

Examining the Potential Significance of Industry Consolidation and Fleet Management in Implementing the DOTr's PUV Modernization Program: A Case Study of 1TEAM

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Abstract: This study examined the potential significance of requiring industry consolidation and fleet management in the successful implementation of the PUV Modernization Program by the Department of Transportation (DOTr) by presenting a case study of 1-Transport Equipment Aggregator and Management Inc. (1-TEAM), a fleet management company. Surveys and key informant interviews were conducted to carry out the study. Results revealed that industry consolidation and fleet management are both significant components of the DOTr PUV Modernization Program. Moreover, the financial viability of modernizing the current jeepneys would greatly depend on efficient management and operations of the brand new PUJs. Non-financial incentives and regulatory backstops may also help the government convince jeepney operators to participate in the modernization program.

Keywords: PUV Modernization, Fleet Management, Air Pollution, Road Safety, Jeepneys

1. INTRODUCTION

1.1 Mobile Sources of Air Pollution in the Philippines

The Environmental Management Bureau (EMB) of the Department of Environment and Natural Resources (DENR) in its 2009 Emissions Inventory identified the specific mobile sources of air pollution as diesel and gasoline-fed vehicles such as cars, utility vehicles, buses, trucks, and motorcycles.

In the same inventory, the emissions of the following pollutants were covered: particulate matter (PM), sulfur oxides (SO_x), oxides of nitrogen (NO_x), and volatile organic compounds (VOC), and carbon monoxide (CO). Results revealed that in 2009, 86% of VOC emissions, 79% of CO emissions, 59% of NO_x emissions, 17% of PM emissions, and 2% SO_x emissions all came from mobile sources.

Meanwhile, among all mobile sources of air pollution, Public Utility Jeepneys (PUJs) have been pinpointed as a major source, especially in Metro Manila (Blacksmith Institute and Clean Air Asia, 2016). In fact, PUJs in the said region are accounted for emitting 48.05% of particulate matter, 27% of SO_x, and 21% of NO_x.

A worse PUJ – air pollution correlation was observed in other PH cities. In an emissions inventory conducted by GIZ in Iloilo City, it was estimated that PUJs contributed 80% of the ultra-fine particulates, 18% of CO, 58% of NO_x, and 54% of SO_x from the total mobile sources of air pollution. Meanwhile, in a separate emissions inventory in Cagayan de

Oro City, it was revealed that more than half of the particulate matter emissions and a third of the CO and NOx emissions from mobile sources are from PUJs (GIZ, 2015).

This air pollution contribution of jeepneys is primarily attributed to the fact that of all the Public Utility Vehicles (PUVs) in the Philippines, only PUJs do not have a mandatory age limit, even though they dominate the public transportation in the country. Based from the LTFRB data in 2012, out of the 234,739 PUJs, 87% or 205,000 units are more than 15 years old this 2018. Table 1 shows a summary of the age of all Jeepneys in the Philippines.

Table 1. Vehicle Age of Public Utility Jeepneys in the Philippines

Year Model	Number of Units	Percentage
No Record	2,427	1.02%
Pre - 1976	7,974	3.34%
1976 - 1980	9,108	3.82%
1981 - 1985	10,973	4.60%
1986 - 1990	20,895	8.76%
1991 - 1995	59,873	25.11%
1996 - 2000	66,606	27.93%
2001 - 2005	40,410	16.95%
2006 - 2016	20,206	8.47%
TOTAL	238,472	100.00%

Note that vehicle age in the country is determined by the year the vehicle is registered with the LTO, not the actual age of the vehicle's major components such as the engine, chassis, etc. This means that a vehicle may be technically considered 15 years old in the country, but its engine (in the case of surplus engines) is a lot older. For other PUVs, the following mandatory age limit is being implemented as promulgated in the DOTr Department Orders 2017 – 009, 2013 – 006, 2012 – 020, 2004 – 012, 2002 – 030, and the LTFRB Memorandum Circular No. 2013 – 007.:

- Buses and Mini-buses: 15 years
- UV Express: 15 years
- Taxi (unleaded/diesel): 13 years
- Taxi (LPG): 15 years
- School Service: 15 years; and
- Trucks: 15 years

Moreover, majority of these PUJs run on surplus and second-hand Japanese engines such as the Isuzu C190, C240, and Mitsubishi 4DR5 which were built in the 1980s while the newer versions have Isuzu 4BC2, 4BA1, and 4BE1 engines to make way for bigger passenger capacities.

Other factors which contribute to the air pollution caused by PUJs include poor maintenance practices, tampering with engine system, poor vehicle design and production processes, and poor driving behavior (Blacksmith Institute and Clean Air Asia, 2016).

Despite these characteristics of the PUJ industry, PUJs service around 74 million kilometers of passenger kilometer travelled in Metro Manila annually. Further, based on the JICA MUCEP Study in 2015, out of the 21.5 million trips per day in Metro Manila, 70% or around 15 million trips are by public transport. Out of these 15 million trips, around 7 million are by PUJs.

1.2 The Public Utility Vehicle Modernization Program

With the recent launching of the DOTr PUV Modernization Program through Department Order 2017 – 011 or the Omnibus Franchising Guidelines and the upcoming release of several Memorandum Circulars by the LTFRB, a significant amount of air pollution, specifically those coming from mobile sources, are targeted to be eliminated.

However, since the launching of the said program in June 2017, several transport groups have already signified their opposition in its implementation. A major concern by these groups and coalitions is the financial aspect or viability of the modernization program. For instance, the Pinagkaisang Samahan ng mga Tsuper at Operator Nationwide (PISTON) has been very vocal in tagging the program as anti-poor. According to the group, the program would only result in drivers and operators being buried in debt due to the high costs of the brand new PUJs.

Meanwhile, the DOTr reiterated that the PUV Modernization Program is not limited in modernizing the current PUV fleet in the country, but rather a transformational program that aims to modernize the whole industry. Moreover, the department laid out ten (10) components for the implementation of the program, namely: (1) regulatory reform, (2) LGU capacity building, (3) route rationalization, (4) fleet modernization, (5) industry consolidation, (6) financing, (7) vehicle useful life, (8) stakeholder support mechanism, (9) initial implementation, and (10) communications.

Further, the DOTr highlighted that under the fifth component, industry consolidation, the modernization of the current PUVs is expected to be financially viable.

1.3 Industry Consolidation and Fleet management

The DOTr and the Land Transportation Franchising and Regulatory Board (LTFRB) recognize that that modernizing the Philippine jeepneys is indeed not doable nor financially viable under the current operation set-up where majority of the PUJ industry players operate under the “one franchise – one operator – one unit” scenario. Table 2 shows the LTFRB data on the number of valid jeepney franchises and the corresponding number of jeepney units as of 2017.

Table 2. LTFRB Data on PUJ Franchise and Units, per Region (2017)

Region	Public Utility Jeepneys	
	Number of Valid Franchise	Jeepney Units
Central Office	8,051	9,908
NCR	36,117	45,863
I	7,258	8,001
II	4,324	4,369
III	20,126	23,366
IV	28,662	30,959
V	5,072	5,462
VI	11,726	12,164
VII	10,158	11,285
VIII	1,490	1,588
IX	2,336	2,451
X	6,381	8,371

XI	4,918	5,456
XII	2,463	2,951
CAR	5,068	5,228
CARAGA	2,233	2,241
GRAND TOTAL	156,383	179,663

The difference between the 2012 LTFRB data previously mentioned (234,739 PUJs) and the 2017 data translates to jeepney units which fall under any of the following: 1) unregistered but still operate; 2) unregistered because such units are non-operational due to old age; 3) unregistered because their routes were abandoned due to low profit, among other reasons; and 4) unregistered as PUJs because the units are now being used as private vehicles.

Further, based on the data presented in table 2, for every PUJ franchise issued by the LTFRB, there are around 1.149 PUJ units. The franchise to unit ratio is close to 1:1 which proves the current one franchise – one operator – one unit setup of the industry.

This industry setup results in operational inefficiency due to on-street competition and disorganized dispatching / the lack of a dispatching system. Jeepney drivers tend to compete for passengers to maximize their profit. Palmiano (2003) noted that this competition in PUJ operations explains the “aggressive behavior” of jeepney drivers when on the road.

In addition, Blacksmith Institute and Clean Air Asia (2016) cited this nature of PUJ operations where there is “unrestricted picking up and dropping off of passengers and high competition among themselves” as a contributor to traffic congestion.

With these current operational characteristics of the jeepney industry, the fifth component of the modernization program - industry consolidation, it is envisioned that smaller transport industry players will be strategically merged to form cooperatives or corporations to facilitate the successful implementation of the program.

Industry consolidation would entail requiring individual franchise holders to either join or form legal entities such as those mentioned above, with assistance from the DOTr and its attached agencies such as the Office for Transport Cooperatives (OTC). These legal entities are expected to own, manage, and operate the modernized fleet in an organized manner, or simply be in charge of fleet management.

The transportation department has also repeatedly highlighted that with a proper industry consolidation and fleet management in each route, the following benefits are expected to be achieved:

- maximized revenue while keeping maintenance costs low;
- spread of capital, operations, and maintenance expenses
- operational efficiency by organized dispatching system and fleet management system
- access to more discounts in fuel and spare parts
- access to common garage/depot

1.4 Objectives of the Study

This study focused on examining the potential significance of industry consolidation and fleet management in the successful implementation of the DOTr PUV Modernization Program. Specifically, the study had the following objectives:

- To evaluate the financial viability of modernizing the jeepneys under a consolidated setup with fleet management.
- To compare the before and after modernization scenario of 1TEAM-managed jeepneys in terms of operator income, maintenance expenses, driver income, and operational

expenses.

- To identify measures (fiscal and non-fiscal) which may be adopted by the government to encourage jeepney operators to voluntarily modernize their jeepneys.

1.5 Limitations of the Study

The data gathered and utilized in this study was limited to the results of the survey and interviews conducted with the operators, the president, and the public relations officer of 1TEAM.

Due to time constraints, the researchers were not able to conduct separate surveys and interviews with the drivers of 1TEAM. Hence, the results presented in this paper may not necessarily hold true to all the drivers employed by the transport group.

Lastly, human bias and subjectivity of the operators and other key informants during the interviews and surveys were likewise classified as a limitation.

2. METHODOLOGY

A case study was conducted on 1-Transport Equipment Aggregator and Management Inc. (1TEAM), a transport management corporation in the Philippines with prior experience in modernizing their jeepneys by replacing their old units with brand new ones. Surveys and key informant interviews were conducted with all the operators of the modernized fleet of the group. The following data were gathered:

- daily gross income before and after they modernized their jeepneys;
- monthly maintenance expenses before and after they modernized their jeepneys;
- daily operational expenses before and after they modernized their jeepneys;
- down payment or equity requirement for the purchase of the replacement (brand new) jeepneys;
- daily and monthly amortization for the replacement (brand new) jeepneys; and
- reasonable subsidy/incentive/support needed by the operators so they can afford the purchase of a new PUJ unit.

Then, online and phone interviews with the president and the public relations officer of 1TEAM were likewise conducted to validate and supplement the results of the surveys and interviews with the operators. Data on the average income of drivers and operational expenses before they modernized their jeepneys were also discussed during this stage. Descriptive statistics was then used to present the survey and interview results.

3. RESULTS AND DISCUSSIONS

3.1 Background of 1TEAM Operations

1TEAM has been operating with modernized PUJs since 2014. Currently, they manage 30 brand new Euro 2 jeepneys plying in 5 routes within Metro Manila. Table 3 shows a summary of the said routes.

Table 3. Jeepney Routes, Route Length, and Number of Units Under 1TEAM

Route	Route Length	Number of Units
Cubao – Lagro via Kalayaan	18.96 km	10

Cubao – Parang Marikina via Aurora Blvd.	7.27 km	2
SSS Village – Stop & Shop via Aurora Blvd.	16.54 km	2
Parang – Stop & Shop via Aurora Blvd.	16.17 km	15
Cubao – Silangan (San Mateo) via Aurora Blvd.	14.03 km	1
Total Number of Modernized Jeepneys		30

Twenty operators, who all signed management contracts with 1TEAM, own these 30 jeepney units. All these operators participated in the surveys. Four of them own 3 units each, two operators have 2 units each, while the remaining 14 operators have 1 jeepney each. Table 4 is a summary of the demographic background of these operators.

Table 4. Demographic Background of Operators Under 1TEAM

Demographic Factor	Summary of Responses
Civil Status	All married
Average Age	57 years old
Gender	12 males and 8 females
Educational Attainment	13 are college graduates, 5 are high school graduates, 1 graduated from a technical/ vocational school, and 1 has a Master's degree
Employment Details	6 are business owners, 9 are full time operators, 2 are private sector employees (one messenger and the other one is a private secretary), 1 operator is a police officer, another one is a retired employee, and the remaining 1 is an OFW

3.2 Financial Characteristics of the Jeepney Routes Before Modernization

In terms of the financial aspect of each route, the Cubao – Lagro via Kalayaan route yielded the least boundary per day received by the operators before they modernized their jeepneys. Meanwhile, the remaining 4 routes charge higher boundary for the PUJ owners from the same timeline. Table 5 shows the average boundary per day and per month, average monthly maintenance expenses, and the average monthly net income spent or received by the jeepney operators with their old PUJ units.

Table 5. Financial Characteristics of Jeepney Operations Before Modernization (for the Operators)

Route	Daily Boundary	Monthly Boundary	Monthly Maintenance Expenses	Monthly Net Income
Cubao – Lagro via Kalayaan	₱800.00 to ₱880.00	₱16,000.00 to ₱17,600.00	₱12,950.00	₱3,050.00 to ₱4,650.00
Cubao – Parang Marikina via Aurora Blvd.	₱935.30 to ₱1,125.00	₱18,706.00 to ₱22,500.00	₱15,800.00	₱2,906.00 to ₱6,700.00
SSS Village – Stop & Shop via Aurora Blvd.				
Parang – Stop & Shop via Aurora Blvd.				
Cubao – Silangan (San Mateo) via Aurora Blvd.				

As shown in table 5, operators from the Cubao – Lagro route received around ₱800.00 to ₱880.00 every day or ₱16,000.00 to ₱17,600.00 on a monthly basis when they still had their old jeepneys. Moreover, around ₱12,950 was spent monthly by the same operators for the tires, oil, brake, labor, lubricants, battery, etc. per PUJ unit. The daily operational expenses for fuel, terminal fees, parking fees, etc. was not factored in since under the boundary system, these expenses are shouldered by the driver.

All in all, these jeepney operators receive a net income of around ₱3,050.00 to ₱4,650.00 per month, assuming that their PUJs operate for 20 days. This is a conservative estimate compared with the reports from 1TEAM that the old jeepneys operate for 14 to 16 days per month on the average.

Meanwhile, the other 4 routes, which are more profitable, yielded a net income of ₱2,906.00 to ₱ 6,700.00 under the same assumptions. This equates to an income of around ₱935.30 to ₱1,125.00 daily or ₱18,706.00 to ₱ 22,500.00 monthly, less the ₱15,800 monthly expenses for the maintenance of the PUJ units.

Based on these data, it was observed that a less profitable route also require less maintenance , probably due to a shorter service period. The opposite is likewise observed for more profitable routes.

Meanwhile, table 6 shows the average operational expenses and income of jeepney drivers prior to modernization. The data below was provided by the public relations officer of 1TEAM during a phone interview and was based on the previous experience of their PUJ drivers.

Table 6. Financial Characteristics of Jeepney Operations Before Modernization
(for the Drivers)

Route	Daily Gross Income	Daily Operational Expenses	Daily Net Income	Monthly Net Income
Cubao – Lagro via Kalayaan	₱1,590.00 to ₱1,760.00	₱960.00 to ₱ 1,090.00	₱500.00 to ₱800.00	₱10,000.00 to ₱16,000.00
Cubao – Parang Marikina via Aurora Blvd.				
SSS Village – Stop & Shop via Aurora Blvd.				
Parang – Stop & Shop via Aurora Blvd.				
Cubao – Silangan (San Mateo) via Aurora Blvd.				

As previously mentioned, drivers shoulder the operational expenses of the jeepneys under the boundary system. These expenses include parking fees, payment for the jeepney barkers, fuel expenses, food, and the “butaw” (*daily membership fee for a transport group*). On the average, as shown in the table above, these expenses range from ₱960.00 to ₱ 1,090.00 per day.

Considering a gross income of around ₱1,590.00 to ₱1,760.00, jeepney drivers are left with a daily profit of ₱500.00 to ₱800.00. Then, under the same assumption that these old jeepneys operate for 20 days per month, the monthly take home income of the drivers before modernization was around ₱10,000.00 to ₱16,000.00.

3.3 Modernization of the 1TEAM Fleet

In order to replace their old jeepneys with the brand-new ones, all 20 operators forged management agreements with 1TEAM. The latter shouldered all the expenses required for the purchase of the new vehicles. Then, when the new jeepneys were already available, the old units were dropped from their respective franchises and substituted with the brand-new units.

Under the said management agreement, all expenses shall be shouldered by 1TEAM as the fleet manager, including the driver's salary, compensation for other personnel, operational expenses, maintenance expenses, down payment for the purchase of the new PUJ unit, and amortization expenses for a duration of 7 years. In addition, the operator will receive a fixed monthly boundary of ₱7,000.00. This amount is higher than the monthly net income received by the operators prior to modernization, regardless of the route. Table 7 shows a summary of the responsibilities of the operators, drivers, and 1TEAM under their current setup of fleet management.

Table 7. Responsibilities of the Operators, Drivers, and 1TEAM in Managing the PUJ Fleet

Stakeholder	Responsibilities
Operators	No responsibility in managing the fleet but are guaranteed a fixed amount of boundary to be paid every month
Drivers	Run the jeepneys (<i>either full-time or part-time</i>) for guaranteed salary and benefits
1TEAM (Fleet Manager)	<ul style="list-style-type: none"> • Take care of the repairs and maintenance of the new jeepneys • Take care of the operating expenses of new jeepneys • Fund the acquisition (<i>down payment and monthly amortization</i>) of the new jeepneys • Manage the day-to-day operations of the new jeepneys • Transfer the ownership of the new jeepneys to the franchise owners/operators after 7 years • Provide the guaranteed boundary for the operators and the salaries and benefits of drivers and other personnel (<i>safety officers, conductors, dispatch officers, mechanic, etc.</i>)

Meanwhile, the operators were also asked about their opinion as to how much subsidy must be provided by the government. Results of the survey revealed that eleven out of the 20 operators prefer the ideal government subsidy to be around ₱160,000.00 to ₱200,000.00; the other six indicated that it should be ₱80,000.00 to ₱120,000.00; one was undecided; one chose the ₱200,000.00 to ₱240,000.00 subsidy; and the last one said that it shall be above ₱280,000.00.

3.4 Financial Viability of Modernizing the 1TEAM Fleet

In order to validate and supplement the results of the survey discussed above, an online key informant interview with Mr. Yuri Sarmiento, President of 1TEAM, was also conducted.

According to Mr. Sarmiento, the guaranteed boundary of ₱7,000.00 per month was calculated based on the operational income of the operators before they modernized their jeepneys. These brand-new Euro 2 PUJs cost around ₱1.35 million each and are amortized for around ₱17,000.00 monthly. 1TEAM was able to negotiate with the Development Bank of the Philippines (DBP) for a 7-year term loan with an interest rate of 6.25% and down payment of 30% to acquire the said jeepneys.

Further, 1TEAM's new Jeepneys somehow addressed the design issues of the old units, primarily the door entrance (transferred from the rear to the side), seating width (14 inches or

35.56 cm) and the floor to ceiling height (1.5 meters) which allowed passengers to stand up and have a more comfortable trip. Although the said design is still not compliant with the Philippine National Standards for Public Utility Vehicles promulgated by the Bureau of Product Standards in September 2017, it was still a welcome innovation especially for the commuters.

In fact, according to Mr. Sarmiento, their modernized PUJ units earn around ₱6,500.00 each per day on the average. This means that under the assumption that each unit operates for 26 days every month, as highlighted by Mr. Sarmiento, 1TEAM's fleet earns around ₱5.07 million per month. This 26-day operation (on the average) of the new jeepneys compared to the 14-16 days operation of the old units is one of the most significant changes when 1TEAM modernized their fleet. This increase in the days of operation is a result of the lesser breakdowns of the new PUJ units. Meanwhile, table 8 shows a summary of monthly expenses of 1TEAM for the operations of the said fleet.

Table 8. Monthly Expenses of 1TEAM for the Operations of Their Fleet

Expenses	Per Unit	Fleet
Monthly net income of operators	₱7,000.00	₱210,000.00
Monthly amortization / PUJ unit	₱17,000.00	₱510,000.00
Monthly maintenance / PUJ unit	₱6,600.00	₱198,000.00
Average monthly income / full time driver*	₱23,000.00	₱1,380,000.00
Average monthly income / mechanic	₱19,000.00	₱76,000.00
Average monthly income / full time conductor**	₱13,000.00	₱780,000.00
Average monthly income / safety officer	₱25,000.00	₱50,000.00
Average monthly income / dispatcher	₱20,000.00	₱80,000.00
Average fuel consumption	1160 liters per month	34,800 liters per month
Other expenses (garage, terminal, etc.)	-	₱65,000.00

* aside from 86 part time drivers

** aside from 30 part time conductors

As seen in table 8, a significant portion of 1TEAM's monthly expenses are allocated for the provision of fixed and guaranteed salaries for their personnel. Further, around ₱3,349,000 is spent for the items indicated in the same table, excluding the fuel expenses and remuneration for part time drivers and conductors.

1TEAM has 86 part time drivers and 30 part time conductors who serve as relievers whenever required. Their salaries vary depending on the number of hours/days they work per week. Meanwhile, the fleet's average monthly fuel consumption is around 34,800 liters. Since the price per liter of diesel changes almost every week, fuel expenses also vary. Lastly, the remaining balance serves as the 5-6% income (around ₱253,500 to ₱304,200) for 1TEAM as the fleet manager.

In terms of the monthly maintenance expenses, it can be recalled that around ₱12,950.00 to ₱15,800.00 is spent monthly per unit before 1TEAM modernized their jeepney fleet. This went down to ₱6,600.00 with the brand new units, perhaps due to the minimal maintenance requirements of new vehicles.

On the other hand, based on the daily operational expenses reflected in table 6, the monthly operational expenses were estimated to be around ₱19,200.00 to ₱21,800.00 per unit or around ₱576,000.00 to ₱650,000.00 for the whole fleet before the modernization. These expenses went up to around ₱1.5 million per month (for the whole fleet) when fleet

management was implemented with the brand new jeepneys. This is primarily due to the increasing fuel prices, the additional expenses for the lease of garages and terminals, and the additional manpower required to implement a fleet management system. However, these additional costs also meant additional income for 1TEAM as the efficient management of the modernized fleet resulted in higher income.

Mr. Sarmiento also added that the bigger the fleet, the bigger the income, hence more financially viable PUV modernization. He also added that for 1TEAM, fleet management shall be the core concept of the PUV Modernization Program. This would allow the industry to shift from boundary to fixed salaries, allow transport groups to purchase new vehicles without burdening individual operators about their creditworthiness, and would result in an increase in operational scale which will allow the fleet to acquire the necessary manpower (mechanic, dispatcher, conductors, safety officers, etc.). In addition, Mr. Sarmiento reiterated that fleet management results in lower operating costs (fuel, tire, spare parts, batteries, etc.).

Further, with consideration to the fact that 1TEAM paid for the 30% down payment required for the purchase of the brand new jeepney units and shoulders the monthly amortization as part of their management agreement with the operators, the latter essentially obtain the brand new PUJ units for free. This scheme was likewise made financially viable because of the efficient fleet management.

Meanwhile, table 9 shows the net income of the drivers and operators under 1TEAM before and after they modernized their PUJ fleet.

Table 9. Monthly Net Income of 1TEAM Drivers and Operators Before and After the Modernization of their PUJ Fleet

Stakeholder	Monthly Net Income		
	Before Modernization	After Modernization	Difference
Operators	₱2,906.00 to ₱ 6,700.00	₱7,000.00	₱300.00 to ₱4,094.00
Drivers	₱10,000.00 to ₱16,000.00	₱23,000.00	₱7,000.00 to ₱13,000.00

As seen in table 9, both operators and drivers received higher monthly net income after they modernized their jeepneys through a management agreement with 1TEAM. Further, PUJ drivers benefited the most with a net income increase between ₱7,000.00 to ₱13,000.00 while operators received boundaries higher by about ₱300.00 to ₱4,094.00.

3.5 Recommendations of 1TEAM for the Successful Implementation of the PUV Modernization Program

In terms of subsidy, Mr. Sarmiento pointed out that it may serve as an impetus for the jeepney sector to jumpstart the modernization. He added that in order to allocate the limited budget allocation and to maximize the impact the modernization program, he agrees that the reasonable subsidy shall be equivalent to the down payment to be paid by the transport groups per unit.

In terms of what to improve on the implementation of the PUV Modernization Program, Mr. Sarmiento stressed that the government must vastly improve its Information / Education Campaign (IEC). He recalled that even before the modernization program was launched, a lot of transport groups have already signified their opposition. But as the government and other stakeholders explained the benefits, a mellowing of opposition was observed.

He also mentioned that as the transport groups level up, so should government

agencies. Internal reforms must be implemented at the LTFRB, LTO, OTC and the DOTr. Lastly, in terms of the scrap value of the old jeepneys, Mr. Sarmiento articulated that the market should dictate the price. He, however, pointed out that the government may entice the operators in modernizing their vehicles by providing non-fiscal incentives such as exemption from coding, waiving of the common carriers' tax (tax charged against operators of PUVs) during the amortization period, and guarantee the bank loans to lower the interest rates (which may also pave the way for funds from the private commercial banks to be used for the program).

4. CONCLUSIONS

The results of the case study show that based on the experience of 1TEAM in modernizing their jeepney units, it can be concluded that industry consolidation and fleet management are both very significant components of the DOTr PUV Modernization Program. The financial viability of modernizing the jeepneys would greatly depend on having efficient and well-managed operations of the new PUJ units.

In fact, 1TEAM essentially paid for the 30 brand new jeepneys that they currently have by shouldering the 30% equity requirement and the monthly amortization as part of their management agreement with the operators. This means that on top of getting a free jeepney unit after the 7-year management agreement, the operators get higher boundary while the drivers and conductors receive fixed salaries and other employment benefits. In addition, jeepney drivers benefited the most after the modernization of 1TEAM's fleet by receiving a net income increase between ₱7,000.00 to ₱13,000.00.

Moreover, maintenance expenses for the modernized PUJs were lower as expected since new vehicles require lesser maintenance. Meanwhile, operational expenses were higher after modernizing the jeepneys because of the increasing fuel prices, the additional manpower requirement, and the additional facilities that were leased. Such increase however resulted in higher income for the group.

These arrangements were made possible because of the efficient fleet management of the modernized jeepneys. In this regard, transport groups need support in the form of fleet management and financial literacy trainings.

Further, non-fiscal incentives and regulatory backstops are also important in making sure that modernization programs succeed. The provision non-fiscal incentives such as low emission zones, exemption from coding, and tax waiver, may entice jeepney operators to voluntarily or willingly modernize their old units. Meanwhile, regulatory backstops such as the imposition of a mandatory age limit would force owners of old and polluting vehicles to participate in modernization programs.

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