



Steering Towards Sustainable Mobility: A Holistic Examination of Public Utility Vehicle Modernization Program Impact on Commuting Public and Private School Students in the University Belt, Manila, Philippines

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ABSTRACT: The Public Utility Vehicle Modernization Program aims to create convenient, accessible, and eco-friendly electric jeepneys, commonly called “Jeepney Modernization,” for commuters in urban areas. However, the price of modernized jeepneys is costly, leaving a majority of commuters, especially students, with the burden of making enough profit to fund the program, resulting in fare increases continually. Hence, this research study aims to assess the following categories: (1) students’ perceptions of the significance of jeepneys for student commutes, (2) students’ perception of Jeepney Modernization policies and possible fare increase, and (3) students’ perceptions on their affordability of the fare increase. The researchers utilized a quantitative approach using modified survey questions adapted from existing studies. This survey was distributed to (40) college students. Specifically, (10) participants from each of the following four universities: Pamantasan Ng Lungsod ng Maynila (PLM) and Unibersidad de Manila (UDM), public schools; Far Eastern University (FEU) and University of Santo Tomas (UST), private schools. Results have shown no significant differences in students’ perspectives from public and private universities within U-Belt. This indicates that regardless of variation in academic institutions, students have similar perspectives on the significance of Jeepney usage, Jeepney modernization program policies, Fares increase, and Fares affordability. Ultimately, this research provided valuable insights regarding students’ challenges and experiences due to the recent transportation changes and could potentially aid policymakers in mitigating negative impacts.

KEYWORDS: commuter perspective, mitigation, public transportation, transportation affordability, transit accessibility.

INTRODUCTION

In the Philippines, jeepneys are the most prevalent motorized land transport mode utilized by several commuters. Jeepneys make up (80%) eighty percent of all transportation modes for the students and working class in both rural and urban areas (Dimalanta et al., 2023). On June 19, 2017, the Department of Transportation (DOTr) implemented Department Order No. 2017-011, known as the Omnibus Guidelines on the Planning and Identification of Public Road Transportation Services and Franchise Issuance (OFG) to launch the “Public Utility Vehicle Modernization Program” otherwise known as “PUVMP.” The program aims to create a public transport system that is more dignified, humane, and capable of adhering to global standards (Francisco, 2017). According to Autoindustriya (2023), it aims to replace traditional jeepneys with electricity-powered vehicles, rightfully termed “E-jeepneys,” to improve public transport in the Philippines. This issuance pushed to stop the production of traditional jeepneys by January 2024 and revoke jeepneys of 15 years off the road (Yu, 2023). While modernization may seem ideal, it is equally important to analyze the affected aspects before implementing the transition. With this idea, this research study identified the factors affecting users upon issuing the Public Utility Vehicle Modernization Program (PUVMP).

Conventionally, jeepneys are considered transportation vehicles made of scrap materials and bare steel from the repurposed surplus military jeeps left by American troops to solve the post-war conveyance problem during World War II in 1953 (Lopez, 2022). The recent issuance of the PUVMP defines “Jeepney Modernization” as replacing traditional jeepneys with safer engines, eco-friendly electric parts that reduce smoke emission, and more efficient designs to better accommodate the convenience of commuters



(Francisco, 2017). However, modernization entails costly financial demands, leaving commuters the burden of profiting from funding the program, resulting in fare increases (Cadiz, 2022). This raises questions about fare affordability, considering there will be a “ripple effect” of increased living costs, including transportation, for several low-income households (Relativo, 2024). This pertains to the increase in public transportation costs or the minimum fare to sufficiently fund the budget cuts and loans brought by Jeepney Modernization.

Consequently, the government aims to subsidize P280,000 for the transport sector to implement the modernization. They plan to provide loan programs using the Land Bank of the Philippines and the Development Bank of the Philippines with a Php 160,000 pesos subsidy per modern vehicle with a 6% interest (Gatarin, 2023). To counter the claims of electric jeepneys being “costly,” the government will be selling the vehicles for just Php 985,000 pesos a unit, in contrast to the initial price of Php 2.48 million pesos per unit cost that foreign manufacturers insist on (Yu, 2024). Consequently, for drivers to make income from Jeepney Modernization, the minimum fare will have to increase to fifty pesos (Php 50) per commuter (Relativo, 2024). Students in private and public schools are limited in financial resources; the tuition hikes and recent inflation of expenses will aggravate students’ financial crisis to meet daily living costs (Chi, 2023).

Furthermore, Regidor’s (1996) paper emphasizes that the lack of proper transportation structures is the major contributor to the low revenue of jeepneys, causing financial crises. This paper states that to make public transportation effective, factors such as disciplines in traffic regulations, behavior science of driver-passenger interactions, comprehensive research plans, simulations, and public forums, as well as evaluating potential policy changes, should be considered. However, while this may explain the relationship between profit and drivers, it focuses little on how these “stops” may affect a commuter’s access to public transportation. The commuter student population comprises a large portion of the higher education system (Giacalone, 2022). Consequently, without a commuter’s perspective of the problem, it could potentially affect how the public can access public transportation.

Furthermore, the paper by Gatarin (2023) explores the complexities of the Philippine Public Utility Modernization Program (PUVMP) through interviews, media analysis, and participant observation. This paper examines the program’s impact on various stakeholders, including government transport agencies, private sector representatives, and civil society organizations. It argues that the PUVMP while promoting modernized transport infrastructure, is perceived to be phasing out the traditional jeepneys, a major cultural factor that serves the low-income population. Moreover, Gatarin (2023) heavily implies that financial crisis issues are attributed to political interferences and poorly planned out issuances to the public transportation sector. The paper draws on both transportation studies and sociology as it addresses the socio-economic effects, policy impacts, and rhetorical methods for the transition to modernization. The paper emphasizes the need for inclusivity and sustainability in transportation reforms. Despite limited references to past research, Gatarin’s (2023) paper offers valuable insights into the Filipino context and emphasizes inclusivity and sustainability in transport reforms. While both literature emphasize the relationship between the human (drivers), vehicles, and environmental system, there is still a need to involve the affected group of the Jeepney Modernization Program in solution-making and planning.

Addressing these gaps would address the concerns of the users of public transportation. Ignoring the concerns regarding fare issues or reduced accessibility to public transportation will adversely affect the revenue of Public Utility Vehicles (PUVs) (Kusuma, 2023). With this idea, further research is still needed to identify the major contributors to the inefficient accessibility of public transportation and financial crises to the affected population of the Public Utility Modernization Program (PUVMP). With proper accommodation for commuters, the income of several Jeepney drivers would remain high, affecting their financial capabilities (Kusuma, 2023). Identifying and mitigating potential disruptions regarding inaccessibility and financial crises to public transportation in the commuter’s perception would allow for proper planning of strategies to minimize inconvenience and allow a smoother transition to modernization (Dimalanta et al., 2023). This paper aims to analyze the impact of the Public Utility Vehicle Modernization Program (PUVMP) and assess students’ public perception and financial capability. Hence, considering the commuters’ perception of the shift to modernization will allow for efficient accessibility, better revenue, and a user-friendly transportation system.

This study aims to achieve the following objectives:

1. Determine the demographic profile of the commuting students regarding their:
 - a. Age
 - b. College program
 - c. Academic Institution



- d. Year Level
- e. Frequency of using jeepney
- f. General area of residence
- g. Daily allowance
- h. Expenses on commuting
2. Determine the perceptions of University Belt public and private school students in terms of:
 - a. Significance of Jeepney Usage
 - b. Jeepney modernization program policies
 - c. Fare increase
 - d. Fare affordability
3. Determine the correlation among Jeepney significance, Jeepney modernization program, Fare increase, and Fare affordability.
4. Determine if there are any statistical differences between students' perspectives in public and private schools within the University Belt.

METHODS

This study gathered insights from college students in public and private schools around the University Belt regarding the Jeepney Modernization Program (PUVMP). The researchers utilized a quantitative research design. Quantitative research uses numerical data and statistical analysis to understand the trends and generalizable patterns of insights within their sample population, measuring a respondent's attitudes, behaviors, and beliefs into categorical and generalizable results (Hair et al., 2015; Losby & Wetmore, 2012). Moreover, this study utilized a descriptive-correlational research design. This finds variances between variables without manipulating the study's variables and determining if there are any relationships with the study's variables (Aggarwal & Ranganathan, 2019; Neuman, 2021). The researchers utilized stratified random sampling as a dissemination technique.

Moreover, the researchers utilized online survey platforms with survey questions modified and came from studies by Gumasing (2021), Mendoza (2021), Ong et al. (2023), and Tiglaio et al. (2020). Furthermore, limitations by the researchers include that a quantitative approach may typically offer a finite number of response options and may not capture the full spectrum of opinions (Hair et al., 2015). To counter this, the researchers provided odd-numbered Likert Scales, allowing respondents to remain neutral. Adding more sentiment levels prevents respondents from congregating options that do not exactly describe their beliefs or attitudes, thus avoiding forced and biased responses (Croasmun & Ostrom, 2011). To attain insights from commuting college students, this type of research design accommodates the research's objectives.

The researchers imposed one set, forty-two (42) item questionnaire, multiple-choice, and close-ended questionnaires consisting of 5-point Likert Scale options that will be conducted using Google Forms and disseminated through social media platforms, namely Facebook and Messenger. The survey consisted of (5) sections: Section (I) gathers the demographic profile (name, age, program, year level, University/School, preferred mode of transportation, frequency of using jeepneys, purposes for using jeepneys, general area, daily allowance, and expenses on public transportation) of each college student, Section (II) tackled their views on the importance of jeepneys in their daily errands, Section (III) explored their opinions on whether recent Jeepney Modernization initiatives have positively or negatively impacted their daily commutes, Section (IV) tackled their level of awareness on potential fare increases associated with the program, Lastly, Section (V) tackled their financial capability regarding revised fare prices of Jeepney Modernization. This was distributed to a total of (40) commuting college students using stratified random sampling, with (10) participants from each of the following four universities: Pamantasan Ng Lungsod ng Maynila (PLM), and Unibersidad de Manila (UDM), public schools; Far Eastern University (FEU) and University of Santo Tomas (UST), private schools. To ensure data integrity, the researchers practiced confidentiality and anonymity by strictly abiding with the Data Privacy Act of 2012; this was done by including a Consent form at the beginning of the survey questionnaire, indicating the transparency of the research objectives and protection of gathered data (Foronda et al., 2023). Ultimately, all data came from the respondents, which are primary sources.

The quantitative data was collected through Google Sheets. It was summarized and analyzed using Jamovi Statistical Software. After summarizing each question the participants chose, the researchers applied visualization through figures and charts for better presentation and understanding of the given data. Once the data was summarized, the researchers utilized descriptive and



inferential analysis. A Descriptive Analysis identifies central tendencies, such as the mean and median, to understand the respondents' overall perceptions and measure the dispersion within the groups (Croasmun & Ostrom, 2011). Inferential statistics examines and compares the differences in the data (Guetterman, 2019). The researchers utilized a t-test method to determine existing variances between the data given by the respondents. A t-test analysis allowed the researchers to compare the means between the two groups and identify variability (Mishra et al., 2019). Additionally, the researchers conducted a correlational analysis to determine the relationships between the variables (Prematunga, 2012). Ultimately, the methods concluded larger perspectives through the results of data gathering and interpretation and created results that coincided with the research's objectives.

RESULTS AND DISCUSSION

This section presents the findings of a study investigating the impact of the Public Utility Vehicle Modernization Program (PUVMP) on commuting students within Manila, Philippines' University Belt area. The analysis employed quantitative methods on survey data collected from 40 college students representing each of the following four universities: Pamantasan Ng Lungsod ng Maynila (PLM) and Unibersidad de Manila (UDM), public schools; Far Eastern University (FEU) and University of Santo Tomas (UST), private schools. The aim is to analyze student perceptions regarding the importance of jeepneys for their commutes, their views on the program's policies, and potential fare increases.

Furthermore, this section explores the implications of the results through interpretation facilitated by a modified survey instrument. This instrument was accurately made by adapting existing literature from prominent scholars like Gumasing (2021), Mendoza (2021), Ong et al. (2023), and Tiglao et al. (2020) to align with the study's objectives. Ultimately, this section aims to contribute to a deeper understanding of the PUVMP's impact on commuting students and propose potential solutions to address any identified issues.

I. Demographic Profile

a. Age

Table 1.1 Frequency and Percentage Distribution of Socio-demographic: Age

Age	Frequency	Percentage
18 years old	1	2.2%
19 years old	17	37.8%
20 years old	16	35.6%
21 years old	9	20.0%
22 years old	2	4.4%
Total	45	100.0%

Table 1.1 shows the frequency and percentage distribution of socio-demographic age. Most of the respondents, 37.8%, are 19 years old, followed by 35.6% 20 years old, 20% 21-year-old respondents, 4.4% 22-year-old respondents, and lastly, there are 2.2% aged 18 years old.

b. College Program

Table 1.2 Frequency and Percentage Distribution of Socio-demographic: College Program

College Program	Frequency	Percentage
Accountancy	1	2.2%
Architecture	2	4.4%
Business Administration	1	2.2%
Business Economics	4	8.9%
Creative Writing	2	4.4%
Financial Management	3	6.7%
Fine Arts	1	2.2%
Hospitality Management	2	4.4%



Human Resource Management	2	4.4%
Human Resource Management	1	2.2%
IT	3	6.7%
Marine Transportation	1	2.2%
Marketing Management	1	2.2%
Nursing	10	22.2%
Physical Therapy	10	22.2%
Tourism	1	2.2%
Total	45	100.0%

Table 1.2 shows the frequency and percentage distribution of socio-demographic college programs. The respondents mostly consisted of Physical therapist students, with a 22.2% percentage, followed by Nursing students, with 22.2%. Only 2.2% of Fine Arts, Marine Transportation, Tourism, Marketing Management, Accountancy, and Business Administration students were there.

d. Educational Institution

Table 1.3 Frequency and Percentage Distribution of Socio-demographic: Academic Institution

Academic Institution	Frequency	Percentage
Far Eastern University (FEU)	11	24.4%
Pamantasan ng Lungsod ng Maynila (PLM)	12	26.7%
Universidad de Manila (UDM)	10	22.2%
University of Santo Tomas (UST)	12	26.7%
Total	45	100.0%

Table 1.3 shows the frequency and percentage distribution of socio-demographic academic institutions. 26.7% of respondents study in Pamantasan ng Lungsod ng Maynila (PLM), 26.7% are University of Santo Tomas students (UST), 24.4% are Far Eastern University respondents (FEU), and 22.2% are from Universidad de Manila (UDM).

e. Year Level

Table 1.4 Frequency and Percentage Distribution of Socio-demographic: Year Level

Year Level	Frequency	Percentage
1st year	4	8.9%
2nd year	36	80.0%
3rd year	3	6.7%
4th year	2	4.4%
Total	45	100.0%

Table 1.4 shows the frequency and percentage distribution of the socio-demographic year level of the respondents. Results show that 80% of the respondents are 2nd-year students, followed by 8.9% 1st-year students and 6.7% 3rd-year students. There are only 4.4% of 4th-year respondents.

f. Daily use of Jeepney

Table 1.5 Frequency and Percentage Distribution of Socio-demographic: Frequency of using Jeepney

Daily used of Jeepney	Frequency	Percentage
Never	2	4.4%
Rarely	7	15.6%
Sometimes	7	15.6%



Very Often	4	8.9%
Always	25	55.6%
Total	45	100.0%

Table 1.5 shows the frequency and percentage distribution of socio-demographic and daily use of jeepneys. Most of the respondents, 55.6%, always use a jeepney, 15.6% use a jeepney sometimes, and 15.6% answer rarely. There are 8.9% who use jeepneys very often, while 4.4% have never used a jeepney.

g. General area of residence

Table 1.6 Frequency and Percentage Distribution of Socio-demographic: General Area of residence

General Area of residence	Frequency	Percentage
I live outside of Metro Manila	5	11.1%
I live within Metro Manila	40	88.9%
Total	45	100.0%

Table 1.6 shows the frequency and percentage distribution of respondents' socio-demographic area of residence. Most of the respondents, or 88.9%, live within Metro Manila, and 11.1% live outside Metro Manila.

h. Daily Allowance

Table 1.7 Frequency and Percentage Distribution of Socio-demographic: Daily Allowance

Daily Allowance	Frequency	Percentage
Less than Php 300	21	46.7%
Php 300 to Php 499	13	28.9%
Php 500 to Php 1,000	6	13.3%
More than Php 1,000	5	11.1%
Total	45	100.0%

Table 1.7 shows the frequency and percentage distribution of respondents' socio-demographic daily allowances. Most of the respondents, 46.7%, have less than 300 pesos allowance per day. 28.9% have an allowance between 300 and 499 pesos. 13.3% have an allowance between 500 and 1000 pesos, while 11.1% have more than 1000 pesos allowance.

i. Expense on Daily Commute

Table 1.8 Frequency and Percentage Distribution of Socio-demographic: Expenses on Commuting

Expenses on Commuting	Frequency	Percentage
Less than Php 300	41	91.1%
Php 300 to Php 499	4	8.9%
Total	45	100.0%

Table 1.8 shows the frequency and percentage distribution of socio-demographic expenses for commuting. Most respondents, 91.1%, have less than 300 pesos in travel expenses, while 8.9% have between 300 and 499 pesos in travel expenses.

II. Level of perception in terms of the Significance of Jeepney usage

Table 2.1 Level of Perception in terms of Significance of Jeepney usage

Significance of Jeepney usage	Mean	SD	Interpretation	Rank
1. For my daily activities, I use Jeepneys as my primary means of transport.	4.09	1.38	Agree	8



2. For students like me, Jeepneys are an affordable and convenient mode of transportation.	4.56	1.01	Strongly Agree	7
3. I appreciate the cultural significance and historical value of jeepneys.	4.76	0.71	Strongly Agree	2
4. I think Jeepneys currently need further improvements on security and comfort.	4.58	0.84	Strongly Agree	6
5. I believe jeepneys play an important role in the public transportation system.	4.71	0.87	Strongly Agree	4
6. I believe many Filipinos rely on jeepneys for affordable and easy travel.	4.69	0.87	Strongly Agree	5
7. I believe Jeepneys are significant in the livelihood of many drivers, commuters, and operators.	4.80	0.76	Strongly Agree	1
8. I believe that it's important to both preserve Jeepney culture and their structural integrity.	4.73	0.86	Strongly Agree	3
Grand Mean	4.74		Strongly Agree	

Table 2.1 shows the students' perception of the significance of jeepneys. The students strongly agreed that jeepneys are significant to the livelihood of several of their users, have a strong appreciation for the cultural and historical significance of jeepneys, and strongly agree on the idea of preserving their structural integrity. This proves that the students are aware of modernization in the livelihood of its users. The results support the researcher's claim that jeepneys have a significance to livelihood, cultural significance, and preservation of the structural integrity of jeepneys (Cadiz, 2022). Furthermore, results have shown that jeepneys are an affordable and convenient mode of transportation for students. This implies that most commuters and students rely heavily on jeepneys (Giacalone, 2022). Since jeepneys are proven to be an affordable and convenient mode of transportation, they remain a convenient choice for students. They are making jeepneys a viable option from getting to point A to B at an affordable price despite rising expenses in education. Additionally, students see room for improvement in jeepney vehicles. This indicates that jeepneys are convenient for students and have a cultural and significant meaning to them.

b. Jeepney Modernization Program policies

Table 2.2 Level of Perception in Terms of Jeepney Modernization Program policies

Jeepney Modernization Program Policies	Mean	SD	Interpretation	Rank
1. I am aware of the government's plan to modernize jeepneys.	4.58	0.97	Strongly Agree	2
2. I believe that jeepney modernization will affect my daily commute.	4.20	1.31	Agree	3
3. The recent Jeepney Modernization implementations have improved my accessibility to public transportation.	3.02	1.08	Neutral	8
4. The recent Jeepney Modernization implementations limited my access to public transportation.	3.31	1.02	Neutral	7
5. I believe that there are proper infrastructures (visible Jeepney stops, safe access to Modernized Jeepneys, etc.) to accommodate Modernized Jeepneys.	3.42	1.27	Agree	6
6. I believe that Modernized Jeepneys will be built to make me feel safer and comfortable.	3.64	1.05	Agree	4
7. I believe modernizing jeepneys is a good step in improving public transportation.	3.62	1.05	Agree	5
8. However, I am concerned about how it might affect the livelihood of several jeepney drivers and operators.	4.69	0.95	Strongly Agree	1
Grand Mean	3.87		Agree	



Table 2.2 shows respondents' perceptions of the jeepney modernization program. Respondents strongly agree that they are concerned with the consequences on the livelihood of several jeepney drivers and operators; they are aware of the program and how it will affect their daily commute. This supports the researcher's claim that modernization will affect several jeepney users' livelihood and commute (Yu, 2024). Furthermore, this proves that students are aware of the changes and effects of the program. This indicates that students worry about the consequences for themselves and the drivers of jeepneys. The students are knowledgeable and informed on how modernization will impact their routes and transportation. This includes structural changes and economic changes to the availability of jeepneys (Kusuma, 2023).

Additionally, the respondents agreed when asked whether the program will provide proper infrastructure for the modern jeepneys, whether the modern jeeps make them feel much safer and more comfortable, and if modern jeepneys will improve public transportation. This indicates that while they are concerned about the livelihood of the drivers, the students agreed that it is a good step in improving public transportation, making it safer for commuters. Furthermore, respondents were neutral when asked whether the program has made it harder for them to get around by jeepney and whether it has improved their access to public transportation. Ultimately, while students acknowledge the considerations and benefits of modernized jeepneys, they express their concerns about their possible impact on themselves and the drivers.

c. Fare Increase

Table 2.3 Level of Perception in Terms of Fare Increase

Fare Increase	Mean	SD	Interpretation	Rank
1. I am aware that Jeepney Modernization will cause an increase in minimum fares.	4.58	0.99	Strongly Agree	1
2. I have noticed an increase in jeepney fares since the local implementation of the modernization program.	4.38	1.03	Strongly Agree	2
3. I believe that the fare increase is justified due to the benefits offered by the jeepney modernization.	3.71	1.08	Agree	3
4. I think the fare increase fairly represents the cost of transitioning to modern jeepneys.	3.69	1.04	Agree	4
5. I understand that raising the fares is necessary to implement the jeepney modernization	3.71	0.97	Agree	3
6. Overall, I believe the benefits of the jeepney modernization program for students like me exceed the possible disadvantages.	3.36	1.11	Agree	5
Grand Mean	3.87		Agree	

Table 2.3 indicates that students' perceptions of fare have increased. Respondents strongly agree that they know the general fare increase in demand for jeepney modernization, including the fare increase in their area. Hence, this supports the researcher's claim that jeepney modernization will cause an increase in minimum fare for jeepney users (Chi, 2023). This proves that while students know about this fare increase, they understand that the implications of the increase are attributed to improving the structure of jeepneys. Additionally, they agree that the modernization of jeepneys outweighs the disadvantages; this implies that students agree that fare increase is justifiable for implementing jeepney modernization. Hence, as students agree on this matter, they recognize that jeepney modernization relies heavily on the profits provided by the commuters.

d. Fare Affordability

Table 2.4 Level of Perception in Terms of Fare Affordability

Fare Affordability	Mean	SD	Interpretation	Rank
1. Due to my limited financial capacity, I am worried about the fare increase.	3.87	1.18	Agree	3



2. I believe that the minimum fare of a modern jeepney is budget-friendly.	3.36	1.13	Agree	6
3. The government should provide a subsidy to students to make up with the fare increase.	4.20	0.94	Agree	1
4. I consider using other means of transportation when the fare increases.	3.36	1.25	Neutral	6
5. I intend to minimize/cut-off my other expenses to cover the additional fare.	3.56	1.22	Agree	5
6. I can adjust my budget to cover the fare increase of modern jeepney.	3.67	1.11	Agree	4
7. I consider increasing my budget/allowance to accommodate the fare increase.	3.56	1.24	Agree	5
8. I encourage creating an alternative solution to improve the transportation/jeepney system without compromising its affordability.	4.09	1.18	Agree	2
Grand Mean	3.77		Agree	

Table 2.4 indicates students' perceptions of fare affordability. Students agree that they are concerned about the fare increase, that the minimum fare of modern jeeps is not affordable, that the government should provide subsidies, that they will reduce other expenses to make room for the additional fare, that they will consider increasing their allowance to accommodate the fare increase, and that they encourage the creation of alternative solutions to improve transportation without compromising affordability. This aligns with the study of Relativo (2024), wherein students will have to adjust their budgets to adhere to the fare increases resulting from jeepney modernization. Hence, this imposes risks to the budget and allowances of students as they will have to adjust their costs to keep up with the financial demands of jeepney modernization (Chi, 2023). However, when asked if they considered alternative modes of transportation, the students generally replied neutrally.

III. Correlation

Table 3.1 Correlation Result between Significance of Jeepney usage and Jeepney Modernization Program policies

Variables	N	r Value	Interpretation	p-value	Decision	Remarks
Significance of Jeepney usage	45	0.689	Strong Positive	<0.001	Reject H _o	Significant
Jeepney Modernization Program Policies						

Table 3.1 shows the relationship between the Significance of Jeepney and the Jeepney Modernization Program. The p-value (<0.001) is less than the significance level (0.05). With that, the researchers reject the null hypothesis. The statistical conclusion is that there is a strong positive significant relationship between the Significance of Jeepney and the Jeepney Modernization Program. These findings align with previous studies on how convenient and affordable the students may perceive jeepneys to be; there is an influential relationship between how the students, regardless of whether they come from a public or private university, will entail once jeepney modernization policies are implemented (Cadiz, 2022; Kusuma, 2023). The result shows a direct relationship between the two variables and a moderate correlation. This means that there is a moderate likelihood that the significance of the jeepney is associated with the Jeepney Modernization Program.



Table 3.2 Correlation Result between Significance of Jeepney usage and Fare Increase

Variables	N	r Value	Interpretation	p-value	Decision	Remarks
Significance of Jeepney Usage Fare Increase	45	0.462	Moderate Positive	0.002	Reject H ₀	Significant

Table 3.2 shows the relationship between the Significance of Jeepneys and Fare Increase. The p-value (0.002) is less than the significance level (0.05). With that, the researchers reject the null hypothesis. The statistical conclusion is that there is a significant relationship between the Significance of Jeepneys and the Fare Increase. This indicates a strong positive association between the Significance of Jeepney and Fare Increase. The result shows that there is a direct relationship between the two variables but also shows that there is a moderate correlation. This means there is a moderate likelihood that the Significance of Jeepney is associated with a Fare Increase. These findings align with studies by Chi (2023) and Relativo (2024), suggesting that the jeepney modernization program may lead to fare increases, which could concern students. This implies that while jeepneys remain an affordable and convenient option for the students, there will be an increase in the fare for the students upon implementing jeepney modernization.

Table 3.3 Correlation Result between Significance of Jeepney usage and Fare Affordability

Variables	N	r Value	Interpretation	p-value	Decision	Remarks
Significance of Jeepney usage Fare Affordability	45	0.453	Moderate Positive	0.002	Reject H ₀	Significant

Table 3.3 shows the relationship between the Significance of Jeepneys and Fare Affordability. The p-value (0.002) is less than the significance level (0.05). With that, the researchers reject the null hypothesis. The statistical conclusion is that there is a significant relationship between the Significance of Jeepneys and Fare Affordability. Therefore, sufficient evidence supports the researcher's claims that there is a significant relationship between the significance of Jeepney and fare affordability. This supports the researchers' claim that there is a strong positive association between the Significance of Jeepney and fair affordability (Relativo, 2024).

Furthermore, this implies that the convenience and affordability of students are heavily reliant on jeepneys. Heavily implying that the students, whether coming from private or public schools, continue using jeepneys as it is seen to be a convenient and affordable mode of transportation. The result shows a direct relationship between the two variables and a moderate correlation. This means there is a moderate likelihood that the Significance of Jeepney is associated with Fare Affordability.

Table 3.4 Correlation Result between Jeepney Modernization Program policies and Fare Increase

Variables	N	r Value	Interpretation	p-value	Decision	Remarks
Jeepney Modernization Program Policies Fare Increase	45	0.524	Strong Positive	<0.001	Reject H ₀	Significant



Table 3.4 shows the relationship between the Jeepney Modernization Program and Fare Increase. The p-value (<0.001) is less than the significance level (0.05). With that, the researchers reject the null hypothesis. The statistical conclusion is that there is a significant relationship between the Jeepney Modernization Program and Fare Increase. This supports the researchers' claim that there is a strong positive association between the Jeepney Modernization Program and Fare Increase (Lopez, 2021). This heavily implies that the Jeepney Modernization Policies will impose fare increases to the minimum wage of the students. As the jeepney modernization program prevails, it will likely result in fare increases. The result shows a direct relationship between the two variables and a strong correlation. This means it is likely that the Jeep Modernization Program is associated with Fare Increase.

Table 3.5 Correlation Result between Jeepney Modernization Program policies and Fare Affordability

Variables	N	r Value	Interpretation	p-value	Decision	Remarks
Jeepney Modernization Program Policies Fare Affordability	45	0.545	Strong Positive	<0.001	Reject H ₀	Significant

Table 3.5 shows the relationship between the Jeepney Modernization Program and Fare Affordability. The p-value (<0.001) is less than the significance level (0.05). With that, the researchers reject the null hypothesis. The statistical conclusion is that there is a significant relationship between the Jeepney Modernization Program and Fare Affordability. This data supports the researchers' claims that there is a strong positive association between the Jeepney Modernization Program and Fare Affordability (Cadiz, 2021). This indicates that the implementation of Jeepney Modernization will significantly influence the fare affordability of both public and private universities, as it shows that they are strongly related to each other. This means that there is a high likelihood that the Jeepney Modernization Program is associated with Fare Affordability.

Table 3.6 Correlation Result between Fare Increase and Fare Affordability

Variables	N	r Value	Interpretation	p-value	Decision	Remarks
Fare Increase Fare Affordability	45	0.365	Moderate Positive	0.015	Reject H ₀	Significant

Table 3.6 shows the relationship between Fare Increased and Fare Affordability. The p-value (0.015) is less than the significance level (0.05). With that, the researchers reject the null hypothesis. The statistical conclusion is that there is a significant relationship between Fare Increased and Fare Affordability. Therefore, enough evidence supports the researcher's claims that there is a significant relationship between Fare Increased and Fare Affordability. The result validates the researcher's claim that there is an association between Fare Increase and Fare Affordability (Relativo, 2024). This implies that the fare increase due to modernization significantly impacts the fare affordability of the students, which means that while the minimum fare increases, the student's capability will have to increase to adhere to the financial demands of jeepney modernization.

IV. Comparison

Table 4.1. Comparison Between the perspectives of students in public and private schools in terms of the Significance of Jeepney usage

Indicator	Type of School	Mean	p-value	Decision	Remarks
Significance of Jeepney usage	Public	4.90	0.670	Failed to Reject H ₀	Not Significant
	Private	4.61			

*P-value: p-value<0.05 (Significant); p-value> 0.05 (not significant)



Table 4.1 shows the result of comparing the perspectives of students in public and private schools in terms of the Significance of Jeepneys. The p-value was (0.670). Because the p-value (0.670) is greater than the significance level (0.05), the researchers failed to reject the null hypothesis, implying that there are no significant differences between students' perspectives in public and private schools regarding Significance of Jeepney. Regardless of being in a private or public school, this data supports the claim that jeepneys are still perceived as crucial in the Philippine public transport system and the convenience of several students, implying the usage by most commuters (Kusuma, 2023).

Table 4.2 Comparison Between the perspectives of students in public and private schools in terms of Jeepney Modernization Program policies

Indicator	Type of School	Mean	p-value	Decision	Remarks
Jeepney Modernization Program Policies	Public	4.19	0.230	Failed to Reject Ho	Not Significant
	Private	3.74			

*P-value: $p\text{-value} < 0.05$ (Significant); $p\text{-value} > 0.05$ (not significant)

Table 4.2 compares the perspectives of public and private school students in terms of the Jeepney Modernization Program. The p-value was 0.230. Because the p-value (0.230) is greater than the significance level (0.05), the researchers failed to reject the null hypothesis, implying that there are no significant differences between the perspectives of public and private school students regarding the Jeepney Modernization Program. This heavily implies that both public and private perceptions of students regarding the Jeepney Modernization Program are similar, implying that the policies will affect the livelihood of drivers and the commute of the students. This supports the claims that implementing Jeepney Modernization may affect the daily commute of students (Cadiz, 2022; Kusuma, 2023).

Table 4.3 Comparison Between the perspectives of Students in public and private schools in Terms of Fare Increase

Indicator	Type of School	Mean	p-value	Decision	Remarks
Fare Increase	Public	3.76	0.098	Failed to Reject Ho	Not Significant
	Private	4.22			

*P-value: $p\text{-value} < 0.05$ (Significant); $p\text{-value} > 0.05$ (not significant)

Table 4.3 shows the result of comparing the perspectives of students in public and private schools in terms of Increase. The p-value was 0.098. Hence, because the p-value (0.098) is greater than the significance level (0.05), the researchers failed to reject the null hypothesis, implying that there are no significant differences between the perspectives of students in public and private schools regarding Fare Increase. This indicates that regardless of whether the students reside in public or private schools, they similarly face the fare increase in public transportation. While they are aware of its necessary fare increase to support modernization, they are similarly concerned with its potential impacts on the public. This supports Relativo's (2024) claim that modernization will impose a risk to the financial costs of its users and the drivers, as commuters, particularly students, have expressed their concerns to themselves and the drivers.

Table 4.4 Comparison Between the perspectives of students in public and private schools in terms of Fare Affordability

Indicator	Type of School	Mean	p-value	Decision	Remarks
Fare Affordability	Public	3.81	0.931	Failed to Reject Ho	Not Significant
	Private	3.74			

*P-value: $p\text{-value} < 0.05$ (Significant); $p\text{-value} > 0.05$ (not significant)

Table 4.4 shows the results of a comparison of the perspectives of students in public and private schools regarding fare affordability. The p-value was 0.931. Because the p-value (0.931) is greater than the significance level (0.05), the researchers failed to reject the null hypothesis, implying that there are no significant differences between the perspectives of students in public and



private schools regarding Fare Affordability. As previously established in the research by Giacalone (2022), both students from private and public schools are similarly heavily reliant on jeepneys as an affordable and convenient mode of transportation. Since there are no significant differences in the perspectives of students from public and private schools regarding Fare Affordability, it suggests that students in both types of schools face similar challenges when affording transportation fares (Chi, 2023).

CONCLUSION

Results have shown that students' perspectives in both public and private universities are alike regarding Jeepney Perception, Jeepney Modernization, Fare Increase, and Fare affordability. This implies that both students from public and private universities have similar perspectives regardless of the variation in academic institutions. Furthermore, both public and private universities have shown cultural appreciation for jeepneys and want to see improvement; however, due to modernization, the students are concerned with their livelihood and the overall impact of modernization on their commutes. This implies that regardless of whether the student is from a public or private university, they are similarly concerned with jeepney modernization affecting their commute. Additionally, students from both public and private universities understood the necessity of modernized jeepneys. However, they also noticed the fare growth accompanying modernization; results have shown that the students were concerned with raising their allowances and reducing their expenses to accommodate the minimum fare of modernized jeepneys. Overall, results have shown that responses show a relationship with each other. This proves that students' perspectives in public or private universities regarding Jeepney Perception, Jeepney Modernization, Fare Increase, and Fare affordability have a significant relationship, implying that their perspectives are indifferent to every category. This research provided additional insight into the affected individuals of Jeepney Modernization. This contributes to the commuter's perception of affordability, potentially allowing for the minimization of inconvenience and a smoother transition to modernization (Dimalanta et al., 2023).

RECOMMENDATIONS

Furthermore, this research has only tackled the perception of students. Further research may be needed to attain the scope of commuters, particularly the working class, regarding their perceptions of the Jeepney Modernization issuance. This allows the researchers to attain the full scope of the perceptions that make up most Jeepney commuters. Additionally, this research may aid further research for possible strategies and implications in Jeepney Modernization issuances. For the convenience of future researchers interested in utilizing our questionnaire, we encourage its use and availability for academic purposes. Please refer to this section to access our questionnaire (https://docs.google.com/document/d/e/2PACX-1vRBPmSdGZRPYK71qWUeK2ETbQ_qWX44SxqVrIXDGw9TisaDVBcodJQQ4Laz-pwkUw/pub).

ACKNOWLEDGMENT

We want to express our deepest gratitude to all the authors who contributed to the fulfillment of this research and whose efforts have been instrumental in completing this study. We are grateful for the support and collaboration of our fellow researchers, without whom this work would not have been possible. Also, we would like to thank our professor, Mc Rollyn Vallespin, for his contributions to offering his expertise and willingness to offer advice for the research improvements.

Lastly, the researchers would also like to thank Ms. Lynn Danielle M. Lasco for taking the time out of her work to contribute to the writing of this research. We are deeply grateful for your generosity, expertise, and willingness to lend a helping hand whenever needed. Overall, we extend our heartfelt thanks to all individuals who contributed in various capacities to the success of this research project; your support and collaboration have been truly appreciated.

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Cite this Article: Agpaoa, Brickette Faye C., Gallevo, Helena Maria U., Lasco, Rohann Sherry M., Roma, Pretty Angel G., Tan, Blessie Y., Vallespin, Mc Rollyn D. (2024). Steering Towards Sustainable Mobility: A Holistic Examination of Public Utility Vehicle Modernization Program Impact on Commuting Public and Private School Students in the University Belt, Manila, Philippines. International Journal of Current Science Research and Review, 7(5), 2526-2540