



Security Challenges in Public Transportation Sector in Cameroon: A Problem-Solving Approach to Safety Protocols in the North West Region

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Abstract: Public transportation systems in Sub-Saharan African countries face significant security challenges, ranging from bad roads, over-speeding, drunk driving, ultimately accident to violent crimes and terrorism threats. In Cameroon, inadequate safety protocols, weak regulatory enforcement, and insufficient infrastructure exacerbate these issues, posing risks to commuters, operators, and transport authorities. This study intend to (i) assess the security challenges in public transportation sector in the North West Region and (ii) propose sustainable strategies to enhance safety protocols. The research adopts a mixed-methods design, combining both quantitative surveys and qualitative interviews. A total of 400 respondents, including commuters, transport operators, and security personnel, were selected using stratified random sampling across major highways in the region notably, Bamenda-Kumbo road axis, Bamenda-Fundong, Bamenda-Batibo, Bamenda-Bafut and Bamenda Santa road axis. Data collection was conducted through structured questionnaires and in-depth interviews, while data analysis employed descriptive statistics and thematic analysis to identify patterns and trends. Findings reveal that 78% of respondents perceive public transport as unsafe due to weak law enforcement and a lack of surveillance technologies. Additionally, 65% report experiencing security incidents within the past years. While security agencies have introduced measures such as random checks and patrols, their effectiveness remains limited by resource constraints and systemic corruption. The study highlights that a problem-solving approach which incorporates advanced surveillance systems, community-based intelligence gathering, and robust policy enforcement can significantly improve safety outcomes. This study concludes that strengthening security management in public transportation requires a multi-stakeholder approach, integrating technology, governance, and community engagement.

Keywords: Public transportation security, safety protocols, problem-solving approach, Cameroon, Sub-Saharan Africa.

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1. INTRODUCTION

Public transportation plays a critical role in the socio-economic development of Sub-Saharan African countries, providing essential mobility for

millions of people daily (Hernandez Berga, 2024). However, insecurity in the transport sector have raised worrisome concerns as these hampers socio-economic agenda of nation states (Stephen T. Odonkor *et al.*, 2020). The insecurity situation have

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largely been blamed on state government's unpreparedness to develop the road infrastructure sector or even developed safety policies and transportation systems that is sustainable (Heydari, A S. *et al*, 2019). Research on transport security has revealed a significant increase in urban transport crime in many developing countries, especially over the past ten years. Many cities across the continent, inter-urban passengers have witnessed numerous threats to life and theft of properties have become a common phenomenon along transport routes and at terminals. Routine journeys on public transit systems now carry risks of mugging, robbery, or even kidnapping (Ajayi and Ajayi, 2014). Furthermore, Odufuwa (2012) identifies harassment, murder, assault, injury, and the loss of life and property as persistent issues in transit crime. As such, criminal incidents pose one of the most substantial challenges to public transportation systems, both in developed and developing nations.

In Cameroon, public transport serves as a vital means of transport for both urban and rural populations, facilitating access to education, employment, and healthcare (Tabi, & Tiafack, 2024). However, despite its importance, the sector faces significant challenges, primarily related to safety and security. With increasing population density and urbanization, the demand for efficient and secure public transportation systems has risen, but security management has not kept pace with these changes (Elassy *et al*, 2024). This has resulted in a variety of safety concerns, including kidnaping, theft, assault, and accidents, which endanger both passengers and operators. Recent studies highlight the growing number of security incidents within public transport systems in Cameroon. For instance, the urbanization of cities like Douala and Yaoundé has led to a surge in traffic-related incidents and criminal activities, with public transport often being a target for criminal behavior (Awamachi, Tambi, & Elambo, 2024). A lack of proper enforcement of safety protocols and an inadequate presence of law enforcement in transport hubs further exacerbates these problems (Feudjio *et al*, 2024). The security risks not only undermine the effectiveness of public transportation systems but also discourage potential users, which has a direct impact on the economy by limiting accessibility to important resources and services (Diang *et al*, 2023). In response to these concerns, various security measures have been proposed and implemented sporadically across different regions. However, these efforts are often fragmented and inconsistent, with many transport operators and passengers unaware of existing safety protocols. Additionally, while there have been some advancements in the introduction of technology such as CCTV cameras and GPS tracking, the overall effectiveness of these measures remains uncertain (Zhang *et al*, 2022). This highlights the

need for a comprehensive and sustainable approach to security management within public transportation systems, one that is tailored to the unique socio-political and economic contexts of Sub-Saharan Africa, particularly in Cameroon.

The issue of security management in public transportation across Sub-Saharan Africa, and particularly in Cameroon, necessitates an integrated approach that considers both technological innovations and human factors (Ajayi *et al*, 2021). A solution-focused examination of current safety protocols, combined with an analysis of effective practices in other regions, could provide valuable insights for strengthening the security framework. This study seeks to evaluate existing safety measures, identify gaps, and propose a set of actionable solutions aimed at improving security protocols in Cameroon's public transportation sector. The lack of a comprehensive and coordinated security management strategy in Cameroon's public transportation system has led to increased vulnerability of passengers and operators to various forms of insecurity (Florido-Benítez, 2024). Incidents such as armed robbery, violent assault, and accidents are widespread, creating an environment of fear and uncertainty for commuters (Adesanya, 2023). This problem is particularly pronounced in major urban centers, where the high population density and inadequate enforcement of safety regulations make public transport an easy target for criminals (Ceccato, Gaudet, & Graf, 2022). Consequently, security concerns have become a significant barrier to the efficient functioning of public transport, limiting its potential to contribute to economic and social development.

Despite the increasing awareness of these challenges, the implementation of security measures remains haphazard, often driven by reactive rather than proactive responses. Public transport operators in Cameroon, particularly in urban areas, lack the necessary training and resources to manage security risks effectively. Moreover, there is insufficient collaboration between local authorities, transport operators, and law enforcement agencies, which results in fragmented and ineffective security policies (Ogbu, Shumba, & Abimbola, 2023). This lack of coordination further exacerbates the problem, as passengers are left vulnerable to security threats without reliable support or intervention.

Given the growing importance of public transportation to Cameroon's development, there is limited attention afforded to incidents of crime and disorder on public transport. It is critical to address these security challenges with a systematic and proactive approach. The study seeks to identify the specific gaps in the current security management

strategies, assess the effectiveness of existing safety protocols, and propose solutions that can be tailored to the unique context of public transportation in Cameroon. By doing so, it aims to contribute to the improvement of safety and security within the sector, benefiting both the economy and the welfare of commuters.

2. THEORETICAL FRAMEWORK

Routine Activity Theory (RAT) and Risk Management Theory

Routine Activity Theory (RAT) was developed by Cohen and Felson (1979) and posits that crime occurs when three elements converge: a motivated offender, a suitable target, and the absence of a capable guardian. The theory suggests that criminal opportunities arise from routine human activities that inadvertently expose individuals or assets to risk. In the context of public transportation security in Cameroon, RAT is relevant because it explains how criminal activities, such as theft, vandalism, and violent attacks, occur due to unprotected passengers, inadequate security presence, and ineffective surveillance. By understanding these patterns, transport authorities can implement strategic measures such as increased law enforcement patrols, real-time surveillance systems, and controlled access to transportation hubs, thereby minimizing criminal opportunities (Cohen & Felson, 1979).

Risk Management Theory, on the other hand, is rooted in financial and operational risk management principles but has been extensively applied to security studies. Kaplan and Garrick (1981) expanded on the concept, emphasizing a structured approach to identifying, assessing, and mitigating risks in various sectors, including public safety. In the context of public transportation security, this theory is relevant because it provides a systematic framework for analyzing security threats, prioritizing vulnerabilities, and designing response strategies. By applying Risk Management Theory, policymakers and transport authorities can conduct risk assessments to identify high-crime zones within transportation networks, develop contingency plans, and allocate resources effectively to mitigate security threats (Kaplan & Garrick, 1981).

Operationalizing these theories involves translating their principles into practical security strategies. RAT can be operationalized by enhancing "capable guardianship" through the deployment of well-trained security personnel, advanced surveillance systems, and community engagement programs to deter criminal activities in public transportation. Similarly, risk assessment tools and predictive analytics can be used to operationalize Risk Management Theory, allowing transportation

authorities to evaluate security threats based on historical data and real-time incident reports. Through these mechanisms, transport agencies can establish robust security protocols, ensuring passenger safety and minimizing the risk of security breaches (Felson & Clarke, 1998).

The basic assumption of Routine Activity Theory is that crime is not necessarily driven by deep-seated criminal motives but rather by opportunistic circumstances that allow criminal acts to take place (Cohen & Felson, 1979). It assumes that altering the environmental or situational context can prevent crime. Similarly, Risk Management Theory assumes that security risks can be systematically analyzed and mitigated through proactive planning, strategic resource allocation, and continuous monitoring (Kaplan & Garrick, 1981). Both theories emphasize that crime and security threats in public transportation can be effectively controlled through structured interventions, situational modifications, and risk-based decision-making. These theories provide a strong foundation for strengthening security management in public transportation in Cameroon by offering practical crime prevention strategies and structured risk assessment methods to improve passenger safety and overall transport security.

3. MATERIALS AND METHODS

The study was undertaken within five road axis in the North West Region of Cameroon, with Bamenda as focal point that links the rest of the urban centers. The North West Region is the third largest region in the country with an estimated population of 2,307,319 inhabitants. It is situated between Latitude 6° 0'0" and 7° 0'0" North of the Equator Longitude 10° 0'0" and 11° 0'0" East of Greenwich Meridian (Figure 1). The region covers a total surface area of 17 300km². It is bordered to the North by the Federal Republic of Nigeria, to the West by the South-West Region and the Federal Republic of Nigeria, to the East by the Adamawa Region, the West Region and part of the Federal Republic of Nigeria, and finally to the South by the West Region and part of the South West Region.

Bamenda was chosen as a central location because it served as a cross road to all the other divisions in the region, it also serves as the socio-economic and administrative hub of the region. The major axis selected included: Bamenda-Kumbo, Bamenda-Fundong, Bamenda-Batibo, Bamenda-Bafut and Bamenda-Santa. These road networks account for over 80% of passenger daily mobility. These roads faces numerous security challenges, including armed highway robberies, pickpocketing, over-speeding, accident, and occasional criminal attacks due to the socio-political instability. Urban

transport services, such as buses, hiace, shared taxis and motorcycle (popularly known as "benskin"), are the common vehicle types plying the roads.

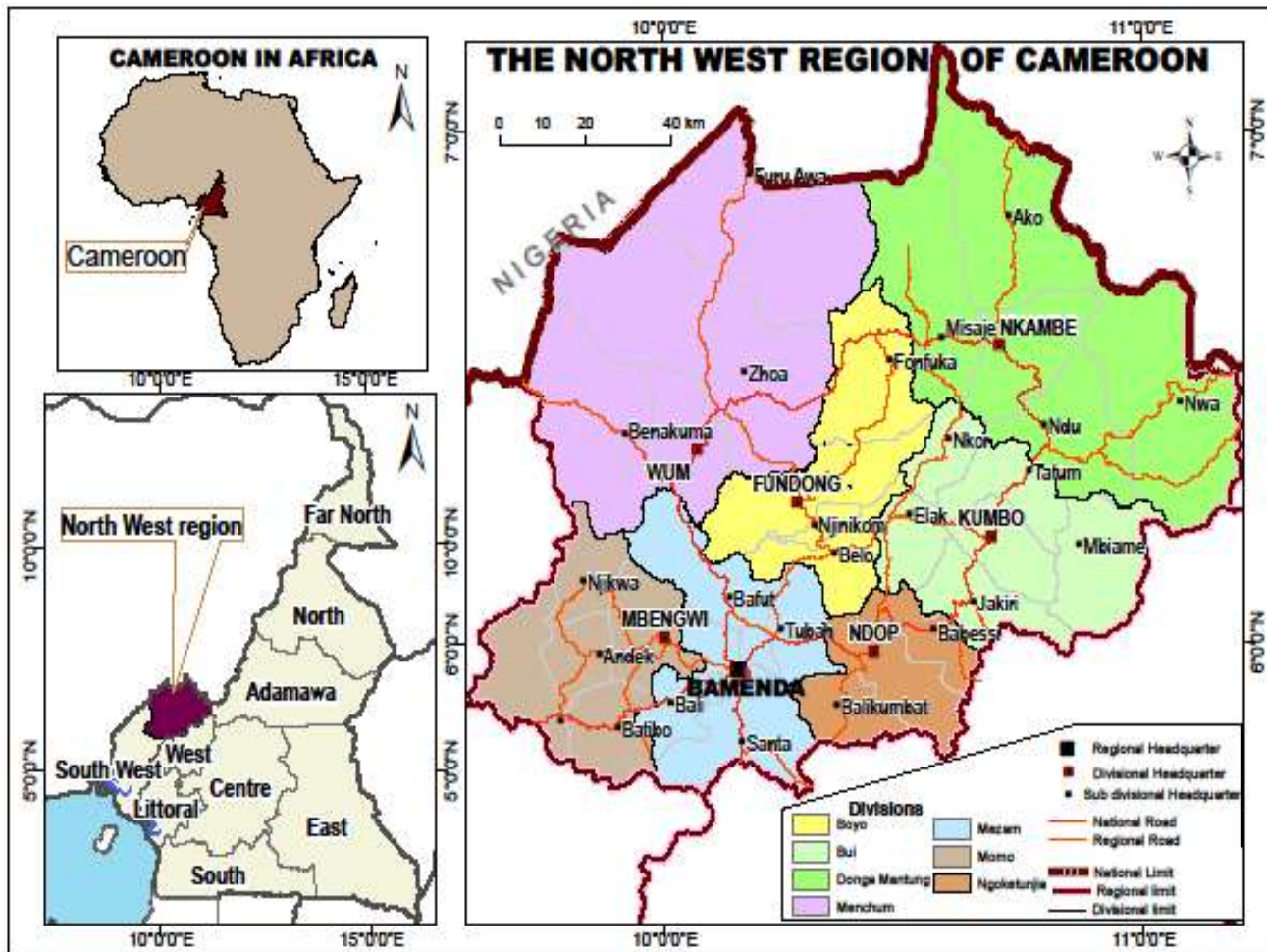


Figure 1: Location of North West Region

This study adopted a descriptive survey research design, which enabled an in-depth examination of the security challenges in the public transportation across the study locations. The population of the study constituted transport operators, passengers, household along the road axis, and security personnel. Informant interviews were conducted with regional delegate of road safety Bamenda, the City Mayor of Bamenda where valuable information was collected on the security situation in the region. A total of 400 questionnaire instruments were deployed on the selected population to ensure comprehensive data representation. The data collection procedure involved face-to-face administration of questionnaires to drivers and passengers at each transport axis and households along the transport roads. We used stratified random sampling technique to categorize respondents into

transport operators, passengers, and security officials, followed by accidental sampling to select participants from each stratum. Accidental sampling was used because the respondents were met by chance, and those who accepted to attain to use were immediately sampled. The technique of data analysis included descriptive statistics such as frequency counts, percentages, and mean scores to summarize data. Data was analyzed using SPSS (Statistical Package for the Social Sciences) to ensure accuracy and reliability of the findings. Table 1 indicate the spatial distribution of questionnaires across the different stratum in the study. Ethical considerations were strictly considered by the research participants respecting the confidentiality of the information provided by the research participants. The information they provided was considered the correct one.

Table 1: Distribution of questionnaire

Selected road axis	Target respondents	Sample size	Form
Bamenda-Kumbo	Passengers, drivers, households	90	Direct
Bamenda-Fundong	Passengers, drivers, households	75	Direct
Bamenda-Wum	Passengers, drivers, households, businessmen	85	Direct
Bamenda-Widikum	Passengers, drivers, households, businessmen	90	Direct
Bamenda-Santa	Passengers, drivers, households, businessmen	60	Direct
Total questionnaire deployed		400	Direct

4. RESULTS AND DISCUSSIONS

4.1. Security challenges along major highways in the North West Region

The public transport sector in the North West Region of Cameroon is currently facing significant security challenges, including road blockages and obstructions caused by insurgency and civil unrest, as well as accidents and highway kidnappings. These issues have severely impacted business activities and hindered the movement of people, goods, and services both within and outside the region. The situation has been exacerbated by the ongoing socio-political crisis, which has led to numerous travel bans and the imposition of "ghost towns" by separatist groups.

Table 1 presents result findings regarding various security challenges affecting major roadways connecting various divisions to the regional headquarter Bamenda. Since the onset of the socio-political crisis in late 2016, mobility from Bamenda to other divisions in the region has been significantly impaired due to increased ambushes and attacks, roadblocks, civil unrest, and frequent checks on passengers. Major road axis such as those of Bamenda to Kumbo, Fundong, Widikum and Wum records very high security challenges ranging from 76,6% to 100,0%. Participants in the study reported that armed groups frequently ambush vehicles, resulting in theft, injury, and even fatalities. Instances of kidnappings for ransom targeting travelers are

reported to be very high. Impromptu roadblocks established by separatist groups are common, especially on highways connecting Bamenda to Kumbo, Widikum, Fundong, and Wum. These factors not only hinder movement but also create opportunities for extortion, significantly slowing down socio-economic activities in the region.

Other security challenges include deteriorating road infrastructure and high rates of kidnapping, particularly along certain road axes. For instance, the road condition from Bamenda to Wum has been assessed as 100% very bad. Currently, only motorbikes can traverse this route, exposing travelers to heightened risks of kidnapping; 51.7% of reported cases occurred in isolated areas along this road. Notably, there is one exceptional road axis, the Bamenda-Santa route where security challenges are minimal. This route is the shortest and most accessible out of the North West Region and poses very little threat, with only 8.3% of certain sections identified as having poor road conditions. We note that security along the road path is highly given that it is the principal and main way-in to the city. Most administrative and top government official residence along this road corridor. Additionally, speeding has been identified as a significant risk factor for accidents along the Kumbo and Widikum road axes, with rates of 27.7% and 35.5%, respectively. This poses yet another challenge to road safety in the region.

Table 2: Security challenges along road highways in the North West Region

Security challenges	From Bamenda to:									
	Kumbo	%	Fundong	%	Widikum	%	Wum	%	Santa	%
Ambushes and attacks	90	100,0*	73	97,3*	69	76,6*	56	65,8	2	3,3
Roadblocks	90	100,0*	75	100,0*	85	94,4*	76	89,4*	00	00
Bad roads	43	47,7	25	33,3	00	00,0	85	100,0*	5	8,3
Kidnappings	85	94,4*	70	93,3*	63	70,0	68	51,7	00	00,0
Theft and robbery	15	16,6	8	10,6	15	16,6	16	18,8	00	00,0
Civil unrest	49	54,4	35	46,6	30	33,3	70	82,3*	00	00,0
Frequent passenger checks	90	100,0*	65	86,6*	85	94,4*	49	57,6	3	5,0
Over speeding	25	27,7	7	10,6	32	35,5	00	00,0	15	25,0

Source: Field data, 2024

4.1.1. Road security challenges at regional scale

As shown in Figure 2, the security situation at the regional level is alarming, characterized by frequent roadblocks, which account for 81.5% of reported security issues. These roadblocks are primarily perpetuated by separatist groups that stop passenger buses and demand financial contributions to support their cause. Passengers whose identification cards indicate they are government employees often face immediate arrest and are taken to separatist camps hidden in the forest, where ransom demands are made for their release. Another significant security challenge in the region is ambushes and attacks, which occurs in 73.5% of cases. In fear of government security forces, many armed individuals remain mobile, increasing the likelihood of ambushes along major highways. This situation is a recurring threat, particularly on routes from Bamenda to Widikum-Ekok, Bamenda to Kumbo, and Bamenda to Fundong.

Frequent checks of passengers contribute to the insecurity, reported at 73.0%. These checks are conducted by both government police at checkpoints

and separatist fighters along the same roads. Vehicles are routinely stopped, and passengers are required to disembark for identification checks. Those with expired identification cards often feel pressured to pay money in order to continue their journey. This scenario is repeated at various stops along the route until passengers reach their destination. Kidnapping emerges as a serious concern, rated at 71.5% in the region. There are targeted kidnappings executed by separatist groups. Theft and robbery is reported to have reached 13.5% at regional scale. Interestingly, road theft incidents are minimal along the road corridors in the North West Region, indicating that while other forms of insecurity are prevalent, theft is not as significant a concern. Civil unrest is rated at 46.0%, while instances of speeding are noted at 32.2% across the region. Ghost town constituted 43.7% at regional scale. Most often passengers travelling across different division in the region and carry unaware when they eventually enter another division witnessing ghost town. They are force to stay on the sport till the ghost town days are over before continuing their journey.

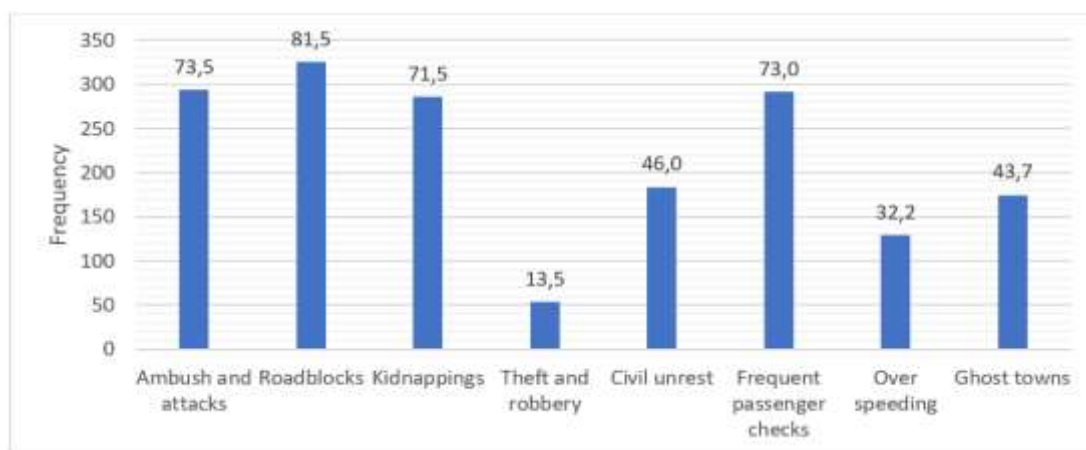


Figure 2: Road security challenges at regional scale

Generally, the road security landscape in the North West Region is fraught with challenges, particularly from separatist groups and armed individuals. The combination of roadblocks, ambushes, passenger checks, and kidnappings creates an environment of fear and uncertainty for travelers. This calls for pressing need from local authorities, community engagements, and a comprehensive security strategy to ensure safe transportation in the region.

4.1.2. Spatial location of insecurity spaces along major roads axis in the North West

Table 3 presents spatial locations of instable spaces identified along several key road axes in the North West Region. The table categorizes these spaces according to levels of insecurity, which are classified as "Very high," "High," and "Moderate". The

very high locations indicate critical safety issues that necessitate immediate attention, as they pose serious risks to individuals traveling along or living in these areas. All the road axis exhibits a mix of insecurity levels. They are separatist frequent checkpoints and these localities are highly concentrated within road axis of Bamenda-Kumbo, Bamenda-Widikum, Bamenda-Wum and Bamenda-Fundong. The Bamenda-Santa road axis shows limited but notable issues, with both Akum and Matazen classified as having "Moderate" insecurity. These levels suggest a need for monitoring to prevent deterioration into more serious safety issues.

The varying levels of insecurity along these road axes calls for an urgent need for comprehensive security strategies by government authorities in the region. Areas marked with high and very high

Figure 3 shows the spatial location map of insecurity points along major road axis in the study area. From the map, we can observe that Nkambe located in the far northern eastern part has less insecurity with moderate cases affected by road security issues. The northern map of the study area which is Nkambe around Ndu and Ntabeken. Bamenda which is the administrative headquarter of the region suffer most from the insecurity challenges.

4.2 Reported incidents of assaults on travelers on major road axis from 2015-2024

Table 4 reports occurrences of assaults on travelers along major road axes from 2015 to 2024. The table reveals a concerning trend in the safety of these routes. Over the nine-year period, there has been a significant increase in the total number of assault cases, with a peak in 2021, where cases reached a staggering 941. This data suggests a troubling escalation in violence against travelers, particularly on the road axis from Bamenda to various destinations including Kumbo, Fundong, Wum, and Widikum. Early years of the report, 2015 and 2016, shows that assault cases were relatively low, with only 8 and 48 reported cases respectively. However, a drastic uptick began in 2017, as a result

of socio-political factors. For instance, the escalation of civil unrest and armed conflict in the region contributed to increased lawlessness, making travelers more vulnerable to attacks. The sharp rise in incidents in 2018 soaring to 261 cases correlate with heightened tensions and the ongoing crisis along the major road axis, where violence became more pronounced and organized. The years 2019 and 2020 saw further increases, culminating in a peak of 811 incidents as the armed conflict intensifies with armed group activities. Certain routes became particularly unsafe, with the Bamenda to Fundong axis experiencing consistent spikes in kidnapping of passengers for ransom and threats on passengers with fire arms. In 2021, despite the highest number of assaults recorded, a notable decline occurred in subsequent years, with incidents dropping to 715 in 2022 and further to 444 in 2023. This decrease indicates implementation of improved security measures and shift in tactics by law enforcement to counter the rising violence. Nevertheless, 2024 still reports significant numbers, showing that while there may be progress, the threat to travelers remains substantial, particularly along the most affected routes.

Table 4: Estimated Assault cases on travelers from 2015-2024 along major road axis in the region

Year	Road axis from Bamenda to:					Total
	Kumbo	Fundong	Wum	Widikum	Santa	
2015	5	0	3	0	0	8
2016	16	9	6	10	7	48
2017	27	21	11	15	9	83
2018	97	63	45	39	17	261
2019	208	153	103	115	27	606
2020	259	188	127	216	21	811
2021	291	214	163	258	15	941
2022	243	165	94	205	8	715
2023	157	117	41	126	3	444
2024	129	83	32	96	2	342
Total	1,432	1,013	625	1,080	109	4,259

Source: Central police Station, Regional Delegation of Transport, Bamenda, 2024

4.3 Forms of assaults on travelers in the Region

As shown in Figure 4, two primary forms of assaults on travelers dominate the transport routes. A staggering 94.5% of passengers reported being stopped by armed groups, who pressure them into financially supporting the armed struggle against their will. Passengers are often required to contribute a minimum of 500 FCFA, while in certain areas, such as the Bamenda-Fundong route, the amount escalate to a minimum of 5,000 FCFA at a single checkpoint. Additionally, 89.2% of passengers face threats involving firearms, instilling fear and trauma, particularly among vulnerable individuals. Kidnapping emerges as another significant threat, affecting 43.2% of travelers, with specific targets of

individuals suspected to be government employees or those perceived as new to the area. At separatist checkpoints, passengers are frequently forced from their vehicles to step down, subjected to intimidation, and sometimes physically assaulted. This experience is reported by 35.2% of travelers across various routes in the region. Moreover, 20.7% of assaults on passengers arise from crossfire incidents between government military forces and separatist groups. Passengers traveling through these conflict zones are often compelled to seek cover for extended periods, leading to heightened anxiety and trauma. Sexual intimidation is particularly reported among female passengers, with 18.0% reporting experiences of harassment. Participants indicated that assailants

often make suggestive remarks and exhibit predatory behavior towards women. Lastly, the phenomenon of unexpected ghost towns, affects 12.0% of passengers,

further disrupt travels and heightens the sense of insecurity.

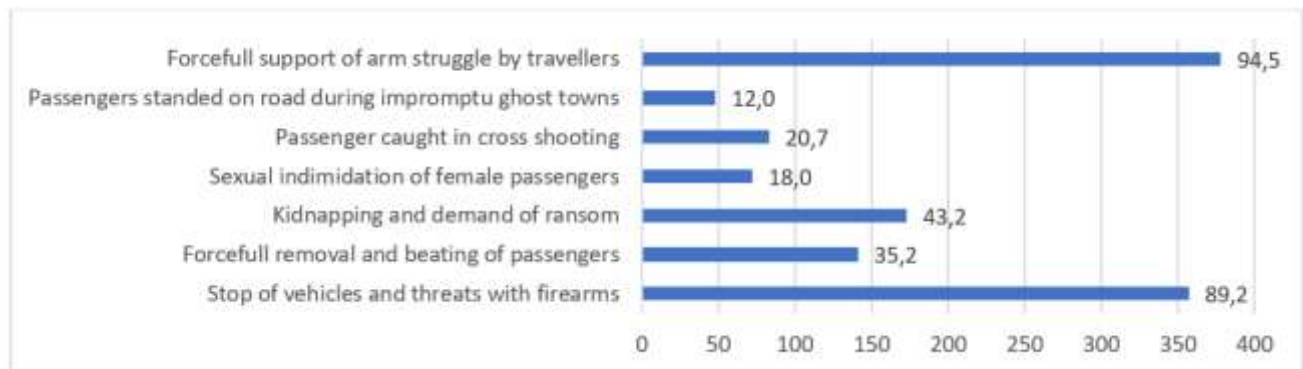


Figure 4: Forms of assaults on travelers in the North West region

5. DISCUSSION

The findings of this study reveal that security challenges along major highways in the North West Region are deeply intertwined with the ongoing socio-political crisis, significantly hampering mobility and economic activities. As indicated by the results, the security situation along major highways is dire, with certain road axes reporting alarmingly high levels of insecurity, ranging from 76.6% to 100%. This aligns with the observations of Stephen T. Odonkor *et al.* (2020) and Elassy *et al.* (2024), who noted that insurgency and civil unrest have led to widespread road blockages and ambushes. The frequent attacks and kidnappings reported by participants not only pose direct threats to passenger safety but also foster a pervasive atmosphere of fear that discourages the use of public transport. This situation reflects the findings of Feudjio *et al.* (2024), which highlight the inadequacies in enforcing safety protocols, further exacerbating the vulnerabilities within public transport systems. Additionally, the deteriorating condition of road infrastructure significantly compounds the security challenges faced in the region. Routes such as Bamenda to Wum are characterized as "very bad," forcing travelers to rely on more vulnerable modes of transport, such as motorbikes. The findings indicate that 51.7% of reported kidnappings occur in isolated areas along these poorly maintained roads, which increases the risk for travelers. This observation points to a critical failure in state governance regarding the maintenance of essential infrastructure. As noted by Hernandez Berga (2024), the socio-economic implications of these security challenges are profound, disrupting the movement of goods and services and thereby limiting access to vital resources such as education and healthcare. The compromised safety of transportation not only hampers individual mobility but also stifles regional development, this calls for urgent need for comprehensive

interventions by the regional authorities and civil society at large.

6. Problem-solving approach to enhance road safety protocols in the region

Since 2015, three road-safety initiatives under the financed of multi-lateral organizations have been carried out in Cameroon. These included Design and Implementation of Traffic Accident Databases (DITAD) and Information System for Road (ISR), Road-Safety Management Capacity Review (RSMCR), and Cameroon's Road Safety Performance Review (RSPR). All these initiatives sought to address the poor quality of road-crash data, the lack of skills and knowledge on road safety, and the lack of co-operation in road-safety management. The main focus of the initiatives have been tilted towards road accidents and injuries reduction to half by 2030. Little is known about road safety protocols encompassing road accidents and injuries to include road crime waves such as kidnapping, harassments, killings, theft and robbery as well as civil unrest which are major security challenges on the road highway that disrupt movements. These highway assaults are frightening in the road transport sector in the North West Region. To attain solutions to these security challenges, the research team proposes the following strategic measures and a problem-solving framework to road safety protocols in the region.

6.1.1. Strategic measures to road safety

To address security challenges along major highways in the North West Region, the following strategies should be prioritize to enhancing safety protocols while fostering community involvement and collaboration among stakeholders.

1. **Strengthening Coordination and Communication:** A robust communication network should be established among law enforcement agencies, local authorities, and community leaders in all the seven Divisions

that make up the North West Region, while re-enforcing regular meeting with stakeholders from these divisions. This can help facilitate the sharing of intelligence regarding potential threats and the identification of high-risk areas in the highways linking the regions. For instance, creating a community alert system using mobile technology would enable quick dissemination of information about roadblocks or ambushes, allowing travelers to choose safer routes or postpone their journeys.

2. **Establishing Safe Travel Zones:** Designating specific routes as "safe travel zones", would encourage public transport operators to concentrate their services on safer corridors. Particularly, the Bamenda-Santa route which currently poses minimal threat, the Fundong-Nkambe-Magba-Foumban-Bafoussm-Bamenda road corridor could be developed. The government can increase police presence and establish frequent patrols along these routes to deter insurgent activities. Furthermore, these zones can be marked clearly, providing reassurance to commuters.
3. **Community Engagement and Awareness Programs:** Engaging the local population in safety initiatives is vital for effective implementation. Organizing community workshops to raise awareness about security issues and encouraging citizens to report suspicious activities can strengthen local resilience. Additionally, training community vigilant groups to monitor their neighborhoods and collaborate with police can create a supportive environment for travelers.
4. **Improving Road Infrastructure:** Investing in the repair and maintenance of essential road infrastructure is fundamental to enhancing safety. Poor road conditions, particularly along routes like Bamenda to Wum, contribute to accidents and increase vulnerability to attacks. Government and non-governmental organizations (NGOs) can prioritize infrastructure development projects to this road axis, ensuring that the road is passable and adequately police control to reduce ambush opportunities.
5. **Implementing Regular Safety Audits:** Regular safety audits on key roads in the region can help identify and mitigate risks. These audits should assess road conditions, security threats, and the effectiveness of

existing safety measures. This findings can guide the allocation of resources, ensuring that areas with the highest risks receive immediate attention.

6. **Collaboration with NGOs and International Bodies:** Partnering with non-governmental organizations and international bodies can bring additional resources and expertise to enhance security measures. Programs focused on conflict resolution and community development can address the root causes of insurgency and civil unrest, ultimately fostering a more stable environment for travel.
7. **Enhancing Training for Law Enforcement:** Providing comprehensive training for law enforcement officers on community policing and conflict resolution can improve their effectiveness. Officers should be trained to handle situations involving civilians with sensitivity and to avoid practices that may escalate tensions, such as arbitrary arrests or extortion at checkpoints.

6.1.2. Framework to road safety protocols

Figure 5 present a propose framework to solving road safety challenges in the region. First of all, awareness programs such as increased reporting of road incidents cases, frequent community meetings on the incident cases and proper reporting to law enforcement can help promote road safety. This can facilitate joint campaigns, shared resources, and coordinated enforcement activities, reflecting a comprehensive approach to road safety challenges. Successful programs should demonstrate active participation and engagement from various community groups, such as community vigilant groups, women's associations, and youth groups. Another valuable solution is through improvement of road infrastructure and integration of advanced technology. This can be achieved through deployment of Surveillance Systems such as CCTV cameras and traffic monitoring systems can be installed in high-risk areas along the road highways. The NGOs can play significant role in road safety initiatives especially linked to aid training, community outreach programs, and awareness campaigns focused on the importance of safe driving and emergency response. A vivid example can be Road Safety Coalition Association. This coalition may comprise of various local NGOs and civil society organizations working together to advocate for road safety reforms, conduct research, and implement educational programs to raise awareness about road safety issues.

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