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Vehicle Recovery Services and Road Safety Complience in Port Harcourt Metropolis

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Abstract

This study investigates vehicle recovery services and road safety compliance in the Port Harcourt metropolis. In order to evaluate the state of vehicle recovery services and road safety compliance in the city, a questionnaire was prepared to assess vehicle recovery services and road safety compliance based on 4 main categories: Impact, availability and affordability, performance and challenges. The statistical analysis and tools employed were simple percentage (%) tables and charts. The findings obtained revealed that there are areas for improvement with regard to vehicle recovery in the city, particularly with respect to breakdowns. Distressed vehicles which for one reason or the other are not recovered quickly, contribute significantly to hindering smooth traffic flow, could contribute to secondary crashes and in themselves, contribute to a reduction in road safety compliance. The study recommended that the Rivers State Ministry of Transport should be involved in regulating vehicle recovery services in the state and shaping policy that affects the sector. The involvement of the Ministry in increasing driver education will also contribute towards improving road safety compliance in the state.

Keywords: auto crash, vehicle recovery, congestion, vehicle break down, road safety, Port Harcourt

1. Introduction

Vehicle recovery is the professional and safe removal of a disabled vehicle from the location where it broke down to a designated secure location according to T&C Services (2023). This secure location is often a vehicle storage facility/depot or in some cases, another location such as a private residence or business premises in the case of a private or company vehicle respectively or sometimes, to a garage or workshop where it will receive proper technical attention to address the issues that caused the breakdown.

The Port Harcourt Metropolis, located in Nigeria's oil-rich Niger Delta region, has experienced rapid urbanisation and economic growth over the past few decades. With this growth comes an increase in vehicular traffic, which poses significant challenges to road safety and traffic management. Vehicle accidents, breakdowns, and incidents are common occurrences on the streets of Port Harcourt, often leading to traffic congestion, delays, and, at times, serious accidents. To address these challenges, the availability and efficiency of vehicle recovery services, as well as the compliance with road safety regulations, play a crucial role.

Road Safety Situation:

The road safety situation in Port Harcourt Metropolis has long been a matter of concern. High traffic volumes, inadequate road infrastructure, lax enforcement of road safety laws, and a lack of awareness among drivers contribute to an increased risk of accidents and traffic disruptions. Fatalities and injuries resulting from road accidents are not only a social and human tragedy but also a significant economic burden on the region. **Vehicle**

Recovery Services, commonly known as towing services, are essential for the prompt removal of disabled or wrecked vehicles from roadways, thus ensuring the safety of road users and preventing traffic jams. In Port Harcourt, the availability, accessibility, and efficiency of these services have a direct impact on road safety and traffic flow. The effectiveness of vehicle recovery services is influenced by factors such as response time, service coverage and the quality of equipment used.

Legal Framework and Regulation:

To address road safety concerns, Nigeria has enacted various laws and regulations, including the Federal Road Safety Commission (FRSC) Act (2007), which stipulates rules and standards for road safety compliance together with the National Road Traffic Regulations (2012). However, the enforcement of these regulations within Port Harcourt Metropolis has faced challenges, including corruption, inadequate resources, and a lack of awareness among drivers.

The Port Harcourt Metropolis, a rapidly growing urban centre in Nigeria's Niger Delta region, faces critical road safety challenges due to the increasing volume of vehicular traffic and a lack of effective vehicle recovery services. These challenges have led to a multitude of problems:

The availability and efficiency of vehicle recovery services in Port Harcourt are often insufficient to promptly clear disabled or wrecked vehicles from the roadways. This deficiency results in prolonged traffic disruptions, increased congestion, and heightened risks of secondary accidents.

Traffic congestion caused by disabled vehicles and accidents has become a common occurrence, leading to significant delays for commuters and economic losses due to reduced productivity and increased fuel consumption.

Non-compliance with road safety regulations by drivers and vehicle owners exacerbates the risks associated with breakdowns and vehicular accidents. Inadequate enforcement of these regulations further compounds the issue, increasing the likelihood of accidents and their severity.

Breakdowns, road accidents, traffic congestion, and delays have substantial economic consequences for Port Harcourt metropolis. These include increased healthcare costs associated with accident-related injuries, reduced economic productivity, and damage to infrastructure.

Data from the analysis of millions of annual roadside events in the USA according to Agero (2019) indicates that breakdowns cost a total of $41 Billion (N18 Trillion) to the US economy annually. From a population of registered vehicles numbering 284.5 million, 69 million breakdowns occur in the USA annually, which is equivalent to 1 in 3 drivers. The sum of $7 Billion annually is spent on roadside assistance. In economic and social impact terms, this further translates to $9 Billion (N4 Trillion) in costs to drivers and businesses and $2 Billion (N874 Billion) as the cost of congestion delays.

In productivity terms, breakdowns cost 260 million hours annually and 30 million workdays. Data revealed that 150 million people sit in traffic caused by breakdowns every year, translating to 120 million hours. These costs take into account the immediate costs to the driver facing the breakdown as well as the accumulation of various derived costs to the driver as well as to other road users and the roadside assistance and other services directly and indirectly connected to the breakdown event.

Relating this to the Nigerian context, data from the National Bureau Of Statistics (NBS, 2018) indicates a total registered vehicle population of 12 million vehicles.

The Lagos State Traffic Management Authority (LASTMA), (2018) reported that about 70% of traffic gridlock was caused by incessant breakdowns. Thus, an increase in the knowledge of the cost of breakdowns will play a beneficial role towards developing an effective vehicle recovery system that is able to attend to breakdowns in a timely and safe manner, thus helping reduce traffic congestion and improve the safe conditions on our roads.

The lack of efficient vehicle recovery services and poor road safety compliance jeopardize the safety of road users, including pedestrians, drivers, and passengers, leading to a higher incidence of injuries and fatalities.

The continued strain on road infrastructure, coupled with the inefficiency of vehicle recovery services, threatens the durability of the road network in Port Harcourt Metropolis. This, in turn, contributes to increased maintenance costs.

Most research already conducted has mainly focused on crashes, it has been observed that literature on other types of non-recurrent incidents such as breakdowns is very sparse, according to Chand et al. (2020).

Addressing these interconnected issues is imperative to enhance road safety, reduce traffic congestion, and promote the overall well-being and economic development of Port Harcourt city. This paper aims to investigate these problems comprehensively and propose solutions that can mitigate these challenges effectively.

Toward achieving this aim the following objectives were pursued:

1) Assess the availability, accessibility and efficiency of vehicle recovery services in the city of Port Harcourt.

2) Evaluate the responsiveness of vehicle recovery services in handling incidents of disabled or wrecked vehicles on the roadways.

3) Analyse the level of road safety compliance among drivers and vehicle owners within the metropolis.

4) Identify the challenges, barriers, and factors affecting the effectiveness of vehicle recovery services and road safety compliance.

5) Propose recommendations for improving road safety compliance and the effectiveness of vehicle recovery services in Port Harcourt metropolis.

By pursuing these objectives, the research seeks to provide insights and recommendations that can enhance road safety, reduced traffic congestion, and improved overall transportation infrastructure in Port Harcourt Metropolis. Ultimately, the aim is to contribute to the well-being, safety, and sustainable development of the region.

The study holds significant importance for several reasons, among which are:

Enhancing Road Safety: Like many other urban centers, Port Harcourt city faces significant road safety challenges. This study can identify areas where road safety measures are lacking, leading to a higher occurrence of accidents and injuries. By addressing these issues, the study contributes to making the roads safer for all road users and residents.

Reducing Traffic Congestion: Inefficient vehicle recovery services contribute to traffic congestion, which has economic and social consequences. By assessing the state of these services, the study can provide recommendations to improve their efficiency, thus reducing traffic jams and related delays.

Economic Implications: Breakdowns and accidents contribute to traffic congestion and result in economic losses due to reduced productivity due to delays, increased fuel consumption and healthcare costs. The study's findings and recommendations can help mitigate these economic impacts, contributing to the economic development of the region.

Infrastructure Preservation: The strain on road infrastructure caused by breakdowns, accidents and traffic congestion can lead to higher maintenance costs. An improved road safety environment and efficient vehicle recovery services can help preserve infrastructure, reducing long-term costs for maintenance and repairs.

Legal and Regulatory Enhancement: By evaluating the enforcement of road safety regulations and legal frameworks, the study can shed light on the gaps in enforcement. This can lead to recommendations for strengthening regulatory compliance, which is vital for overall road safety.

Improved Emergency Response: Efficient vehicle recovery services are crucial for swift emergency response. This study can highlight areas where improvements are needed, potentially saving lives and reducing the severity of accidents.

Quality of Life: Safer roads and reduced traffic congestion improve the quality of life for residents and commuters. People can spend less time in traffic, are less stressed and feel safer while travelling within the metropolis.

Policy Development: The study's recommendations can serve as a basis for policy development and decision-making by local authorities and government agencies. It provides evidence-based insights into areas that require attention and resources.

Vehicle Recovery Services

Vehicle recovery is the specialised, professional removal of a disabled vehicle from one location to another. Vehicle recovery services play a vital role in maintaining road safety. They offer assistance in the event of accidents, breakdowns, and traffic incidents. These services encompass towing, accident recovery, and roadside assistance. Research by Anderson (2017) emphasises the importance of efficient and responsive vehicle recovery services in reducing traffic congestion and minimising road hazards.

Road Safety Compliance

Ensuring road safety compliance is crucial to preventing accidents and fatalities. Road safety compliance involves adhering to traffic regulations, vehicle maintenance, and the proper handling of emergencies. In the Port Harcourt metropolis, the enforcement of road safety regulations has been a topic of concern. A study by Okafor et al. (2019) highlights challenges in road safety compliance due to inadequate law enforcement and public awareness.

The Nexus Between Vehicle Recovery Services and Road Safety Compliance

Several studies have explored how vehicle recovery services contribute to road safety compliance. Adeyemi (2018) emphasises that swift recovery of accident-damaged vehicles can prevent traffic disruptions and secondary accidents, thereby enhancing compliance with safety regulations. Additionally, the study by Onyejekwe (2020) discusses the role of roadside assistance services in ensuring vehicle maintenance, which is a vital aspect of road safety compliance. A study by Park et al (2018) on real-time prediction and avoidance of secondary crashes under unexpected traffic congestion also provides valuable insight towards improving safety.

Challenges and Opportunities

While vehicle recovery services hold promise in improving road safety compliance, there are challenges to be addressed. These include the need for standardisation of recovery practices, regulation of service providers, and improved infrastructure. A study by Nwachukwu (2019) highlights the need for coordination between recovery services and law enforcement agencies to enhance compliance.

2. Methodology

The research will pay particular attention to non-recurrent incidents of a non-crash nature, which in this case are vehicle breakdowns. As breakdowns are unscheduled and unplanned events, the research design is dependent on the occurrence availability of breakdowns along Agip, Ada-George road axes. These roads are relatively busy and experience a rich diversity of vehicle types and should provide a realistic impression of typical traffic in Port Harcourt metropolis.

In an ideal scenario, live breakdown events which are identified were targeted for investigation and the surrounding area are studied in real time in light of the effects of the breakdown on traffic and the road safety situation. In the absence of live breakdown events from which to gather live data, a selection of respondents situated in the area will be given questionnaires to fill based on their historical experience with breakdowns and traffic disruptions and the results will be collated and analysed.

The selected sample size for this study is 50. Questionnaires were given to the respondents based on the aforementioned instances, with regards to live incidents or narration from previous. The completed questionnaires were subsequently retrieved and analysed.

5-point Likert scale sampling method was selected due to its ability to capture a broad spectrum of opinions, which produce an insightful impression of the perceptions of the respondents. Budnukaeku and Emmanuell (2022), Alexander (2022), Budnukaeku (2024), Alexander, Frank, and Ajiboye (2025), Alexander, Aloni and Amadi (2025) all used the same method and achieved result in their works.

Simple percentage, Tables and Pie char will be used for analysis in this paper.

The analysis for this study is based on four categories namely, impact, performance, availability and affordability and challenges. 4 questions were generated for each category, forming a total of 16 questions for the entire questionnaire.

3. Impact

Table 1. Do vehicle recovery services alleviate or reduce congestion on the roads?

Response	**No. of Respondents**	**Percentage %**
Strongly Agree	26	52
Agree	19	38
Neutral	2	4
Disagree	3	6
Strongly Disagree	0	0
Total	**50**	**100**

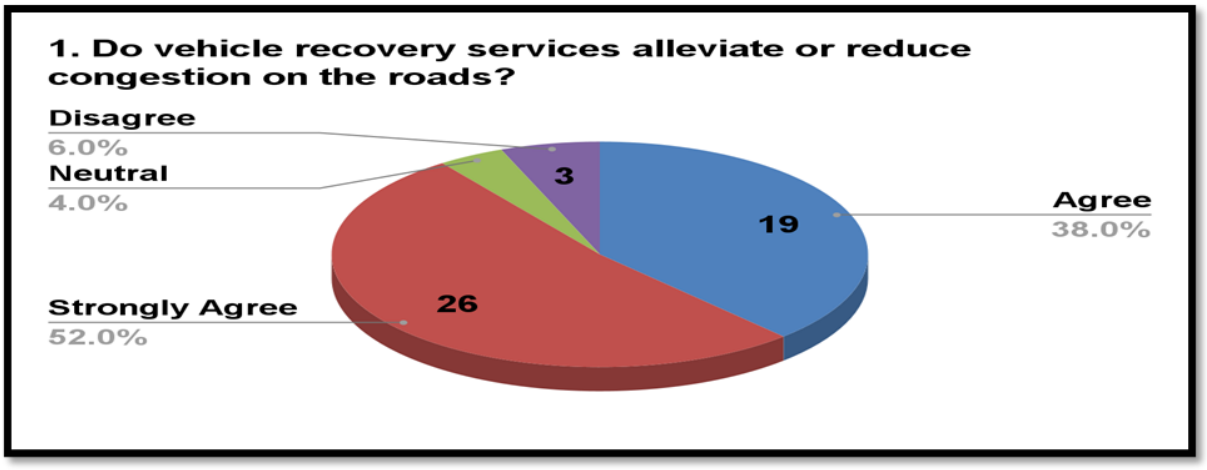

Figure 1. Response to whether or not vehicle recovery services reduce congestion on the roads

Regarding the question on whether or not vehicle recovery services reduce congestion on the roads, 52% strongly agree, while 38% agree with that position. This implies that 90% of the respondents are of the view that vehicle recovery services reduce congestion on the roads. It was also observed that 6% disagreed with the preposition, while 4% were undecided or neutral on the issue. It is worthy to note that among the 50 respondents interviewed, none of them strongly disagreed with the position; therefore the percentage is 0% and hence is not reflected in the corresponding pie chart. The position of this study is that vehicle recovery reduces traffic congestion on the road.

Table 2. Does the recovery of broken-down vehicles affect transportation time?

Response	**No. of Respondents**	**Percentage %**
Strongly Agree	13	26
Agree	23	46
Neutral	5	10
Disagree	8	16
Strongly Disagree	1	2
Total	**50**	**100**

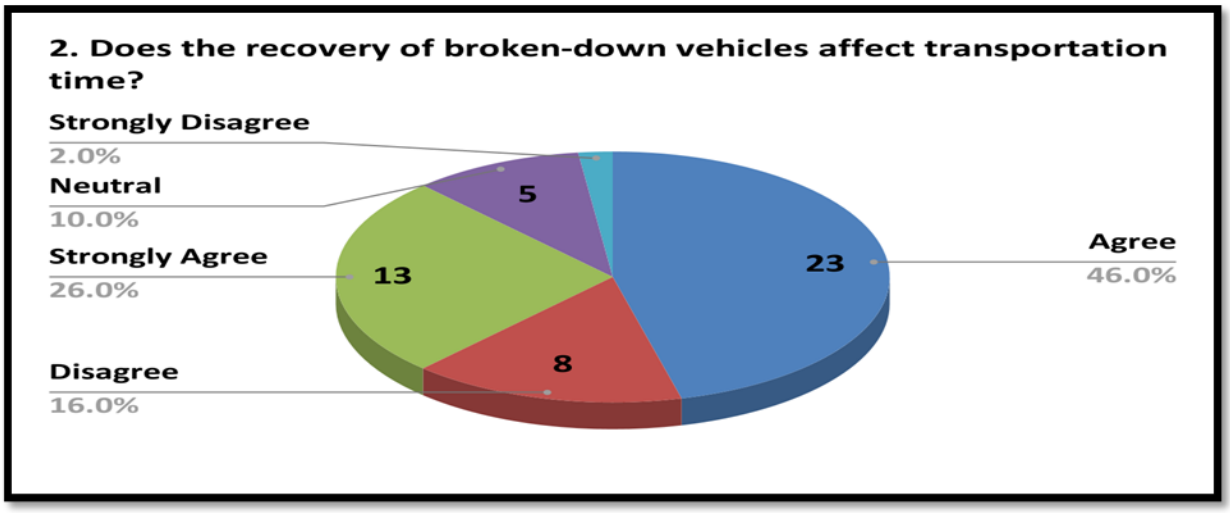

Figure 2. Response to whether the recovery of broken-down vehicles affects transportation time

With regard to the question, Does the recovery of broken-down vehicles affect transportation time? 26% strongly agreed with that position while 46% agreed. This implies that 72% of the respondents are aware that recovery of broken down vehicle affects transportation time. However, 10% were neutral while 16% disagreed and 2% strongly disagreed. 18% of the respondents representing 9 persons did not accept that recovery of broken down vehicle affects transportation time. The responses indicate that the majority of respondents are of the view that the recovery of broken-down vehicles affects the transportation time. Perceptions were based on the processes and time involved in recovering the broken-down vehicle in light of how this could impact regular traffic and ultimately the transportation time.

It was observed that the recovery of broken-down vehicle, in a short time affects transportation time negatively, while on the long run it reduces transportation time, because of easy flow of traffic as a result of the recovery of the broken down vehicle.

Table 3. Does vehicle recovery reduce accidents on the roads?

Response	**No. of Respondents**	**Percentage %**
Strongly Agree	24	48
Agree	18	36
Neutral	3	6
Disagree	5	10
Strongly Disagree	0	0
Total	**50**	**100**

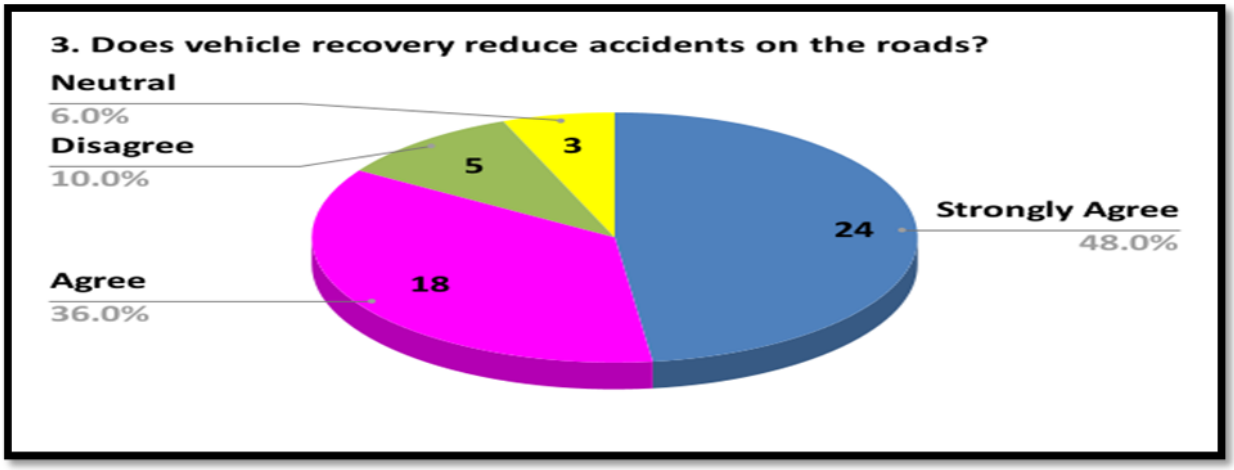

Figure 3. Response when asked if vehicle recovery reduces accidents on the roads

In response to question on Table 3 which states, does vehicle recovery reduces accidents on the roads? 24 respondents accounting for 48% of all the sample size strongly agreed with this view. 18 respondents accounting for 36% of those interviewed agreed with the position. This implies that 84% of the respondents, representing 42 of those interviewed either strongly agreed or agreed that vehicle recovery on the road reduces accidents in the study area. However, 3 persons or 6% were neutral on this question, while 5 persons or 10% disagreed with the position. Similar to the first question, it is also noteworthy that 0 persons representing 0% of the total strongly disagreed with the position and this is reflected in the corresponding pie chart in Figure 3.

Table 4. Does vehicle recovery affect the cost of transportation?

Response	**No. of Respondents**	**Percentage %**
Strongly Agree	4	8
Agree	18	36
Neutral	3	6

Disagree	22	44
Strongly Disagree	3	6
Total	**50**	**100**

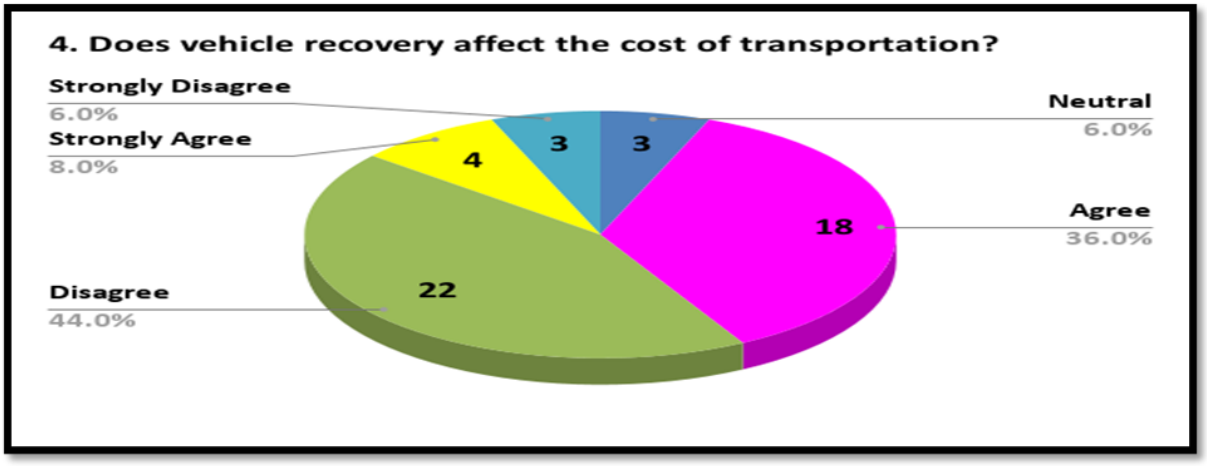

Figure 4. Response when asked if vehicle recovery affects the cost of transportation

When analysing question in Table 4 does vehicle recovery affects the cost of transportation? It was observed that only 4 respondents representing 8% of the sample size strongly agreed while 18 people accounting for 36% agreed with this view. 3 people or 6% were neutral. On the other hand, it was also observed that 22 people representing 44% of the sample disagreed that vehicle recovery affects the cost of transportation. 3 people representing 6% strongly disagreed with the position. It can be analysed that the majority of respondents are of the view that vehicle recovery does not affect the cost of transportation. From this study, observation shows that 50% of the respondents were of the views that vehicle recovery does not change the cost of transport in a particular route. This can be explained as most of the drivers and commuters cannot pre-empt when a vehicle can breakdown or recovered. The closeness in the opinion of the respondents however shows that depending on the position of a vehicle, drivers aware of a broken down vehicle may increase fare based on time it will take him.

4. Performance

Table 5. Are there effective vehicle recovery services in Port Harcourt?

Response	**No. of Respondents**	**Percentage %**
Strongly Agree	6	12
Agree	11	22
Neutral	10	20
Disagree	16	32
Strongly Disagree	7	14
Total	**50**	**100**

When the question, Are there effective vehicle recovery services in Port Harcourt? was asked, Table 5 shows that 6 people representing 12% strongly agreed while 11 people or 22% agreed with the position. By implication, 17 of the respondents representing 34% of those interviewed says that vehicle recovery service in the study area "Port Harcourt "was effective. Neutral to this position were 10 people representing 20% of the respondents. This means that 10 respondents do not know much about vehicle recovery service in Port Harcourt.

On the contrary, 16 people accounting for 32% disagreed while 7 people or 14% strongly disagreed with the position. From the results obtained, it can be deduced that the majority of respondents are of the view that there are no effective vehicle recovery services available in Port Harcourt. The views are shown in Figure 5 below.

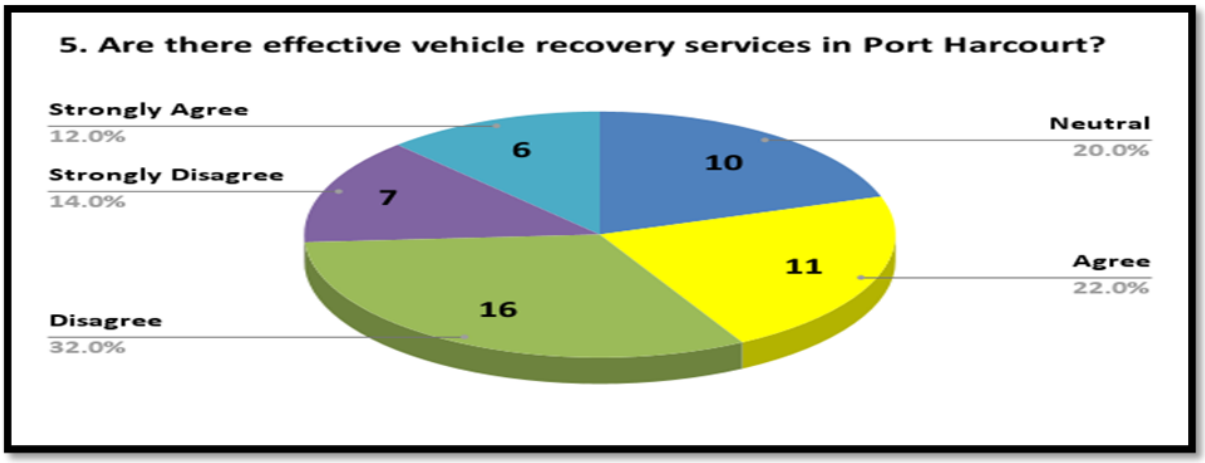

Figure 5. Response to the question on whether there are effective vehicle recovery services in Port Harcourt

Table 6. Does vehicle recovery affect the state of the roads?

Response	**No. of Respondents**	**Percentage %**
Strongly Agree	7	14
Agree	19	38
Neutral	6	12
Disagree	16	32
Strongly Disagree	2	4
Total	**50**	**100**

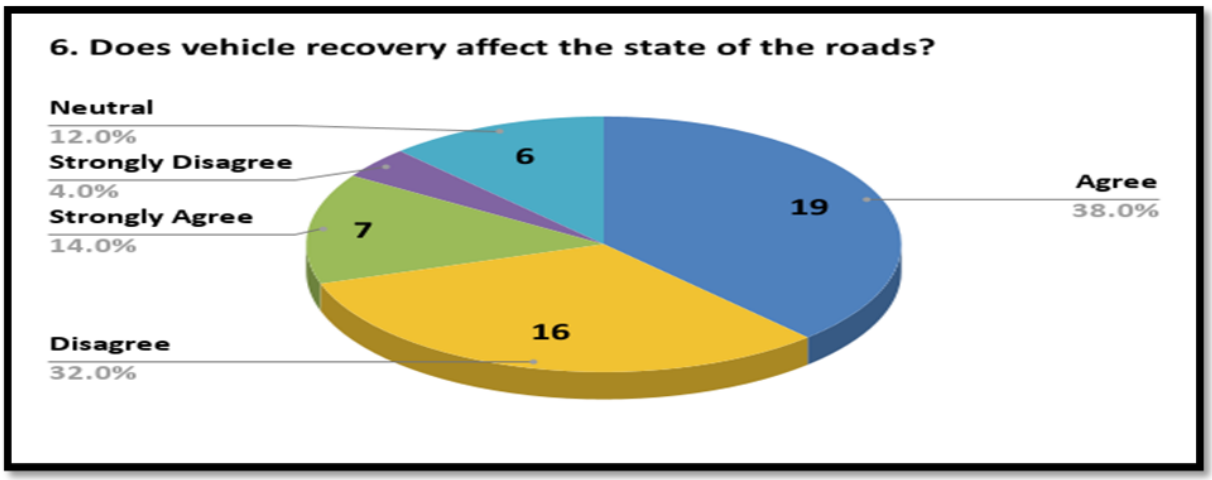

Figure 6. Response when asked if vehicle recovery affects the state of the roads

Figure 6 shows the responses of the respondents as captured in Table 6. With the question do vehicle recovery affects the state of the roads? The results obtained shows that 7 people representing 14% strongly agreed while 19 people accounting for 38% agreed. It was observed that 6 people or 12% were undecided while 16 people or 32% disagreed and 2 people or 4% strongly disagreed. From the results it can be deduced that the majority of respondents are of the view that vehicle recovery affects the state of the roads. Obviously, it has been observed that after recovery, there were no post clean-up of the recovery spot, Sometimes the equipment used damage the road.

Table 7. Do vehicle recovery services respond timely to incidents?

Response	No. of Respondents	Percentage %
Strongly Agree	2	4
Agree	7	14
Neutral	12	24
Disagree	22	44
Strongly Disagree	7	14
Total	**50**	**100**

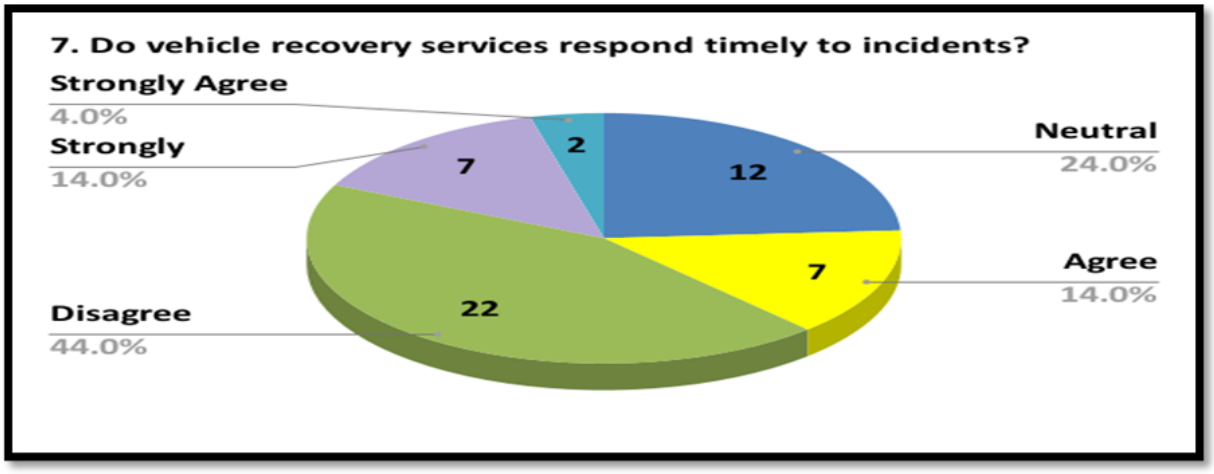

Figure 7. Response when asked if vehicle recovery services respond timely to incidents

The responses on Table 7 question relating to performance, upon investigating if vehicle recovery services respond timely to incidents. Just 2 respondents representing 4% of the respondents strongly agreed while, 7 people representing 14% agreed. 12 people (24%) were neutral. Opposed to this view were 22 people which accounts for 44% while 7 people or 14% strongly disagreed with the position. From the results obtained, it can be deduced that a significant majority of respondents hold the view that vehicle recovery services do not respond to incidents in a timely manner.

Table 8. Do vehicle recovery services carry out the recovery competently?

Response	No. of Respondents	Percentage %
Strongly Agree	4	8
Agree	19	38
Neutral	13	26
Disagree	11	22
Strongly Disagree	3	6
Total	**50**	**100**

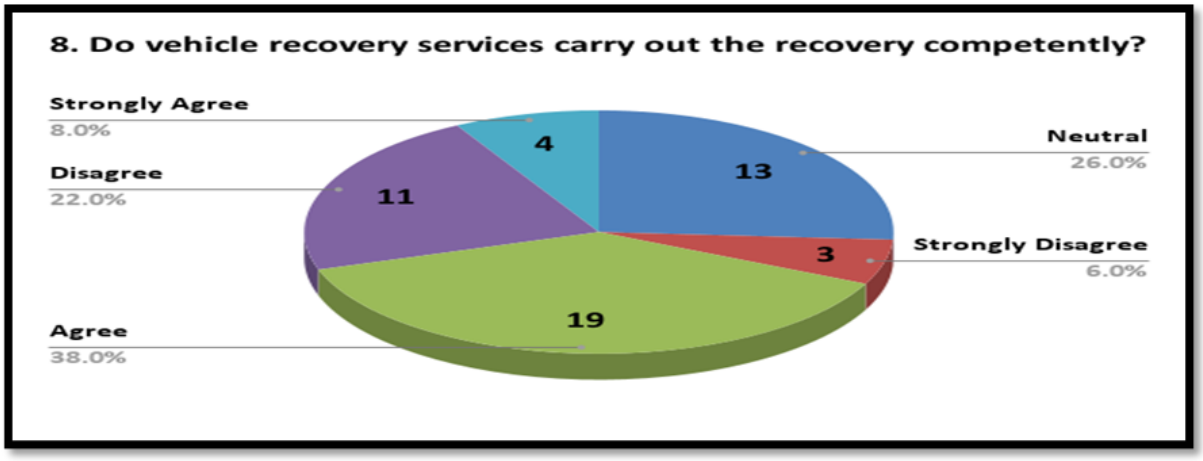

Figure 8. Response when asked if vehicle recovery services carry out the recovery competently

When asked if vehicle recovery services carry out the recovery competently as shown in Table 8, and further explained in Figure 8, it was observed that 4 people were strongly in agreement with that position, which represents 8% of the respondents. 19 people comprising 38% of the respondents were in agreement and 13 people or 26% were neutral and could not decide. In disagreement were 11 people (22%) while 3 people or 6% strongly disagreed with the position. Analysing the results in totality, they indicate that the majority of respondents are positive about the level of competence of vehicle recovery services in Port Harcourt.

5. Availability and Affordability

Table 9. Are vehicle recovery services available in Port Harcourt?

Response	**No. of Respondents**	**Percentage %**
Strongly Agree	5	10
Agree	28	56
Neutral	8	16
Disagree	7	14
Strongly Disagree	2	4
Total	**50**	**100**

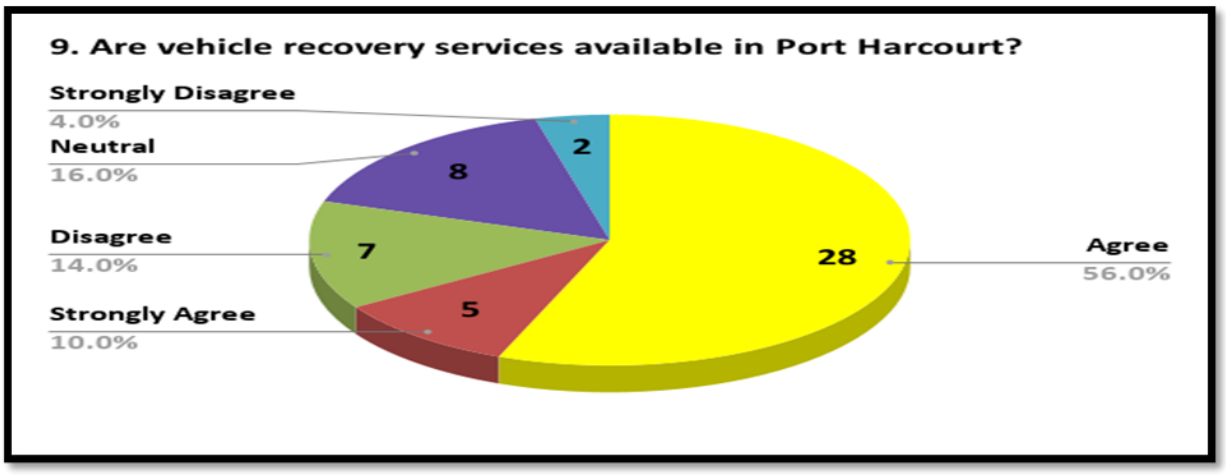

Figure 9. Response to the question on the availability of vehicle recovery services in Port Harcourt

When asked about the availability of vehicle recovery services in Port Harcourt, 5 people or 10% strongly agreed

that such services are available. This was complemented by 28 people in agreement or 56%. Among those who were undecided were 8 people or 16%. On the other hand, 7 people or 14% were in disagreement while 2 people or 4% strongly disagreed.

Insight from the results obtained show an overwhelming majority sharing the view that vehicle recovery services are available in Port Harcourt and are not a rarity.

Table 10. Are vehicle recovery services affordable?

Response	**No. of Respondents**	**Percentage %**
Strongly Agree	1	2
Agree	13	26
Neutral	18	36
Disagree	15	30
Strongly Disagree	3	6
Total	**50**	**100**

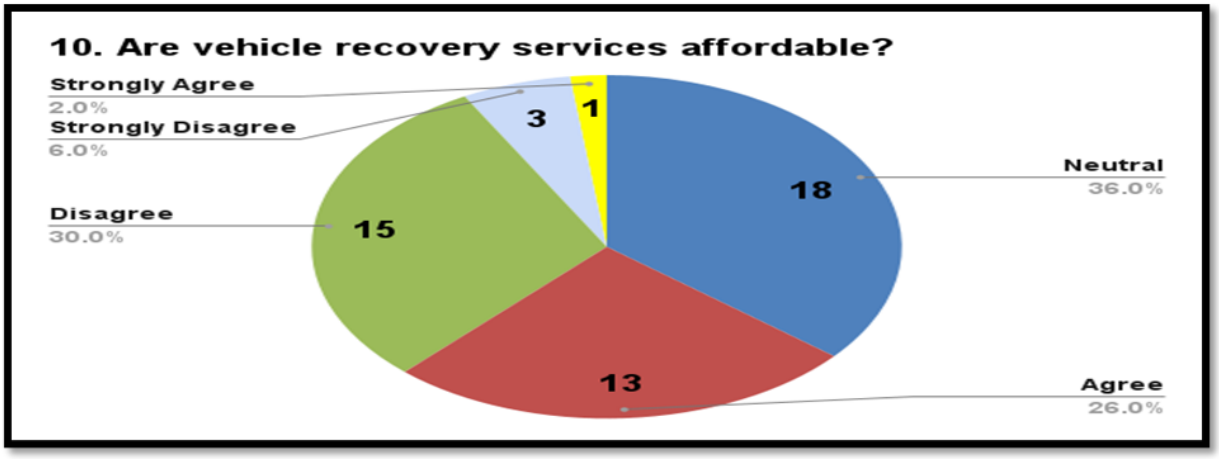

Figure 10. Response when asked if vehicle recovery services are affordable

When asked about the affordability of vehicle recovery services in Port Harcourt, 1 person (2%) strongly agreed while 13 people (26%) were in agreement. A total of 18 people (36%) were undecided, 15 people (30%) disagreed and 3 people (6%) strongly disagreed. It is interesting to note that while the majority of respondents were undecided on the affordability of vehicle recovery services, the second largest group of respondents were in strong disagreement with their affordability and perceived their cost to be on the high side for motorists.

Table 11. In the event of breakdowns, are vehicle recovery services for heavy goods and commercial vehicles also available?

Response	**No. of Respondents**	**Percentage %**
Strongly Agree	2	4
Agree	15	30
Neutral	13	26
Disagree	15	30
Strongly Disagree	5	10
Total	**50**	**100**

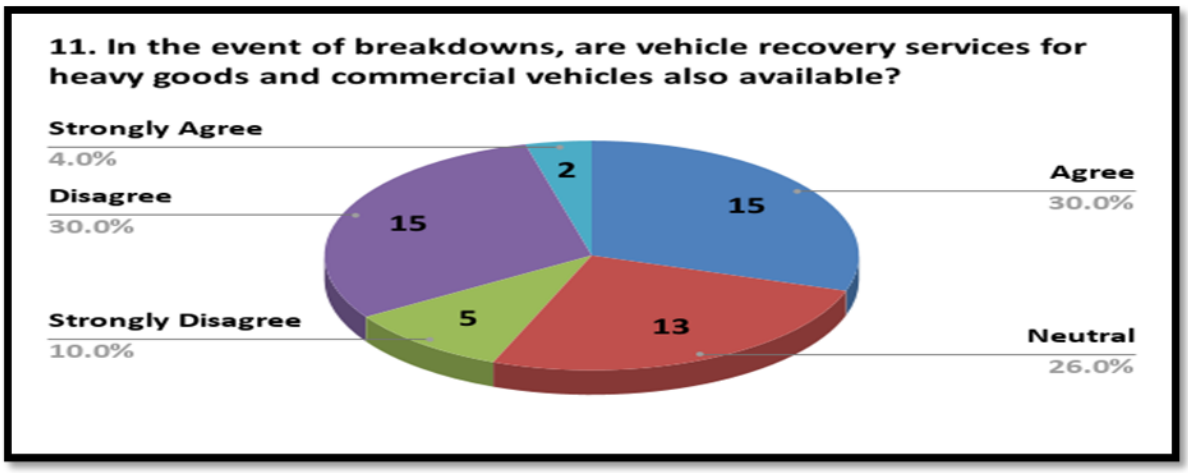

Figure 11. Response when asked about the availability of vehicle recovery services for heavy goods and commercial vehicles

As part of the research work, respondents were also asked about the availability of vehicle recovery services for the class of heavy goods and commercial vehicles such as trucks and buses since these also ply the roads and as such, could break down or encounter situations whereby they too would require the assistance of vehicle recovery services which are capable of handling that class of vehicle.

From the responses received, 2 people (4%) strongly agreed while 15 people (30%) agreed with their availability. A total of 13 people (26%) were neutral on the question while similar to those in agreement, 15 people (30%) disagreed on their availability while 5 people (10%) strongly disagreed. Analysing the results in more detail, while it was observed that opinions were split evenly between the number of respondents who agreed and disagreed (30% each), when considered in the broader perspective taking into account the totality of agreement and disagreement, it can be derived that the majority of respondents disagreed with the position and are of the view that vehicle recovery services to cater to the class of heavy goods vehicles and commercial vehicles are not available in Port Harcourt.

Table 12. If the cost of vehicle recovery were more affordable, will more motorists utilise their services?

Response	**No. of Respondents**	**Percentage %**
Strongly Agree	23	46
Agree	24	48
Neutral	2	4
Disagree	1	2
Strongly Disagree	0	0
Total	**50**	**100**

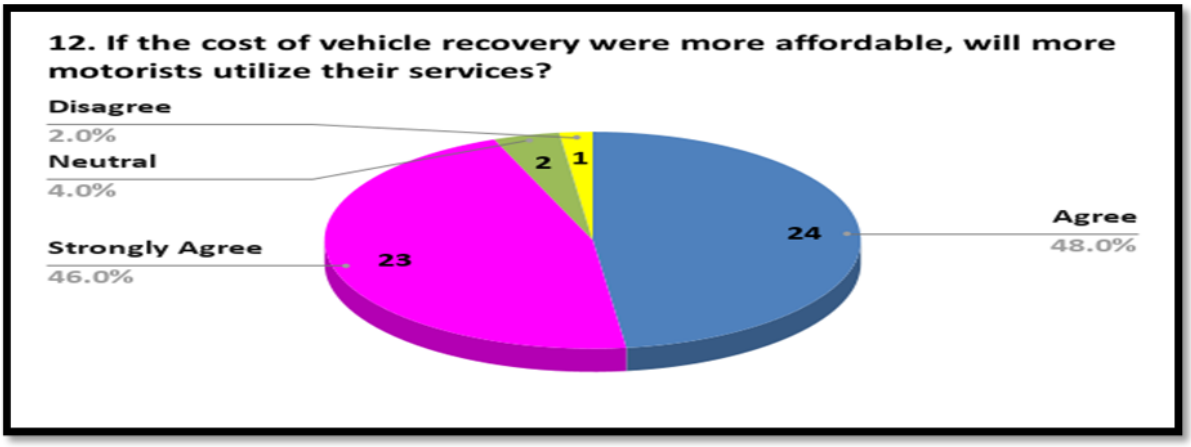

Figure 12. Response on whether more motorists will utilise vehicle recovery services if they were more affordable

Next, the survey set out to investigate whether or not more motorists will utilise vehicle recovery services if they were more affordable.

To this question, 23 people (46%) strongly agreed while 24 people (48%) agreed. 2 were neutral (4%) while 1 person (2%) disagreed and 0 persons (0%) strongly disagreed, which is why the 0% is not indicated in the pie chart of Figure 12. The results indicate a very significant majority of respondents agreed with the position that more motorists will utilise vehicle recovery services if they were more affordable as opposed to making alternative private arrangements and fending for themselves in such situations.

6. Challenges

Table 13. Should the State Ministry of Transport Regulate Vehicle Recovery Services?

Response	**No. of Respondents**	**Percentage %**
Strongly Agree	26	52
Agree	20	40
Neutral	4	8
Disagree	0	0
Strongly Disagree	0	0
Total	**50**	**100**

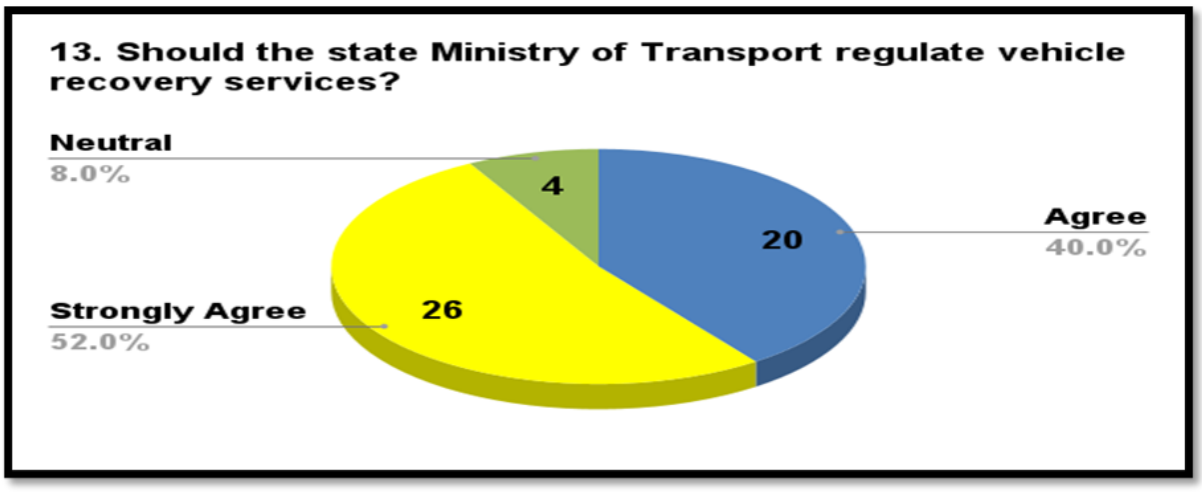

Figure 13. Response when asked if the state Ministry of Transport should regulate vehicle recovery services

Proceeding further, respondents were asked if the Rivers State Ministry of Transport should regulate vehicle recovery services in the state. This yielded the following results. 26 people (52%) strongly agreed, 20 people (40%) agreed and 4 people (8%) were undecided. Worthy of note are the absence of opinions which strongly disagree or disagreed with the question, hence the 0% as indicated in Table 13 and the corresponding pie chart of Figure 13. The overwhelming position of those interviewed is that of agreement, which indicates a strong preference for the Ministry of Transport to be actively involved in regulating the vehicle recovery services sector in the state and shaping policy in that regard.

Table 14. Should motorists invest more in preventive maintenance of their vehicles to reduce the occurrence of breakdowns?

Response	**No. of Respondents**	**Percentage %**
Strongly Agree	34	68
Agree	15	30
Neutral	1	2
Disagree	0	0
Strongly Disagree	0	0
Total	**50**	**100**

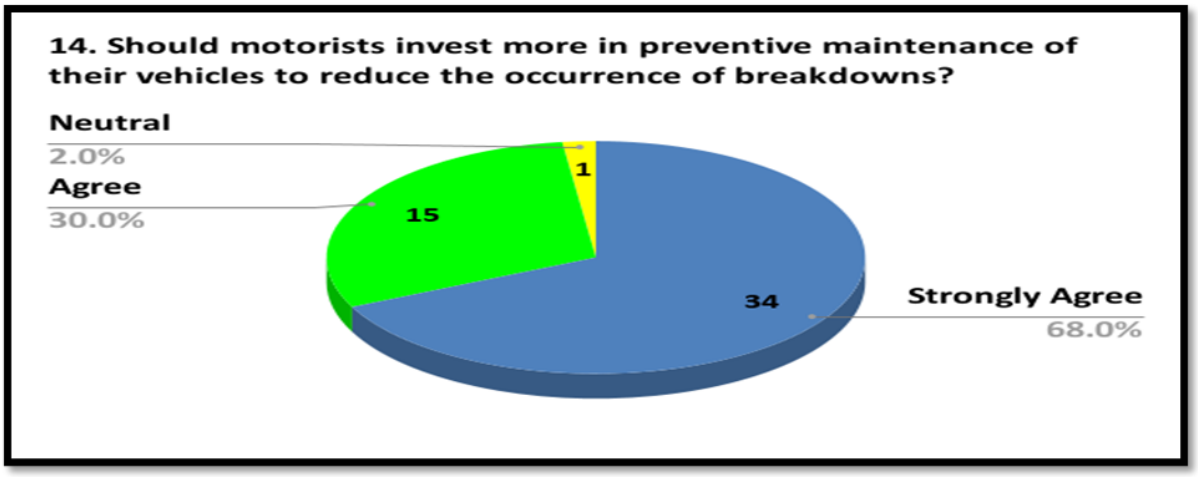

Figure 14. Response to the question, Should motorists invest more in preventive maintenance of their vehicles to reduce the occurrence of breakdowns?

Respondents were then asked if motorists should invest more in preventive maintenance of their vehicles to reduce the occurrence of breakdowns. The following results were recorded. 34 people, representing 68% strongly agreed with this position followed by 15 people (30%) who agreed. 1 respondent (2%) was undecided. It is interesting to note that none of the respondents disagreed or strongly disagreed with the position and this is again represented by the 0 scores in Table 14 and the pie chart of Figure 14.

Analyses of the results indicate an overwhelming majority in support of increased investment in preventive maintenance by motorists as a measure to reduce the occurrence of breakdowns on the roads.

Table 15. Does road safety and vehicle knowledge among motorists need to increase?

Response	**No. of Respondents**	**Percentage %**
Strongly Agree	32	64
Agree	16	32
Neutral	2	4
Disagree	0	0

Strongly Disagree	0	0
Total	**50**	**100**

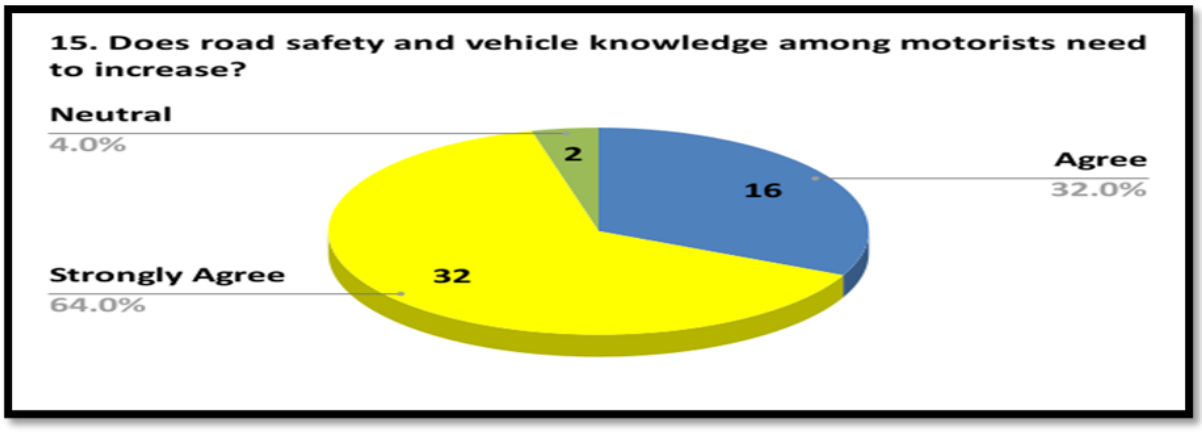

Figure 15. Response to the question, Does road safety and vehicle knowledge among motorists need to increase?

Following the previous question on preventive maintenance, respondents were then asked if road safety and vehicle knowledge among motorists needs to increase. From the sample covered, 32 people (64%) were in strong agreement 16 people (32%) agreed and 2 people (4%) were neutral. Again, none of the respondents disagreed or strongly disagreed with the position, hence the 0 scores indicated in Table 15 and the non-reflection of that score in the corresponding pie chart of Figure 15.

From the results gathered, they show strong agreement on the need for an increase both in the level of road safety knowledge as well as knowledge about the vehicle system by motorists.

Table 16. Can regular patrols along the major roads help reduce the impact of breakdowns on the roads?

Response	**No. of Respondents**	**Percentage %**
Strongly Agree	27	54
Agree	18	36
Neutral	2	4
Disagree	3	6
Strongly Disagree	0	0
Total	**50**	**100**

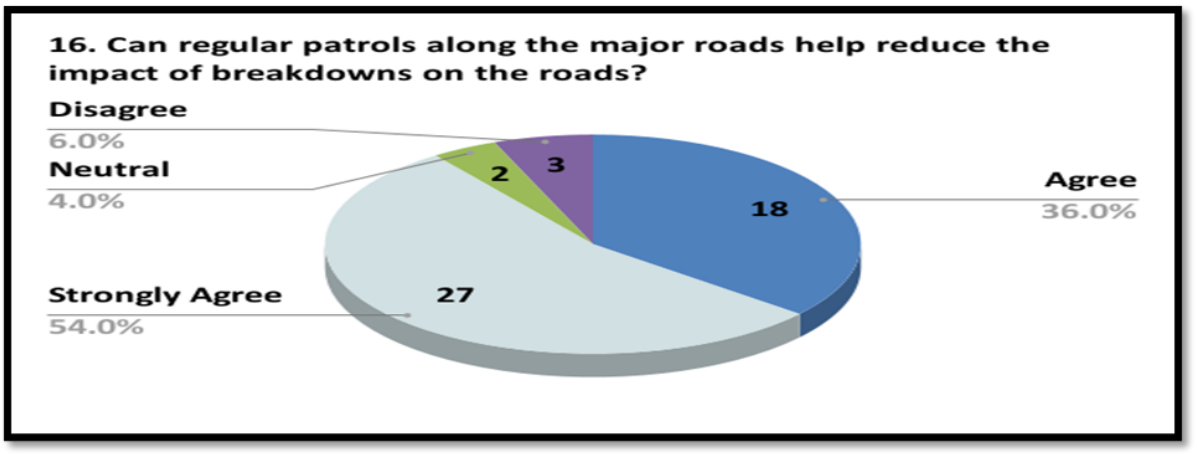

Figure 16. Response to the question; can regular patrols along the major roads help reduce the impact of breakdowns on the roads?

The survey concluded with the 16th and final question of the survey in which respondents were asked if regular patrols along the major roads could help reduce the impact of breakdowns on the roads.

Responding in strong agreement were 27 people, representing 54% of the sample. In agreement with this position were 18 people which are 36%. 2 people were neutral (4%) and 3 people (6%) disagreed. Worthy of note is that the absence of any result in strong disagreement with the position, hence a 0 score in Table 16 and no reflection of that score in the corresponding pie chart of Figure 16.

The obtained results indicate that majority of respondents were strongly in favour of regular patrols by the designated traffic authority along the major roads as a measure to reduce the impact of breakdowns on the roads.

In the area of impact, the study found that vehicle recovery services reduce congestion on the roads. It also found that the recovery of broken down vehicles affects the transportation time. Vehicle recovery reduces the risk of accidents on the roads, particularly secondary accidents. On the impact on transportation cost, findings indicate that vehicle recovery has no impact on the transportation cost.

With regards to performance, findings indicate that there are no effective vehicle recovery services available in Port Harcourt. It also found that vehicle recovery affects the state of the roads. This pointed to the fact that the presence of prolonged breakdowns which are not recovered in a timely manner negatively affects the state of the roads. Further assessing the performance, it was found that vehicle recovery services do not respond to incidents on time. This slow response time in turn significantly impacts traffic flow and road conditions.

In terms of the level of competence of the recovery work, findings indicate that vehicle recovery services carry out the recovery competently.

When availability and affordability were considered, findings indicate the presence of vehicle recovery services in Port Harcourt. On the question of affordability of vehicle recovery services, the cost of vehicle recovery is perceived to be high and not affordable to common people.

Addressing the issue of breakdowns of the commercial vehicles and heavy goods vehicles, findings indicate that vehicle recovery services to cater specifically to the classes of heavy goods vehicles and commercial vehicles are not available in Port Harcourt. This is generally observed to be the case when such classes of vehicles break down in the metropolis, when recovery often tends to take several days. It was also found that more motorists will utilize formal vehicle recovery services if they were more affordable, pointing to cost being the overwhelming factor keeping the majority of motorists from accessing the services.

Addressing challenges, there is a strong perception that the Rivers State Ministry of Transport should be involved in regulating vehicle recovery services in the state and shaping policy that affects the sector. When addressing aspects of preventive maintenance, it was found that increased investment in the preventive maintenance of vehicles on the part of motorists will help reduce the occurrence of breakdowns on the roads. This challenge of personal responsibility is invariably linked to economic factors as it is typically cost that plays a major role in the delay in maintenance of vehicles by motorists. Furthermore, it was also found that the level of vehicular and road safety knowledge among motorists needs to increase. More technical knowledge of the vehicle as a system will help motorists take better care of their vehicles. Combining this with better road safety knowledge with its attendant impact on good driving practice will contribute positively to improved road safety compliance in the Port Harcourt metropolis. Finally, findings indicate that regular patrols by designated traffic authorities along the major roads in the city are a measure to reduce the impact of breakdowns on the roads. This is owing to the fact that regular patrols offer the possibility of early detection of breakdowns and the ability to more quickly attend to them and coordinate a more effective response among the relevant services, whether emergency response or vehicle recovery services.

7. Conclusion

The study set out to investigate vehicle recovery and road safety compliance in Port Harcourt metropolis. The findings obtained revealed that there are areas for improvement with regard to vehicle recovery in the city, particularly with respect to breakdowns. Distressed vehicles which for one reason or the other are not recovered quickly, contribute significantly to hindering smooth traffic flow, could contribute to secondary accidents and in themselves, contribute towards a reduction in road safety compliance in cases where motorists resort to improper and unsafe driving practices in order to circumvent vehicles that have been broken down for prolonged periods and have not been towed away, for example. The economic and financial impact of vehicles not promptly recovered on traffic and commuters is also significant. It was also revealed that there are areas for improvement in road safety compliance among the motoring public. The increase in the level of road safety knowledge among motorists will contribute significantly towards improving the overall road safety compliance in the metropolis.

As a measure to complement existing efforts by established national bodies such as the Federal Road Safety Commission (FRSC) on a local level, concerted effort and involvement of the Rivers State Ministry of Transport

to regulate the vehicle recovery sector in the state will play a positive role in improving the traffic flow management. The involvement of the Ministry in increasing driver education will also contribute towards improving road safety compliance in the state.

8. Recommendations

From the research questionnaire and various interactions with respondents as well as taking a critical look at the issue of vehicle recovery services and road safety compliance, the following recommendations are hereby presented;

1) The Rivers State Ministry of Transport should explore strategic partnerships with the vehicle recovery sector as a means to reduce the impact of breakdowns in Port Harcourt metropolis. Conducting research to identify breakdown hotspots in the metropolis is recommended. Research insight such as is contained in the RAC (2006) Breakdown Britain report, could form a good basis for investigating the local motoring landscape.

2) Effort should be made to establish vehicle recovery guidelines and procedures applicable to all classes of vehicles operating in the state. An example of vehicle towing policy of the Netherlands Government — Local Laws And Regulations — Vehicle Towing Policy (2015) provides a rich source of insight into vehicle towing policy formulation. Performance standards for vehicle recovery should also be set. Areas of critical focus should include accessibility to such general recovery services, the ability to report distressed/disabled vehicles to the designated authorities, who will then spring into action and attend to such disabled vehicles in a prompt, professional, safe and cost effective manner. The standards set should ensure that irrespective of the nature of the situation by which vehicles become disabled and the financial and other means available to the vehicle owner or operator, the vehicle is recovered within a specified time period and the affected roads are rendered fully motorized as soon as possible. A fair and appropriate mechanism for adequate financial and administrative compensation for the recovery service to be paid by the vehicle owner/operator pre or post-recovery is highly recommended. Such costs may include vehicle towing and retrieval from a designated garage or depot by the vehicle owner/operator.

3) Promote the increased utilization of car insurance and stimulate greater synergies between car insurance providers and roadside assistance services. The creation of more attractive insurance packages whose benefits are marketed and linked to roadside assistance services could create a natural incentive for motorists to become members of formal roadside assistance organizations, which among other benefits include access to professional vehicle recovery and roadside assistance in the event of breakdowns as well as a rich suite of other transport related services. The British Automobile Association (AA) (1905), The Dutch ANWB (1883) and the German ADAC (1903) are three notable motoring organisations who provide similar comprehensive services to a large population of motorists, the majority of whom are active members/subscribers.

4) State campaigns to stimulate and encourage a better maintenance culture among motorists could contribute to a reduction in the occurrence of breakdowns via a preventive approach.

5) Physical infrastructure modifications in the form of creating more Lay Bays in strategic locations where breakdowns could be temporarily moved until professional roadside assistance arrives is recommended.

6) Regular patrols along major routes with known breakdown hotspots for the active monitoring of traffic to facilitate the early detection of breakdowns and other hindrances to traffic will contribute to prompt information flow and the coordination of an effective and timely response with traffic police and roadside assistance services.

7) Setting up dedicated official phone lines, website and social media platforms for the prompt reporting of breakdowns and other traffic hindrances by the general public will assist the designated authorities in communicating the relevant information required to coordinate an effective response to attending to such traffic disrupting events.

References

Adeyemi, S., (2018). Enhancing Road Safety Compliance through Efficient Vehicle Recovery Services: Case Studies from Nigerian Cities. *International Journal of Transportation Research*, *25*(3), 217-231.

Agero & Cooper, S., (2019, November 19). Vehicle Breakdowns Cost US Economy $41b Per Year. https://blog.agero.com/vehicle-breakdowns-cost-us-economy-41b-per-year

Ajzen, I., (1991, December). The Theory of Planned Behavior. *Organizational Behavior and Human Decision Processes*, *50*(2), 179-211. https://doi.org/10.1016/0749-5978(91)90020-T

Alexander, C.B., (2022). Climate change: a factor to farmers/herders crisis in Benue State, North Central,

Nigeria. *MOJ Ecology & Environmental Sciences*, *7*(5), 154-160.

Alexander, C.B., Aloni, C., and Amadi, D.E., (2025). The Effect of Climat-Tech on Sustainable Power Supply in Nigeria. *Innovation in Science and Technology*, *4*(4), 1-12.

Alexander, C.B., Frank, B.M.S., and Ajiboye, S.A., (2025). Analysis of Urban Morphology and Microclimate in Nigeria: Case Study of Three Cities (Port Harcourt, Lagos and Jos). *Innovation in Science and Technology*, *4*(5), 1-19.

Allgemeiner Deutscher Automobil-Club (ADAC), (1903). English translation: General German Automobile Club. https://www.adac.de

Anderson, J., (2017). The Role of Vehicle Recovery Services in Traffic Management. *Journal of Transportation Safety*, *35*(2), 123-136.

ANWB — Algemene Nederlandsche Wielrijders Bond, (1883). English translation: The Royal Dutch Touring Club. https://www.anwb.nl

Bako, A. I., & Agunloye, O. O., (2017). Factors Influencing Road Traffic Delay: Drivers' Perspectives And Loss Of Man-Hour Along Lagos-Abeokuta Expressway, Lagos, Nigeria. https://dx.doi.org/10.4314/ejesm.v10i5.6

Budnukaeku, A.C, and Emmanuela, O.C., (2022). Effect of Adverse Weather on Air Transport: Port Harcourt International Airport in Focus. *Innovation in Science and Technology*, *1*(4), 1-17.

Budnukaeku, A.C., (2024). The Perceptions of Indigenes on the Impacts of Rising Sea Level on Coastal Erosion and Flooding in Nigeria Coastal Communities. *The Progress: A Journal of Multidisciplinary Studies*, *5*(4), 1-13.

Chand et al, S., (2020). Analysis of Vehicle Breakdown Frequency: A Case Study of New South Wales, Australia. *Sustainability*, *12*(19). https://doi.org/10.3390/su12198244

Chand et al, S., (2020). Examining the macro-level factors affecting vehicle breakdown duration. *International Journal of Transportation Science and Technology*, *11*(1), 118-131. https://doi.org/10.1016/j.ijtst.2021.03.003

DiMaggio, P. J., & Powell, W. W., (1983). The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields. *American Sociological Review*, *48*(2), 147-160. https://doi.org/10.2307/2095101

Federal Republic of Nigeria Official Gazette No, 101 Vol. 99. (2012, December 25). Federal Road Safety Commission (Establishment) Act (2007), National Road Traffic Regulations (2012). https://frsc.gov.ng/NATROADTRAFFICREGS2012.pdf

Federal Road Safety Commission (Establishment) Act 2007 No. 22 A571. (2007). https://frsc.gov.ng/FRSCACT2007.pdf

Haddon Jr., W., (1972). A Logical Framework for Categorizing Highway Safety Phenomena and Activity. *Journal of Trauma and Acute Care Surgery*, *12*(3), 193-207. https://doi.org/10.1097/00005373-197203000-00002

Lagos State Traffic Management Authority LASTMA, (2018, August 22). Vehicle breakdowns increased by 200 per cent in Lagos. *The Nation*. https://thenationonlineng.net/vehicle-breakdowns-increased-by-200-per-cent-in-lagos/

National Bureau of Statistics of the Federal Republic of Nigeria, (2018). Nigeria Number of Registered Vehicles: Government. https://www.ceicdata.com/en/nigeria/road-transport-number-of-registered-vehicles/number-of-registered-vehicles-government

Nwachukwu, E., (2019). Coordination Between Recovery Services and Law Enforcement for Enhanced Road Safety Compliance. *Safety and Transportation Research*, *12*(2), 89-103.

Okafor, C., E.A., (2019). Challenges in Road Safety Compliance in Urban Areas: A Case Study of Port Harcourt Metropolis. *Journal of Urban Transportation*, *42*(4), 315-328.

Onyejekwe, N., (2020). Roadside Assistance Services and Vehicle Maintenance for Improved Road Safety Compliance. *Transportation and Infrastructure Journal*, *38*(1), 45-58.

Overheid.nl Lokale wet- en regelgeving - Beleidsregels wegslepen van voertuigen. Translated: Netherlands Government - Local Laws And Regulations - Vehicle Towing Policy. (2015, June 19). https://lokaleregelgeving.overheid.nl/CVDR369881#

Park et al, H., (2018, March). Real-time prediction and avoidance of secondary crashes under unexpected traffic congestion. *Accident Analysis & Prevention*, *112*, 39-49. https://doi.org/10.1016/j.aap.2017.11.025

RAC, (2006). Breakdown Britain. https://www.rac.co.uk/pdfs/report-on-motoring/breakdown-britain-report-2006

T&C Services, (2023, March 6). https://recovery-equipment.co.uk/what-are-the-different-types-of-vehicle-recovery

The Automobile Association (AA), (1905). https://www.theaa.com