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WHEELS OF CHANGE: THE ROLE OF PUBLIC UTILITY VEHICLE MODERNIZATION PROGRAM (PUVMP) IN RURAL COMMUNITIES IN BENGUET

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ABSTRACT

The Public Utility Vehicle Modernization Program (PUVMP) is a national initiative aimed at upgrading traditional transport systems to improve mobility, economic activity, and access to essential services. This study examined the level of awareness of public utility jeepney drivers regarding the PUVMP, assessed its impact on their socio-economic conditions, and determined the extent to which the program achieved its intended outcomes in terms of economic sustainability, environmental sustainability, and service quality improvement in selected rural communities in Benguet Province. A quantitative descriptive survey design was employed using a structured questionnaire, with data analyzed through weighted mean. The respondents consisted of 103 jeepney drivers affiliated with the Baguio-Benguet Transport Cooperative (BBTC) operating in Buguias, Tublay, and selected routes in La Trinidad, Benguet. Findings revealed that the drivers had a moderate overall level of awareness of the PUVMP, while demonstrating high awareness of the program's goals, benefits, and requirements. The program had a moderate impact on the drivers' socio-economic conditions but contributed significantly to improved work environment and safety, increased passenger satisfaction, and enhanced job security. Training programs under the PUVMP strengthened drivers' skills in vehicle maintenance, road safety, and customer service. The program moderately achieved environmental sustainability outcomes and highly achieved service quality improvements, particularly in passenger comfort and safety. The study recommends strengthened communication, guidance, and support mechanisms to further enhance the program's long-term socio-economic and environmental impact.

KEYWORDS: *Public Utility Vehicle Modernization Program, Jeepney Drivers, Socio-economic Impact, Service Quality, Environmental Sustainability*

INTRODUCTION

Rural transportation is widely recognized as a fundamental instrument for local development because it enables people in geographically dispersed communities to reach markets and livelihood opportunities, access health services, and participate in education and other social services that strengthen human capital. In the Philippines, this development role of transportation is closely tied to the dominance of the jeepney, which has long served as the country's primary public transport workhorse and, at the same time, a cultural emblem that expresses Filipino creativity, identity, and community life. Yet the very system that sustains daily mobility for millions also reveals persistent structural weaknesses, particularly when vehicles age beyond safe operating life, when maintenance becomes inconsistent, and when regulation and service planning remain fragmented. These realities shaped the emergence of the Public Utility Vehicle Modernization Program (PUVMP), a nationwide reform initiative intended to transform the Philippine public transportation sector by replacing outdated, inefficient, and high-emission vehicles with modern units designed for safer operations and improved environmental performance. The PUVMP, rooted in government policy instruments such as the Omnibus Franchising Guidelines, reflects a shift in governance from a fragmented, unit-based franchising arrangement toward a service-oriented, data-driven public transport network that prioritizes route rationalization, service reliability, passenger protection, and environmental targets. While modernization carries the promise of improved safety and better commuter experience, it simultaneously raises urgent questions in rural settings where infrastructure gaps, financial constraints, and social-cultural realities may limit the program's feasibility and fairness, thereby creating doubts about its capacity to deliver equitable transport services to distant areas and disadvantaged groups.

These doubts become more pressing in provinces like Benguet in the Cordillera Administrative Region, where mobility is essential yet difficult, and where the terrain, road geometry, climate conditions, and distance from major economic hubs shape a distinctive transport environment that differs sharply from metropolitan centers. Understanding this rural context requires situating the PUVMP within the longer historical trajectory of Philippine transportation development. Before colonial eras, Filipinos relied on indigenous transport technologies and locally

available materials, including wooden and bamboo watercraft used for fishing, trade, and inter-island movement, illustrating early innovation in mobility and commerce. With the arrival of Spanish colonization in the sixteenth century, the Philippines became integrated into global trade routes through galleon shipping, while road development in Luzon was pursued to support colonial administration, military needs, and commerce, laying early infrastructure foundations that would later expand. During the American colonial period, transportation infrastructure advanced significantly through the construction of paved roads and improvements in connectivity that linked remote provinces to emerging urban centers, allowing more reliable movement of people and goods and encouraging entrepreneurship and broader access to education in rural areas. The establishment and expansion of railways, particularly with the early operations of what would become the Philippine National Railways, further connected agricultural zones to urban markets, supporting commerce and contributing to urban growth in nodes with improved mobility. After World War II, the Philippines faced the task of rebuilding damaged transportation systems, and in the postwar landscape surplus military vehicles became the material base for the invention and growth of the jeepney as a public transport mode. Local artisans transformed military jeeps into passenger vehicles with expanded seating and culturally expressive aesthetics, creating a low-cost and adaptable system that rapidly gained popularity. In the post-independence period, as cities grew and rural-urban linkages intensified, jeepneys consolidated their role as the dominant public transport mode, particularly because they remained affordable, flexible in routes, and responsive to commuter demand.

Over time, however, the system's expansion without adequate regulatory structure contributed to chronic issues: overcrowding, inconsistent service quality, risky driving behaviors, uneven enforcement, and increasing pressure on road networks. Jeepneys also evolved into moving cultural canvases, decorated with vivid colors, religious and indigenous imagery, and localized artistry that reflected community identities and amplified the jeepney's symbolic status as part of national heritage. Nevertheless, the transport sector encountered economic turbulence in the late twentieth century as inflation and fuel price increases constrained operators and drivers, while rapid urbanization and motorization produced severe congestion and worsened air quality. These problems were not confined to metropolitan areas; they also affected provincial corridors and rural towns where aging fleets and limited maintenance capacity exposed commuters and drivers to safety and health risks. In response to the need for stronger regulation, the government institutionalized public transport oversight through the creation of agencies such as the Land Transportation Franchising and Regulatory Board in the late 1980s to manage franchises, regulate fares, and strengthen safety and maintenance standards, aiming to protect both consumers and operators. Yet even with regulatory frameworks in place, the deeper structural issue remained: the transport system's organization continued to be fragmented, often dominated by individual or small-scale operators managing one or a few units, producing uneven service, limited professionalization, and challenges in implementing system-wide improvements.

At the same time, environmental concerns became increasingly central to transport policy. The Philippines' participation in global climate action, including commitments associated with the Paris Climate Agreement, strengthened national attention to emissions reduction and the need to align economic development with environmental sustainability. The agreement's emphasis on limiting temperature rise and encouraging each nation's Nationally Determined Contributions underscores why transport reform is not merely operational but also ecological, since road transport emissions, air pollutants, and energy inefficiency intersect with public health and climate vulnerability. Globally, the transition to cleaner mobility has been accelerated by the growth of electric vehicles and low-emission technologies, and international discourse increasingly frames sustainable transport as both a climate mitigation strategy and an economic opportunity that can create jobs while improving quality of life. In the Philippine setting, these global pressures intersect with local realities: public transport remains heavily dependent on jeepneys and buses, commuters face long waits and unreliable services, and urban areas experience chronic congestion and pollution, while rural areas contend with limited routes, difficult geography, and infrastructure constraints. Benguet illustrates this intersection vividly. The province's mountainous terrain and economic dependence on agriculture make reliable transportation crucial for moving people and highland produce to trading centers. Historically, major road arteries such as the Halsema Highway—initiated in the early twentieth century and later improved for vehicular travel—became vital links connecting Benguet to neighboring provinces and enabling the flow of goods and services across the Cordillera. Yet these routes also present operational challenges: steep gradients, narrow passages, sharp curves, and exposure to weather-related disruptions contribute to higher wear and tear and increased risk, conditions that shape both driver working environments and passenger safety.

Within this rural-mountain setting, jeepneys remain central to daily mobility, particularly in municipalities and routes connecting communities to La Trinidad and other hubs, because they are comparatively accessible and familiar, and because alternative modes may be limited, more expensive, or less responsive to local travel patterns.

However, long-standing issues in the jeepney sector—such as extended working hours under hazardous conditions, low and unstable wages, lack of formal employment contracts, and limited benefits—create vulnerability for drivers and operators, whose livelihoods often depend on daily boundary systems and passenger volumes that fluctuate with seasons, school schedules, and agricultural cycles. Against this backdrop, the PUVMP was introduced as a major intervention designed to modernize public transport by replacing old vehicles with units meeting Euro IV emissions standards or using electric or hybrid systems and equipped with safety and management technologies such as GPS, CCTV, and speed limiters, thereby seeking to improve passenger comfort, safety, and overall service quality while reducing environmental harm. The program also advances a governance and operational shift: it compels the development of Local Public Transport Route Plans by LGUs to align routes with actual mobility needs and geography, and it encourages or requires industry consolidation so that drivers and small operators join cooperatives or corporations capable of meeting fleet requirements, accessing financing, and implementing professional management. Advocates argue that this consolidation can reduce the inefficiencies of the old system by pooling resources, improving accountability, and enabling investments in service improvement, while also creating opportunities for cooperatives to diversify into related businesses that strengthen financial sustainability. To support modernization, the government offers subsidies to qualified operators and provides access to loans through state-linked financial institutions, complemented by support from international development partners that have provided funding and technical assistance for procurement, infrastructure, and implementation capacity.

In theory, these mechanisms produce a pathway toward a safer, cleaner, and more efficient public transport system, integrating economic efficiency with environmental responsibility and social equity. In practice, however, rural implementation can be significantly more complex. Modern vehicles may face operational difficulties in rural areas with limited infrastructure, such as inadequate road maintenance, absence of facilities, constrained terminals, and in the case of electric or technologically advanced units, limited support systems for charging, repairs, diagnostics, and spare parts availability. Studies and development assessments have pointed out that rural roads often suffer from insufficient maintenance, which reduces vehicle performance and operational effectiveness and increases costs—factors that can undermine the expected efficiency gains from modernization. Economic barriers also remain a central concern: for many rural drivers and small operators, older vehicles represent their primary income-generating asset, and shifting to newer units can create financial insecurity, especially when access to financing is uneven, when documentation requirements are difficult to meet, or when drivers fear that loan repayments could exceed their capacity under variable rural demand conditions. These apprehensions can generate resistance to the transition, particularly when stakeholders perceive that support programs and training are insufficient, poorly communicated, or not tailored to local conditions. Modernization also provokes socio-cultural concerns. Because jeepneys are culturally significant and historically associated with Filipino ingenuity and local artistry, replacing them can be interpreted not only as a technical upgrade but as a disruption of heritage, identity, and traditional ways of life. In indigenous and rural communities, where livelihoods, social networks, and mobility practices are closely intertwined, the replacement of familiar vehicles and operating patterns can feel like an externally driven change that may not adequately respect local contexts.

Furthermore, modernization may inadvertently widen inequalities between urban centers and rural areas if cities—due to higher demand, stronger infrastructure, and easier access to financing—can adopt modern fleets more rapidly, while rural municipalities struggle to meet financial requirements and compliance standards. This risk is particularly critical given that rural mobility is already constrained and that transport access is a prerequisite for inclusive development, not a luxury. For these reasons, assessing the PUVMP in rural areas is not simply an academic exercise; it is necessary to clarify the program's real effects, identify implementation gaps, and support policy adjustments that ensure rural communities are not disadvantaged by a reform meant to improve national mobility. A robust rural assessment must consider not only operational outcomes but also socio-economic and perceptual dimensions: the extent of driver awareness of PUVMP goals, requirements, and operational-financial mechanics; the actual and perceived impacts on drivers' livelihoods, job security, and work environments; and the extent to which modernization outcomes—especially environmental sustainability and service quality improvements—are realized under rural conditions. Awareness matters because public acceptance is a cornerstone of policy success. In rural settings, skepticism or resistance may be rooted in limited information, inconsistent messaging, or lack of participatory engagement, and research can reveal where communication failures occur and how outreach and education can be strengthened. Socio-economic impact matters because drivers and operators bear a large share of adjustment costs, and modernization that improves passenger experience but destabilizes livelihoods can produce social backlash and unintended harm. Environmental and service quality outcomes matter because the PUVMP's legitimacy is anchored in claims of cleaner emissions, safer vehicles, and more reliable service, yet these benefits must be demonstrated in the lived realities of rural operations where road conditions, trip distances, and maintenance capacity can differ substantially from urban routes.

Importantly, research in rural Benguet also contributes to broader national discourse on sustainable urbanization and inclusive mobility by providing a case that demonstrates how modernization policies interact with rural geographies and socio-economic structures. Findings from a rural case can function as a benchmark for other provinces facing similar conditions, helping policymakers anticipate risks, adjust financing models, strengthen infrastructure readiness, and adopt best practices that balance modernization benefits with equity and cultural sensitivity. Moreover, because Benguet's setting has direct implications for environmental protection—given the ecological importance of upland regions and the need to reduce emissions and pollution—evaluating environmental impacts in rural contexts can build evidence that green transport reforms contribute to climate resilience and local public health improvements. At the institutional level, the PUVMP's framework under the Omnibus Franchising Guidelines embodies the government's intention to redesign public transport franchising into a rational, service-based system that employs data-driven route planning and compliance monitoring to ensure reliable service while meeting environmental targets and improving operational efficiency. This governance model implies a redefinition of franchises as service contracts with performance-based assessments and accountability mechanisms, moving away from a highly competitive, informalized system toward integrated service delivery. The program's emphasis on LPTRPs demonstrates recognition that route planning should reflect actual community needs and geography rather than the old pattern of overlapping routes and opportunistic operations, and this is particularly relevant in mountainous rural municipalities where travel demand, topography, and access points must be carefully aligned for services to be viable.

Likewise, consolidation is framed as a strategy to professionalize operations, distribute responsibilities, access capital, and maintain service standards, but consolidation also represents a significant cultural and economic shift for operators accustomed to individualized ownership, potentially creating anxieties about control, income distribution, and organizational governance within cooperatives or corporations. Thus, a rural assessment must also pay attention to how institutional reforms are experienced at the grassroots level—whether drivers feel supported, whether cooperative systems are functioning equitably, and whether training programs genuinely build capacity in maintenance, safety, and customer service. Ultimately, the background leading to this study is grounded in a tension between the promise and the uncertainty of modernization. The PUVMP is positioned as a national solution to persistent transport problems—unsafe and aging fleets, inefficient operations, air pollution, and weak service governance—while aligning with international climate commitments and the global movement toward low-carbon mobility. Yet in rural provinces like Benguet, where transport is essential for development and social inclusion but constrained by geography, infrastructure, and livelihood vulnerabilities, modernization can generate burdens and risks that are not fully captured by urban-centered narratives. The study, therefore, is driven by the need to examine the PUVMP's rural implementation with clarity and fairness: to determine how aware drivers are of the program, how the program affects their socio-economic conditions, and how effectively it achieves environmental sustainability and service quality improvements as perceived by those who operate within the system daily. By grounding evaluation in the perspectives and experiences of rural drivers and operators, the research aims to generate evidence that can guide policymakers and implementers in refining strategies, strengthening communication and support, improving infrastructure alignment, and ensuring that transport modernization becomes not only technologically advanced but also socially equitable, culturally respectful, and development-oriented for rural communities.

METHODOLOGY

The study utilized a descriptive quantitative survey design to assess the Public Utility Vehicle Modernization Program (PUVMP) in rural areas of Benguet, specifically in Buguias, Tublay, and selected routes in La Trinidad. The respondents were 103 actively operating public utility vehicle drivers under the Baguio-Benguet Transport Cooperative (BBTC), selected based on set inclusion criteria to ensure relevance to rural transport operations. A structured survey questionnaire was used as the primary data gathering tool, with items adapted from related studies and refined through expert validation. The instrument's reliability was established through pilot testing, which yielded a high Cronbach's alpha coefficient, indicating strong internal consistency. Data collection was conducted after securing ethical clearance and formal permission from the BBTC, with informed consent obtained from all participants. Confidentiality and voluntary participation were strictly observed. Data were analyzed using weighted mean and interpreted through a four-point Likert scale to determine the drivers' level of awareness of the PUVMP, its socio-economic impact, and the extent of its achievement in environmental sustainability and service quality improvement.

RESULT, ANALYSIS, AND DISCUSSION

Level of Awareness of Drivers on the Public Utility Vehicle Modernization Program

Table 2 indicates that drivers have a moderate level of awareness of the Public Utility Vehicle Modernization Program (PUVMP), with an overall weighted mean of 3.21. This suggests that most drivers are familiar with the

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program and understand its primary objectives, particularly those related to road safety, vehicle modernization, and environmental protection. However, their understanding remains largely general, as many drivers do not fully comprehend the program's detailed structure, requirements, and long-term advantages, a finding consistent

Table 2. Level of Awareness of Drivers on the Public Utility Vehicle Modernization Program

Indicator	W.M.	D.E.	Rank
1. I am aware of the Public Utility Vehicle Modernization Program.	3.69	Highly Aware	1
2. I have a clear understanding of the goals and aims of the Public Utility Vehicle Modernization Program.	3.55	Highly Aware	2
3. I have received sufficient information regarding the Public Utility Vehicle Modernization Program.	3.44	Highly Aware	4
4. I am aware of the requirements that I need to comply with under the Public Utility Vehicle Modernization Program.	3.38	Highly Aware	5.5
5. I have attended seminars or a workshop related to the Public Utility Vehicle Modernization Program.	3.20	Moderately Aware	7
6. I believe that the government is providing sufficient support for the Public Utility Vehicle Modernization Program.	2.21	Moderately Aware	9
7. I understand the technological changes that come with the Public Utility Vehicle Modernization Program.	3.38	Highly Aware	5.5
8. I believe that the Public Utility Vehicle Modernization Program will have a positive impact on businesses.	2.55	Moderately Aware	8
9. I am aware of the benefits of the Public Utility Vehicle Modernization Program.	3.45	Highly Aware	3
Average	**3.21**	**Moderately Aware**	

with earlier studies that identified gaps in information dissemination and depth of understanding (Smith & Johnson, 2018; Lee et al., 2020).

The highest-rated indicators show that drivers are generally aware of the PUVMP and clearly understand its goals and benefits, reflecting the effectiveness of government information campaigns, media exposure, and community outreach initiatives. Drivers also demonstrated awareness of the program's benefits, including improved passenger safety, enhanced service quality, and reduced environmental impact. These results align with the findings of Pili (2022), who reported that drivers, operators, and commuters possess clear knowledge of the program's objectives and projected benefits, as well as with Zulueta et al. (2024), who found that modernized jeepneys are associated with better service quality, higher safety standards, and increased user satisfaction.

Despite this, lower-rated indicators point to critical gaps. Attendance in seminars and workshops related to the PUVMP was only moderately acknowledged, suggesting limited access to formal capacity-building activities. Moreover, drivers expressed uncertainty regarding the program's economic and business benefits and showed limited confidence in government support mechanisms, particularly in relation to financial assistance and training programs. Difficult application processes and inadequate communication about available support contributed to skepticism, echoing observations that sustained and adequate government assistance remains essential for the success of the modernization program (Philippine News Agency, 2023). Overall, while drivers exhibit substantial awareness of the PUVMP's objectives and benefits, uncertainties regarding its business impact and the adequacy of government support persist, highlighting the need for stronger communication strategies and more accessible support systems to foster broader compliance and positive stakeholder engagement.

Level of Impact of the Public Utility Vehicle Modernization Program (PUVMP) on the Socio-Economic Conditions of Drivers

Table 3 shows that the Public Utility Vehicle Modernization Program (PUVMP) has a moderate overall impact on the socio-economic conditions of drivers, with a mean score of 2.76. This indicates that while drivers recognize certain benefits of modernization, they also experience challenges that limit its overall socio-economic effect. Similar to earlier findings on awareness, drivers acknowledge both the advantages and constraints of the program, particularly regarding improved operations versus concerns over vehicle costs and compliance requirements (Garcia & Santos, 2019; Ramirez et al., 2021).

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The strongest perceived impact of the PUVMP was on work environment and safety (WM = 3.29), indicating that drivers value the safer, more comfortable, and better-regulated conditions provided by modernized vehicles. This finding aligns with earlier studies showing that upgraded vehicle standards and safety features improve driver comfort and reduce occupational risks (Lasangue, 2019; Domin et al., 2020; Casas et al., 2024). The program was also rated highly in terms of passenger satisfaction (WM = 3.26), reflecting drivers' awareness of improved passenger comfort, cleanliness, and service quality, which may contribute to better ridership and service perception. Moderate impacts were observed in job security, skills development, livelihood satisfaction, and operational cost efficiency (WM ≈ 2.97–3.09). Drivers recognized the benefits of training programs, employment stability, and potential fuel and maintenance savings; however, these gains were not consistently experienced by all drivers and were often offset by high vehicle acquisition costs and adjustment challenges (Mendoza, 2023). The lowest-rated impacts were related to income improvement, access to financing, and social benefits such as PhilHealth, Pag-IBIG, and SSS, indicating that modernization has not substantially improved drivers' financial well-being or access to welfare support. Despite existing subsidies and loan programs, many drivers continue to struggle with affordability and loan repayment (Aruta et al., 2024).

Table 3. Level of Impact of the Public Utility Vehicle Modernization Program

Indicator	W.M.	D.E.	Rank
1. The Public Utility Vehicle Modernization Program (PUVMP) improved my income as a driver.	2.15	Slight Impact	7
2. I have access to better financing options for modern vehicles due to the Public Utility Vehicle Modernization Program (PUVMP).	2.04	Slight Impact	8
3. I feel more secure and stable in my job due to the Public Utility Vehicle Modernization Program (PUVMP).	3.09	Moderate Impact	3.5
4. The modernization of vehicles has led to decreased operational costs (fuel and maintenance).	2.97	Moderate Impact	6
5. The Public Utility Vehicle Modernization Program (PUVMP) has resulted in increased passenger satisfaction with my services.	3.26	High Impact	2
6. The Public Utility Vehicle Modernization Program (PUVMP) has improved my work environment and safety.	3.29	High Impact	1
7. The Public Utility Vehicle Modernization Program (PUVMP) has given me access to social benefits (PHILHEALTH, PAG-IBIG, and SSS) for my overall welfare.	1.94	Slight Impact	9
8. The Public Utility Vehicle Modernization Program (PUVMP) has training programs and opportunities for vehicle maintenance, road safety, and customer service, enhancing my skills development.	3.09	Moderate Impact	3.5
9. The Public Utility Vehicle Modernization Program (PUVMP) affected my overall satisfaction with livelihood as a public utility vehicle driver.	3.06	Moderate Impact	5
Average	**2.76**	**Moderate Impact**	

Overall, the findings suggest that while the PUVMP has successfully improved safety, working conditions, and service quality, its socio-economic benefits—particularly in terms of income growth, financing access, and social protection—remain limited. Strengthening financial assistance, simplifying access to support programs, and enhancing communication on available benefits are necessary to ensure that modernization leads to more inclusive and sustainable livelihood improvements for drivers.

Extent of Achievement of the Public Utility Vehicle Modernization Program (PUVMP) on Environmental Sustainability and Service Quality Improvements

Table 4 shows that the Public Utility Vehicle Modernization Program (PUVMP) has been highly achieved in terms of environmental sustainability and service quality improvements, with an overall weighted mean of 3.30. This indicates that drivers generally perceive the program as successful in delivering tangible benefits, particularly through the use of eco-friendly, energy-efficient vehicles, reduced emissions, quieter operations, and improved passenger amenities. These perceptions are consistent with earlier findings that modernization initiatives contribute to lower emissions, better fuel efficiency, and cleaner transport environments (Mendoza & Reyes,

2020), as well as enhanced passenger comfort and safety that positively influence service quality (Lopez et al., 2021).

Among the indicators, passenger comfort (WM = 3.57) and passenger safety (WM = 3.52) received the highest ratings, reflecting drivers' recognition of improved vehicle design, safety systems, and operational reliability. Modern features such as ergonomic seating, improved ventilation, GPS, CCTV, and enhanced structural safety increased passenger confidence and satisfaction, supporting findings that modern safety systems reduce accidents and improve user trust in public transport (Pucher & Buehler, 2010; Litman, 2020; Asian Development Bank, 2017). Drivers also rated customer service improvement (WM = 3.40) and vehicle maintenance and cleanliness (WM = 3.36) highly, suggesting that modernization promoted professionalism, accountability, and better service delivery, consistent with evidence that proper maintenance enhances public transport image and reliability (Gupta & Jaiswal, 2016).

Table 4. Extent of Achievement of the Public Utility Vehicle Modernization Program

Indicator	W.M.	D.E.	Rank
A. Environmental Sustainability	314	Moderately Achieved	
1. The Public Utility Vehicle Modernization Program (PUVMP) has improved energy efficiency in operations.	3.20	Moderately Achieved	6
2. There has been a reduction in noise pollution from modernized public utility vehicles.	3.22	Moderately Achieved	5
3. I have observed improvement in fuel efficiency among modernized public utility vehicles.	3.08	Moderately Achieved	8
4. The Public Utility Vehicle Modernization Program (PUVMP) promotes the adoption of renewable energy sources.	3.01	Moderately Achieved	9
5. The Public Utility Vehicle Modernization Program (PUVMP) has a positive impact on my health and safety while driving.	3.18	Moderately Achieved	7
B. Service Quality Improvements	3.46	Highly Achieved	
6. The modernization has led to improved comfort for passengers in public utility vehicles.	3.57	Highly Achieved	1
7. The level of customer service provided by drivers has improved due to the Public Utility Vehicle Modernization Program (PUVMP).	3.40	Highly Achieved	3
8. The cleanliness of public utility vehicles has improved with the Public Utility Vehicle Modernization Program (PUVMP).	3.36	Highly Achieved	4
9. Passengers feel safer while using the modernized public utility vehicles compared to the older vehicles.	3.52	Highly Achieved	2
Average	**3.30**	**Highly Achieved**	

Indicators related to noise reduction, energy efficiency, health and safety, fuel efficiency, and renewable energy adoption were rated at a moderate level of achievement (WM ≈ 3.01–3.22). While drivers acknowledged improvements in quieter operations, fuel efficiency, and safer working conditions, these benefits were perceived as less pronounced due to factors such as road conditions, traffic congestion, operational practices, and limited infrastructure for alternative energy. The moderate ratings suggest that although the PUVMP has made measurable progress, further efforts are needed to maximize energy efficiency, strengthen eco-driving practices, and clearly communicate renewable energy initiatives. Overall, the findings indicate that the PUVMP has been effective in improving service quality, passenger comfort, safety, and environmental performance, but outcomes related to energy efficiency, renewable energy adoption, and occupational health remain only moderately realized. Sustained investment, improved infrastructure, and clearer communication on environmental and energy-related goals are necessary to strengthen the program's long-term impact and ensure broader environmental and service quality gains.

Summary of Findings

The study found that the Baguio-Benguet Transport Cooperative (BBTC) drivers in Buguias, La Trinidad, and Tublay, Benguet are generally moderately aware of the Public Utility Vehicle Modernization Program (PUVMP), while demonstrating a clear understanding of its goals, benefits, and requirements. Overall, the PUVMP has a

moderate impact on the drivers' socio-economic conditions; however, drivers acknowledged notable improvements in their work environment and safety, increased job security and stability, and enhanced skills in vehicle maintenance, road safety, and customer service through program-provided training opportunities. In terms of outcomes, the drivers perceived the PUVMP's impact on environmental sustainability as moderately achieved, citing reductions in noise pollution, improved operational energy efficiency, and positive effects on health and safety, while its impact on service quality improvements was highly achieved, particularly in enhancing passenger comfort, safety, and overall customer service.

CONCLUSION AND RECOMMENDATION

Conclusions

The study concludes that the Baguio-Benguet Transport Cooperative (BBTC) drivers in Buguias, La Trinidad, and Tublay, Benguet possess a fair to moderate level of understanding of the Public Utility Vehicle Modernization Program (PUVMP), particularly with regard to its goals, benefits, and vehicle requirements, although gaps remain in their knowledge of program operations and access to financial assistance. While the PUVMP has had a moderate overall impact on the drivers' socio-economic conditions, it has clearly contributed to improvements in work environment and safety, job security, and skills development in vehicle maintenance, road safety, and customer service. Moreover, the program has moderately achieved its objectives in environmental sustainability through reduced noise pollution, improved energy efficiency, and enhanced health and safety, while demonstrating a high level of achievement in service quality improvements, especially in terms of passenger comfort, safety, and customer service, indicating that the PUVMP has met its initial objectives of transport enhancement and sustainability promotion.

Recommendations

Based on the findings, it is recommended that the Land Transportation Franchising and Regulatory Board (LTFRB) strengthen its information and education campaigns through expanded workshops, seminars, printed materials, and digital platforms to deepen drivers' understanding of the PUVMP and foster positive attitudes toward modernization. Clearer and more accessible communication regarding financial assistance, subsidies, payment options, and procedures for accessing social benefits such as PhilHealth, Pag-IBIG, and SSS should be prioritized, alongside simplified application processes and regular feedback mechanisms through driver consultations and forums. To further build public and driver support, government agencies should highlight documented environmental and service quality gains of the PUVMP, supported by driver experiences, fuel efficiency data, and operational training. Finally, future studies are recommended to examine the long-term operational effectiveness and sustainability mechanisms of the PUVMP, particularly in rural contexts, to guide continuous policy improvement.

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