggered this paper to confirm that the rapid implantation of the population along the Bare Bakem and Yimo stretch of the National N⁰ 5 highway deviation increases the built-up space of Melong.

The road deviation led to the near disappearance of the old transit areas of Petit Nkam, Kekem and La Moutie to the emergence of new neighbourhoods such as La Foret, Fongang, Magwa as well as Mboentang in Melong along the highway. Melong town extends more to the east along the new road infrastructure. In-migrants who have come for economic purposes have colonised the vegetation along the road stretch, destroying forest land for human settlement. The quest for space has thus increased the built-up area of Melong which is gradually shifting from a predominantly agricultural town to a business hub transit area for travellers. The road therefore serves as a factor of spatial expansion and development of new neighbourhoods.

4.3 Economic and Social Progression in Melong and Regression in Kekem

The economic and social factors of the National N⁰ 5 road infrastructure have greatly improved the wellbeing of the inhabitants in Melong as opposed to those in Kekem. Road infrastructures play an important role in the economic and social development of an area. They do not only improve on the wellbeing of the inhabitants, but as well pull the population and investors who in turn develop the host towns Susan and Karl (2003). This can be observed in Melong, but unfortunately not in Kekem. The

deviation of the road infrastructure has shifted the economic and social developmental imprints to Melong from Kekem and if such phenomenon is not checked, it can affect several other towns. Field and documentary research analyses of the road deviation revealed that much is benefited from the deviation than the old road (Figure 5).

Results from Figure 5 showed that close to half the distance of the road infrastructure is gained because of the deviation. From the Nkam Bridge via Kekem to West region in the Old road is 24.10km (Figure 5), while from Nkam Bridge via Melong to Santcho in the West region is 12.53km. This reveals that some 11.57km is gained as distance as a result of the deviation. The deviation thus is economically rewarding both to passengers and transporters who do not only benefit in cash, but as well in time and energy. A transport car that runs for a regular 60km/hour will thus spend 12.53 minutes through the deviation (Nkam Bridge via Melong to West region) as opposed to 31.19 minutes through the old road (Nkam Bridge via Kekem to West region). Before the creation of the national N^o 5 highway road infrastructure deviation through Melong, the Old highway used to be through Kekem and this improved on the commercial space of the town. Kekem before 2007 witnessed an economic improvement as several commercial spaces were created along the highway. The shift to Melong revealed a complete turnaround of the advantages towards Melong. The deviation as compared to the old road infrastructure is less winding. It has helped a lot to decongest the Melong town which was entirely concentrated in the centre. However, with the creation of the road deviation, most in-migrants settled along the deviation stretch of the roads (Figure 5).

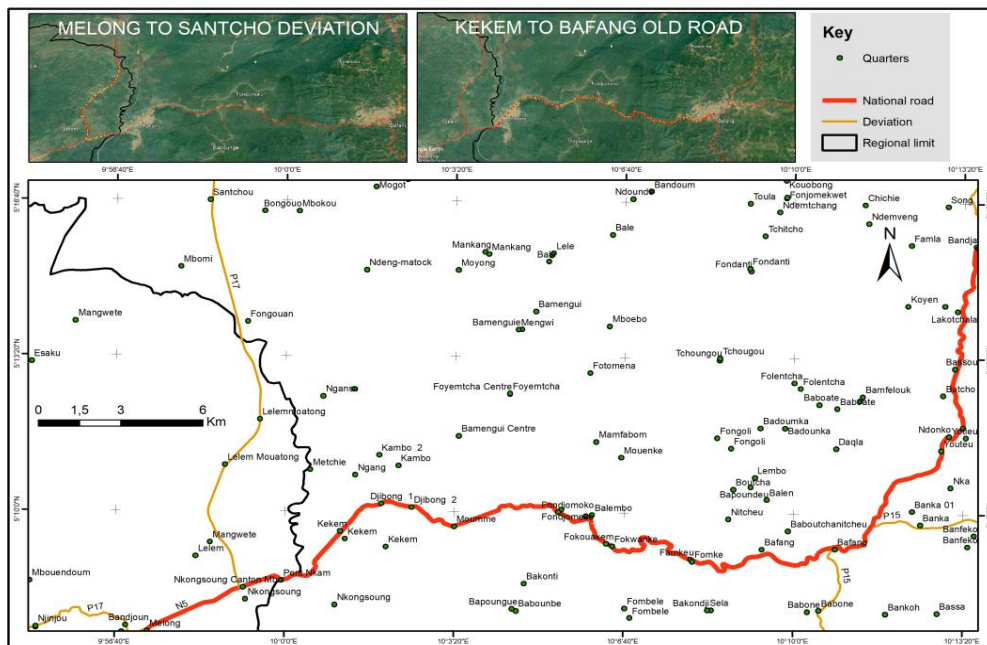


Figure 5. The Melong to West Road Deviation

Source: Google earth 2021, NIC and Field Work, 2021

Field analyses of the advantage of the deviation over the old road revealed that the deviation has triggered commercial space creation in Melong (Table 3). Some 35.9 % of the sampled population adhere to that fact that the road deviation through Melong has triggered commercial space creation. The old transit areas of Petit Nkam, Kekem and La Moumee, in the Kekem stretch have now been replaced by the Fongang, Magwa, La Foret, Bare Bakem and Yimo along the Melong stretch. These neighbourhoods which have been newly created harbour all sorts of commercial activities and curiously run for twenty four hours on all the seven days of the week.

Table 3. Economic Advantages of the Melong to West Region Deviation

Reason	Respondent	Percentage
Commercial space creation	61	35.9
Agricultural intensification	9	5.2
Employment opportunities	49	28.9
Increase in income level	17	10
Transport cost reduction	34	20
Total	170	100

Source: Field work, 2021

Buildings for commercial purposes have emerged along the Melong transit stretch. This area harbours beer parlours, mini-shops, restaurants and Inns which stimulate the commercial life of Melong all day long. Since the Melong stretch has become the current transit town for travellers, the demand for more goods and services have increased. Commercial space creation and the 24/7days functioning of the road have thus encouraged in-migration into the town. Some 28.9% of the population confirmed that the road infrastructure has given an opportunity for them to have an activity that keeps them busy. Most youths from the West, North West and South West regions of Cameroon who had no jobs have moved to Melong and are exercising in trade and commerce. This serves as a source of employment to the people and has greatly improved on their livelihood. The commercial population of Melong along the transit area is made up of the young and the old, male and female alike. Field data showed how families entirely depend on the returns of their sales per day for living. The activity is practiced by parents and children and serves the family to breakeven. It is interesting to note that the commercial space of Melong is on a rise while that of Kekem is disappearing (Table 4).

Table 4. Evolution of Commercial Space in Kekem and Melong from 1980 to 2020

Years	Kekem	Melong
1980	176	152
1990	192	189
2000	344	227
2010	301	351
2021	186	394

Source: Field work and Kekem and Melong local councils

Commercial space creation refers to all areas or buildings where exchange of goods and services take place Peet and Thrift (2013). These include markets, bars, super markets, shops restaurants, Inns, Motels, as well as road side vending tables. The commercial space of Kekem increased from 176 in 1980 to 344 in 2000 and dropped to 301 in 2010 and to 186 in 2020. The drop in commercial space in Kekem in 2010 is due to the deviation of the National N^o 5 highway which shifted the attraction of the town from traders. The purely commercial population that had moved into Kekem from the influence of the road infrastructure could no longer survive since the activity was decreasing. The shift continued over the years and by 2020 more than 90% of the traders in the town had moved to Melong.

Melong has now become the town of attraction to traders who depend entirely on road side vending for their livelihood. The commercial space of Melong is perpetually increasing from 152 in 1980 to 351 in 2010 with a tremendous rise. This increase more than doubled because of the creation of the road

deviation through Melong in 2007 which diverted all commercial attention from Kekem to Melong. The commercial space of Melong began to expand since 2010 and by 2020, some 394 of such spaces can be identified in Melong. The commercial space is constantly increasing as traders who depend on road vending have moved to Melong for trade. Most of these traders settle around their business premises thereby serving as urban space producers of the town. Melong has now become their new area of trade and activities especially along the road infrastructure deviation operate on a daily basis for twenty four hours a day. Melong town is presently experiencing an economic boom, while Kekem has dropped. Revival measures are therefore incumbent to salvage Kekem from this downward economic trend, hence urban decay of the town.

Apart from commercial space creation, transport cost reduction is as well one of the advantages of the road deviation through Melong. Much gain is accrued by road users from passengers to vehicle owners when using the Melong deviation as opposed to the old Kekem stretch (Figure 5). This explains why some 20% of the population reveal how it is beneficial to use the deviation than the old road. Furthermore, inhabitants of Melong have confirmed an increase in their income levels as compared to the past years when the road deviation was absent. Families have moved from a two meals per day to three indicating an improvement in income for household upkeep. Some 10% of the population confirmed of haven improved in their income and that the road was the major cause. Their involvement in the trading activities both in the day and night have helped their families a lot (Figure 6).



Figure 6. Commercial Activities along the Melong Road Deviation in the Day and Night

Photo by Tende, 2019

Figure six shows the commercial activities in the Melong stretch on a daily basis for 24 hours as people transit the areas during the day in Photo A and at night in Photo B. It is interesting to note that the road deviation through Melong has as well encouraged agricultural intensification in Melong. Dominated by agricultural activities, the farmers of Melong have now moved from subsistence agriculture to extensive farming for sales Eva and Jana, (2019). Food items such as tomatoes, oranges, cocoyam and maize are being cultivated in large scale and sold to other cities such as Douala and Yaounde. Road deviation infrastructure has greatly influenced the economic development of Melong.

The reverse is true for Kekem that hitherto used to be at the lime light before the creation of the National N^o5 highway deviation via Melong. Kekem at present has now become a regression town in economic activities. The old transit stretch that used to harbour travellers along the Petit Nkam, Kekem, La Moumee and Fondjomoko neighbourhoods have now become a shadow of themselves. Commercial activities which used to animate the place in the day and night throughout the week have dropped. Traders who had migrated to Kekem for greener pastures saw their goods depreciating and gradually getting bad because of little or no customers. Income levels that had increased in Kekem because of the commercial activities had dropped tremendously. Most youths who depended on the income from their daily sales to finance their education saw their hopes shattered. Kekem town has now become a stagnated with some of its buildings abandoned as they are in a dilapidated and depreciating state. Even the agricultural activity which was the major source of livelihood in the area had gone down the drain with its major factories abandoned. The old Moumie stretch of the road which harboured the daily twenty four hours commercial activity has now become a shadow of itself. The Kekem town that used to be filled with much life and entertainment has now become a quiet area with houses depreciating and some abandoned harbouring criminals and scavengers who can barely have a meal per day (Figure 7).



Figure 7. Dilapidated Buildings along the Kekem Transit Area

Photo by Tende, 2019

Figure 7 shows a current picture of Kekem with ghost shops void of customers in C and dilapidated buildings and shops in D along the Moumie stretch of the old highway. Life that used to boom in Kekem has completely reduced and the town has become calm. Field revelations showed that there is massive out-movement of youths and traders from Kekem. The fear is that if this threat is not checked, Kekem might experience city decay in the nearest future.

The town of Melong has as well improved socially as opposed to that of Kekem from the deviation of the road infrastructure. Some 41.9% of the population confirmed that their standard of living has improved since the creation of the road infrastructure (Table 5).

Table 5. The Social Ramifications of the Melong to West Region Deviation

Reasons	Respondent	Percentage
Improved standard of living	71	41.9
Available social amenities	24	14.1
Emergence of social facilities	32	18.8
Emergence of new neighbourhoods	43	25.2
Total	170	100

Source: Field work, 2021

Contrary to the manner in which they used to live and feeding habits they had, the inhabitants of Melong can now boast of an increase in their daily expenditure thanks to the road infrastructural opportunities of income generation. Improved standard of living can be measured from the level of income, consumption level, and improvement in health as well as ownership of wealth Hanlon et al. (2010). These characteristics best describes the inhabitants of Melong as prove of an improvement in their standard of living. The reverse however is true for the inhabitants of Kekem whose standard of living have dropped and who can barely breakeven since a majority of them depended on the road side vending for survival.

Aside standard of living, new neighbourhoods have emerged in Melong with an increase in its cosmopolitan nature as opposed to Kekem. Some 25.2% of the population confirmed the fact that due to the influence of the road infrastructure, the neighbourhood creation has increased over time in Melong and is dwindling in Kekem. Field data and documentary research from the Melong and Kekem local councils revealed that quarters have emerged over time (Table 6).

Table 6. Neighbourhood Evolution in Kekem and Melong from 1980 to 2020

Years	Kekem	Melong
1980	4	6
1990	9	11
2000	14	15
2010	18	21
2020	18	24

Source: BUCREP 2005/2010 Projections and Kekem and Melong local councils

Data from Table 6 shows that neighbourhood emergence and evolution in Kekem is stagnant while that of Melong is increasing. Results from field work prove that the increase in Melong emanates from the

influence of the road infrastructure as many unemployed Cameroonians are constantly moving into Melong to engage in business for survival. The quest for space to settle thus increases the chances of new space creation especially along the highway. New neighbourhoods such as Mboendang, Nlongko, La Foret as well as Mangwele have emerged to increase the built-up space of the town. This increase despite the presence of administrative and municipal authorities is done with little respect of urban norms thus raising the fear of an urban disorder if not checked in future. The reverse of space creation in Melong is true for Kekem which is gradually losing its inhabitants especially the commercial population. With the absence of their trading opportunity which served as a source of attraction to them, most traders have moved to Melong. The rapid space creation which occurred in Kekem between 1990 and 2010 remained stagnant in 2020 indicating a halt in spatial production. The town of Kekem is no longer economically attractive to traders or even agriculturally welcoming to farmers. With the rapid depreciation of the existing infrastructure that has been abandoned and the increase in rural exodus of the population, the town might experience city decay if nothing is done.

5. Conclusion

This paper which was geared at revealing road infrastructural imbalance and its impact to towns found out that the National N^o 5 highway deviation has caused more harm to Kekem to the advantage of Melong. This unintentional developmental imprint which was created to gain time and cost as well as energy spent by the Cameroonian authority has unfortunately increase the frustration of some citizens an might destroy an entire town if nothing is done. The then road infrastructure which passed through Kekem as transit town expanded the area and increased the economic power of many families for over seventeen years (1990 to 2007). With the creation of the deviation in 2007 through Melong, Kekem loosed her strength of attraction. The attention changed to Melong which has now become the transit Eldorado of passengers from the Littoral to the West and North West regions of Cameroon. A majority of the commercial population which used to live and trade in Kekem have now moved to Melong for the same purpose. Commercial activities take place in Melong for twenty four hours every day along the transit corridor of the area. This has increased spatial expansion of the town coupled with an increase in the population which is gradually affecting Melong. Business, housing and opportunities have increased in Melong as the town has become a transit hub. The developmental growth of Melong is faced with an increase in traffic congestion along the transit corridor as well as other social vices as increase in crime wave and commercial sex activities. Such vices that are observed in metropolis like Douala and Yaounde Fombe and Balgah (2012) are gradually being practiced in Melong. The repercussion of such activities will be detrimental to the growth of the town if not addressed at present. With an increase in the traffic flow through Melong due to its advantage in time and cost, little or no movements are carried out through Kekem. The old transit corridor through Kekem has been abandoned by traders and few commercial activities observed have little or no customers. The diversion in the attractiveness of the road infrastructure has enabled several inhabitants to abandon their houses and move to Melong for survival. Most houses in Kekem are depreciation with dilapidated infrastructure observed as the town is experiencing a developmental halt. The fear is that the town might experience city decay if nothing is done to salvage the situation. This paper therefore suggests that they should be a revamping and revitalisation of the agricultural sector in Kekem owing to the favourable soil and climatic conditions of the area. The production of coffee that used to boom the economy of Kekem and its inhabitants for close to twenty years (1960-1980), has disappeared from the scene. The recreation of the CACEP or other coffee storage magazines in Kekem is mandatory to revamp the agricultural sector. Aside State intervention through subsidising micro agricultural projects, the inhabitants should form local agricultural cooperative associations which can lobby for funding from the World Bank and other funding agencies. Above all, elites should be part of the developmental brain within their area by creating job opportunities through partnerships which will boost the agricultural sector. This will not only re-attract the unemployed population to the town, but will as well pull agro-alimentary industries which will in the long run re-awaken the development of Kekem.

References

- Arend De Haas. (2017). The highway connecting Cameroon and Nigeria has brought economic benefits and forest degradation. *Africapedia Facts Data Trends*, 24.

- Asian Development Bank. (2006). When do roads benefit the poor and how? *Hettige Hemarnala*, pp. 2-123.
- Balgah, S. N., & Kimengsi, J. N. (2016). Land Use Dynamics and Wetland Management in Bamenda: Urban Development Policy Implications. *Journal of Sustainable Development*, 9(5), 1-11.
- Barney Warf. (2010). *Encyclopedia of Human Geography*. Terms, Themes and Concepts. ABC-CLIO, LLC. p. 616.
- Bersdorf, A., & Salet W. (2007). *Spatial reconfiguration and problems of governance in urban regions of Europe*. An introduction to the Belgeo issue on advance services sectors in urban regions.
- BUCREP. (2005). *National Population and Housing Census of Cameroon of 1976, 1987, 2005 and 2010 projections*, p. 567.
- Cameroon National Shippers Council. (2015). *International seminar on Problems of Road Transport of Goods in Africa, CNSC report*, 14-15 May, 2015, p. 9.
- Caroline Dominguez, & Vivian Foster. (2011). Cameroon's Infrastructure: A continental perspective. In *Africa Infrastructure Country Diagnostic country Report* (p. 59).
- Claudia, B., Uwe, D., & Harris, S. (2015). *How roads support development*. World Bank Blogs.
- Epananda Arnaud. (2015). L'essor du vivrier marchand et du maraîchage comme solution à la crise caféière à Kékem dans la plaine des Mbo au Cameroun. Unpublished Mémoire de Master en Géographie, L'Université de Douala, p. 164.
- Eva Ivanova, & Jana Masarova. (2019). Importance of road infrastructure in the economic development and competitiveness. *ECONOMICS AND MANAGEMENT*, 18(2), 263-274,
- Fofiri Nzossie. (2012). Les infrastructures routières comme facteur de (re) configuration de l'espace marchands. In *Cahiers de l'Afrique de l'Ouest, Peuplement, marche et sécurité alimentaire*, pp. 125-127.
- Fogwe, Z. N., & Ntumngia, L. N. (2014). Road infrastructural development and traffic patterns in Bamenda – a Cameroonian medium city. *African Humanities Review. A multidisciplinary journal*, 3(2), 1-12.
- Fombe, L. F., & Balgah, S. N. (2012). *The urbanisation process in Cameroon. process, patterns and implications*. *African Political, Economic and Security Issues* (p. 214). NOVA, Nova Sciences Publishers, Inc. New York.
- Hanlon, J., Armando, B., & Hulme, D. (2010). *Just give money to the poor. The development revolution from the global south*. Kumarian Press, p. 216.
- Harris James Patrick. (2011). The Politics of Road Development in Cameroon. *The Johns Hopkins University International Studies*, p. 38.
- Jean Paul Rodrigue. (2017). *The geography of Transport Systems* (4th ed., p. 440). New York, Routledge.
- Kemetcho Momene Chanelle. (2017). La Déviation du Tronçon Melong – Yimo de la Nationale N°5 et ses Retombées socio-économiques et environnementales sur la ville de Melong. Unpublished Mémoire de Master en Géographie, L'Université de Yaounde 1, p. 149.
- Marie, G., Boris, N., & Gael, R. (2009). *The impact of roads on poverty reduction: A case study of Cameroon* (p. 34).
- Matt Rosember. (2018). *Accessibility and mobility in transportation and geography* (6th ed., p. 379). New York.
- Njimanted, G. F., & Mbohjim, O. M. (2014). Determinants of traffic congestion in the metropolis of Douala, Cameroon: An integrated approach. *Revue de L'Académie des Science du Cameroun*, 11(2/3), 1-14.

- Oloyo, R. (2001). *Fundamentals of Research and Methodology for Social and Applied Sciences ROA Educational Press, Aloro Nigeria*. p. 305.
- Peet, R., & Thrift, N. (2013). *New Models in Geography* (Vol. 2, p. 418). Routledge, London.
- Sununtar Setboonsarng. (2010). *Transport infrastructure and poverty reduction, ADRI research Policy Brief N^o 21, Asian Development Bank*.
- Susan, H., & Karl, K. (2003). *Economic effects of highway relief routes on small and medium-size communities*. Centre for transport research, University of Texas.