Assessing PUV Modernization Program Industry Consolidation And Financing Towards Just Transition For Transport Workers

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Abstract: This study examined the PUV Modernization Program to determine how the concept of Just Transition can be incorporated into the industry consolidation and financing components of the program to address the needs of vulnerable transport workers and the commuting public. Case studies of jeepney transport service cooperatives from the National Confederation of Transport Workers Union (NCTU) from Regions NCR, IV-A, and VII showed diverse experiences of cooperatives undergoing consolidation and fleet modernization. Cooperatives from Region IV-A and VII have successfully modernized, while the NCR cooperative was unable to receive loans to purchase modern jeepney units, hindering their compliance to the program. This emphasizes the need for the government to address factors that influence cooperatives' inability to participate in the program. Financial analysis using a cost recovery framework provided empirical evidence that adequate government investment in the form of equity subsidies and service contracting can address the high capital cost of purchasing modern PUVs and added costs of consolidation and cooperativization and enable a more just transition to modernization.

Keywords: public transportation, PUVMP, jeepney modernization, just transition, service contracting, public transport subsidy

1. INTRODUCTION

1.1. Jeepneys in the Philippine public transport system

Public Utility Jeepneys (PUJ), or jeepneys are the most popular and most frequently used mode of public transport in Metro Manila that operates on fixed routes (JICA, 2022). There are 73,000 jeepneys operating in Metro Manila, and 300,000 nationwide, constituting approximately 3% of the total number of vehicles both in Metro Manila and nationwide (Mendoza, 2021). In Metro Manila, jeepneys ply 677 routes serving 8.9 million passenger-trips per day (Mondalbo, 2020). According to Dimalanta et al. (2023), public transportation modal share in Philippine urban areas constitute 80% of trips, in which jeepneys serve 40%. Dimalanta et al. state that jeepneys

provide an affordable, accessible, convenient, and versatile public transport which makes it an essential mode of transport for the majority of the Filipino population in urban areas.

Even with the vast number and popularity of jeepneys, they are widely considered as informal transport or paratransit (Mateo-Babiano et al., 2020; Dimalanta et al., 2023). Jeepneys along with other public transport modes such as buses, UV Express, and taxis, are regulated by the Land Transportation Franchising and Regulatory Board (LTFRB), an attached agency to the Department of Transportation (DOTr). Pursuant to Executive Order No. 202, LTFRB regulates public transport operations through a franchising system in which public transport operators are authorized to run public utility vehicles or PUVs on pre-approved routes upon the issuance of a Certificate of Public Convenience (CPC). According to JICA (2022), there is a vehicle-to-franchise ratio of 2.25, with the majority of jeepney operators at 78% owning only a single jeepney unit. Due to this, JICA states that the jeepney sector is "highly fragmented and individualized in terms of ownership and operation".

Jeepneys are considered as symbols of national pride (Gatarin, 2024), due to their iconic designs, refashioned by local manufacturers like Sarao Motors and Francisco Motors from military *jitneys* left by the Americans after World War II. However, Gatarin (2024) describes that the old design of the jeepney along with the fragmented nature of its operations led state policy discourse to view jeepneys as outdated and the "antithesis to being modern". This led to the narrative of needing to modernize the traditional jeepney. Mendoza (2021) adds that the environmental unsoundness of traditional jeepney vehicles, including smoke-belching and fuel inefficiency, is a main force driving the need to modernize jeepneys. Most jeepneys are equipped with second hand and inadequately maintained engines that significantly contribute to air pollution in Philippine urban cities (Blacksmith Institute & Clean Air Asia, 2017).

1.2. The development of the PUVMP and its objectives

The Philippine government under President Rodrigo Roa Duterte ratified the Paris Agreement on climate change in February 2017, which aims to keep global warming to below 2° Celsius above pre-industrial levels and limit temperature increase to 1.5°C. In line with the Agreement, the Philippines pledged to reduce carbon emissions by 70% through Intended Nationally Determined Contributions or INDCs (McClean, 2017; Dimalanta & Morales, 2024).

The Public Utility Vehicle Modernization Program (PUVMP) is part of the Philippines' INDCs under the Paris Agreement, enacted through the DOTr Department Order No. 2017-011, titled the "Omnibus Guidelines on the Planning and Identification of Public Road Transportation Services and Franchise Issuance", or simply the Omnibus Franchising Guidelines (OFG). The enactment of the OFG ended a 14-year moratorium on the issuance of franchises to public transport operators placed by LTFRB though the Memorandum Circular 2003-028. During this moratorium period, there had been no standard guidelines for the issuance of public transport franchises, although exceptions were made which granted CPCs to public transport operators across several modes (Angeles et al., 2024).

Within the OFG, new policies were set to require the consolidation of PUV operators, who were previously individual franchise-holders, into cooperatives or corporations which shall then hold one franchise. The policy transforms the current status quo of single ownership towards requiring the management and dispatching of PUV fleets with a "common revenue sharing and fleet management" through a one-route-one-franchise system (LTO, n.d.). The new system establishes the payment of fixed salaries and provisions of benefits and incentives to drivers, replacing the prevailing boundary system in which a driver's revenue is divided into a fixed boundary that gets paid to the operator, with the remaining value kept as daily income.

Fleet modernization requires updated specifications for new PUVs with additional safety and environmental-soundness features. Modern PUV units require at the minimum new Euro IV engines as an improvement to old second hand engines used in traditional units. The PUVMP also promotes the transition to the use of electric jeepneys or e-jeepneys, supported by the Electric Vehicle Industry Development Act or EVIDA.

In 2023, the PUVMP policy was updated and the program renamed with the DOTr Department Order No. 2023-022 titled "Guidelines on the Implementation of the Public Transport Modernization Program" or PTMP. The PTMP guidelines updated the scope of the PUVMP to highlight public transport route rationalization and local public transport route planning by Local Government Units (LGUs) in a "whole-of-government" approach in improving public transport services. Under the updated PTMP policy, LGUs are mandated to create Local Public Transport Route Plans (LPTRP) for the approval of LTFRB and a Technical Panel headed by the DOTr Planning and Project Development Office and including members from other national government agencies and the academe.

The inclusion of local public transport route planning and route rationalization studies adds to the PUVMP by mandating the improvement of public transport service characteristics based on passenger demand data and aligning public transport plans to overall city or municipal development plans. Ideally, this shall lead to improved service quality such as improved routes and stops, predictable interval times and operating hours, and strategic development of public transport infrastructure.

1.3. Criticisms and opposition to the PUVMP implementation

Since its introduction in 2017, the PUVMP has encountered significant resistance from transport worker groups. Notable organizations include the Federation of Jeepney Operators and Drivers Association of the Philippines (FEJODAP), National Confederation of Transport Workers Union (NCTU), Alliance of Concerned Transport Operators (ACTO), Land Transportation Organization of the Philippines (LTOP), Pasang Masda, Alliance of Transport Operators and Drivers Association of the Philippines (ALTODAP), STOP and GO Coalition, and PISTON (Pinagkaisang Samahan ng mga Tsuper at Operator Nationwide). These groups organized nationwide transport strikes, with the largest during the program's early years, to protest what they viewed as financially burdensome and poorly planned reforms.

STOP and GO Coalition also pursued legal avenues, filing multiple petitions to halt the PUV Modernization Program, but these were repeatedly dismissed by courts. Their efforts emphasized the burdensome cost of new vehicles, insufficient subsidies, and the risk of economic displacement for drivers and operators. Over time, resistance from transport groups persisted, challenging the government and its implementing agencies for pressing forward with the program without adequately addressing the sector's longstanding concerns (Dimalanta & Morales, 2024).

The National Confederation of Transport Workers Union (NCTU) has taken a broader stance, emphasizing a *just transition* framework that extends beyond acquiring new units as a response to the climate crisis. They demand just transition and equitable support towards transport workers, both consolidated and unconsolidated. While less prominent in protest coverage than other groups, NCTU actively participated in rallies and mobilizations, emphasizing that a just transition should prioritize comprehensive improvements to the public transportation system rather than merely focusing on acquiring new vehicles. Their vision includes serving Filipino commuters while ensuring sustainable livelihoods and fair treatment for transport workers across the sector.

The PUVMP has been tagged as anti-poor due to the high costs of purchasing brand new modern jeepney units. Prices of modern jeepneys reach up to Php 2.8 million in 2023 (Ramos, 2023; Dimalanta et al., 2023), which will be shouldered by operators and drivers. On the other hand, traditional jeepneys are priced from Php 200,000 to Php 400,000 (Mendoza, 2021). The large difference in cost exceeds the financial capabilities of small-scale traditional PUJ operators and drivers, who fear that they might not be able to recover the high capital cost of modernization through fare revenues.

There are ongoing government service contracting and equity subsidy programs for acquiring modern units, with loan programs provided by the Development Bank of the Philippines (DBP) and Land Bank of the Philippines (LBP). However, they are considered insufficient (Dimalanta et al., 2023). As a result, cost deficits may ultimately be shouldered by the commuting public, potentially leading to drastic increases in passenger fares to as much as Php 34 (Mendoza, 2021), compared to Php 13 as of time of writing. This then in turn may make public transport highly unaffordable to the masses and ultimately defeat the objectives of the PUVMP.

Another reason for opposition to the PUVMP is mandatory franchise consolidation and surrendering of individual franchises, wherein operators holding individual franchises are required to consolidate into cooperatives or corporations which shall hold a single franchise. This in turn adds administrative and miscellaneous costs on top of daily operations. Uncertain of their capacity to shoulder the high costs of consolidation and modernization, many transport workers fear losing their livelihood, afraid that they might not be able to obtain a franchise and continue to ply their routes upon surrendering their individual franchises.

Widespread opposition to the PUVMP ultimately led to numerous extensions in the deadline for consolidation imposed by DOTr and LTFRB. However, a Senate resolution has since deferred the program, which led LTFRB to reopen the period for consolidation for 45 days starting from 15 October to 29 November 2024. Nevertheless, opposition and protest actions continue, not merely aiming for extensions to the consolidation deadline, but rather to demand a thorough review of the program and its implementation that involves all stakeholders (Dimalanta & Morales, 2024).

1.4. Need for just transition

Issues in the implementation of the PUVMP and prevailing opposition to the program emphasize the need for just transition (Dimalanta & Morales, 2024; Gatarin, 2024). Dimalanta et al. (2024) states that the PUVMP failed to address the needs of stakeholders of the public transport industry, which underscores the need for a just transition approach to be adopted by the program. Moreover, Dimalanta and Morales (2024) states that not only the language of just transition must be incorporated in the PUVMP policies and guidelines, but that justice shall be realized during the transition by the most vulnerable groups affected by the program.

2. RESEARCH QUESTION AND OBJECTIVES

The study aims to examine the PUVMP and its implementation with regard to the transition of public transport cooperatives complying with the program. The study is guided by the research question: **How might we improve the Public Utility Vehicle Modernization Program (PUVMP) to ensure a just transition for transport workers?** The study focuses on industry consolidation and the financing components of the PUVMP, specifically the financial elements

of transition in PUV operator consolidation and fleet operations. The study has the following objectives:

1. Examine the financial situations of transport workers and cooperatives before and after the implementation of the PUVMP and how they transitioned from individual franchise owners into consolidated entities.
2. Determine government financial support mechanisms necessary for a just transition and just reform in the public transport industry.
3. Provide empirical and quantitative calculations on the level of public transport investments required to enhance the quality of transportation services while ensuring fares remain affordable for the average Filipino

3. REVIEW OF RELATED LITERATURE

3.1. Just transition in the context of PUVMP

According to Dimalanta and Morales (2024), "just transition" as a concept was developed in the United States in the 1970s - 1980s as a response to "job blackmail" - the idea "that workers must choose between their employment and environmental health". The movement towards just transition aimed to address the social impacts of environmental health-related programs, especially those that significantly affect employment of workers. The concept of just transition has been mainstreamed due to its integration to the Paris Agreement in 2015, and the publishing of just transition guidelines by the International Labour Organization (Stevis, Morena & Krause, 2019 as cited by Dimalanta & Morales, 2024).

Sunio et al. (2019) describes the PUVMP as a "transition experiment", defined by van den Bosch and Rotmans (2008) as "an innovation project with a societal challenge as a starting point for learning aimed at contributing to a transition". Sunio et al. continue to state that the PUVMP was designed to be implemented gradually, with its components not necessarily having to be implemented simultaneously. They examine the case of the Taguig Transport Service Cooperative (TTSC), a successful case of consolidation and modernization that should be replicated in other cities. In this case, *success* is defined as the ability of a transport service entity to operate professionally - with the capacity for fleet management, automatic fare collection system (AFCS), etc. with the presence of government support and subsidy. They identify three lessons that can be learned from this case: (1) Route rationalization is essential; (2) Strong cooperatives that will champion consolidation in their localities are important; and (3) Financing in the form of loans and incentives is needed to stimulate the support of small transport operators. This research focuses on the third lesson on financing and its critical significance in just transition for the PUVMP.

Dimalanta and Morales (2024) examined the PUVMP in terms of the just transition's dimensions of justice, focusing on transport cooperatives from Bacolod City. Their research revealed so-called "forms of injustice" within the PUVMP's industry consolidation, fleet modernization, financing, and vehicle useful life components. Operators were compelled to consolidate due to fear of losing their franchise and livelihood, without proper guidance from the government on the intricacies of consolidation and fleet operations. The requirement for new modern PUV units placed an immense financial burden on operators, with compliant units costing an average of PhP 2.7 million due to higher specifications compared to traditional units. However, obtaining modern units does not guarantee being awarded a franchise, since they still have to undergo the process of approval from LTFRB, competing with other cooperatives for a franchise to operate particular routes.

Dimalanta and Morales point out that the PUVMP aligns with a form of transition that is stripped of its transformative agenda - focusing on technological fixes while retaining and worsening the conditions of marginalized transport workers. The major issue driving opposition is the displacement of transport workers, in particular informal and small-capacity workers and transport groups, as single operators lose their individual franchises to pave the way for franchise consolidation in which cooperatives or corporations will be franchise-holders.

Gatarin (2024) states that while new developments in public transport planning and policy have been overdue in the Philippines, these plans and policies must ensure that no one is left behind, and that strategies and processes ensure just transition towards a more inclusive and sustainable transport system. Pathways for just transition can be better contextualized through the proper understanding of labor conditions of transport workers, need of government support, and the needs of commuters.

Gaining the support of opposing groups, which primarily include small transport operators and drivers, prove critical to the success of the PUVMP, as resistance to the program alongside the need for improvements in public transport governance are obstacles for the replication of successful cases of transition and modernization towards other transport service entities across the country. Sunio et al. describes this as the "politics of transition", and that beyond neutralizing opposition, the government shall aim to stimulate support through increased financial incentives and subsidies.

3.2. Financing modernization within the PUVMP

One of the anchors of just transition within the PUVMP is the financial viability of public transport service entities upon their compliance with the program's consolidation and fleet modernization requirements. Operators who participate in the program face large financial burdens that without adequate financial support from the government, risk income loss and displacement when farebox revenues cannot meet the cost of these additional obligations.

Pontawe and Napalang (2018) evaluated the financial viability of consolidation and modernizing a jeepney fleet through a case study of the 1-Transport Equipment Aggregator and Management Inc. or 1TEAM, a transport management corporation that operates as fleet manager of a modern jeepney fleet. During their modernization, management agreements were made between 1TEAM and 20 traditional jeepney operators, with 1TEAM shouldering all expenses including the downpayment for the purchase of new modern units, amortization expenses for a duration of 7 years, salaries of drivers and other personnel, operational expenses, maintenance expenses, and a fixed monthly boundary for operators. Pontawe and Napalang had the following findings in their financial analysis of 1TEAM's operations: (1) Operators, even with less responsibility in fleet management, received fixed monthly boundaries higher than their monthly net income prior to modernization; (2) Drivers had a net monthly income increase between Php 7,000 and Php 13,000, with employee benefits; (3) Maintenance expenses are lower after modernization since new vehicles required less maintenance; and (4) Operational expenses were higher due to increasing fuel prices, additional manpower requirements, and leasing of additional facilities.

Pontawe and Napalang concluded that the financial viability of modernization greatly depends on efficient fleet management, adding that "the bigger the fleet, the bigger the income". However, it is important to note that 1TEAM was able to provide the capital required for the downpayment and subsequent amortization of 30 modern PUJ units. This level of capital is out of reach of typical small-scale operators in a newly consolidated transport cooperative which faces overall cost deficits without external financial inputs. 1TEAM pointed out that the appropriate government subsidy should be equivalent to the downpayment for every modern

jeepney unit purchased. Additionally, non-fiscal incentives such as low emission zones, number coding exemptions, and tax waivers may entice more operators to modernize.

The studies of Pontawe and Napalang and Sunio et al. focused on the nationwide pilot implementation of the PUVMP. However, there is a need to put into context the time in which their studies were conducted which was pre-COVID-19 pandemic. During the pandemic, the Inter-Agency Task Force for the Management of Emerging Infectious Diseases (IATF) restricted public transport operations which severely affected the livelihoods of jeepney drivers and operators (Aggabao et al., 2022). Moreover, after pandemic restrictions were lifted, not all PUV routes resumed operations. As such, there is a need to revisit the conditions of transitioning transport cooperatives pre and post-pandemic.

Another arena of jeepney modernization is electrification and e-jeepneys. Gaspay and Salison (2024) assessed the economics of local e-jeepney transition and operations in 4 cooperatives from General Santos City. They state that the financial challenges of modernization is due to the cost of modern e-jeepneys coupled with the costs of industry consolidation and cooperativization. Aside from the operating costs of a modern fleet, additional non-operating costs arise from employing salaried in-vehicle staff, operating a cooperative, and fleet management. On the other hand, consolidation and modernization adds non-transport revenue sources including gasoline station revenues, terminal and garage fees, advertising and other sources from diverse cooperative ventures. They state that enabling factors that contribute to the successful adoption of e-jeepneys and participation in the modernization program include, (1) access to alternative financing schemes such as leasing options for battery acquisition, and (2) profits from the service contracting program.

Gaspay and Salison analyzed the finances of e-jeepney operations using the *farebox recovery ratio,* a quantity used to measure the proportion of the amount of revenue generated through fares as a fraction of the cost of its total operating expenses. In their study, high farebox recovery ratios were calculated which indicate profitable and viable public transport operations by PUVMP-compliant cooperatives, with a value of 1.97 reached for a business model with service contracting implemented. Gaspay and Salison associate this with lower operating costs of e-jeepneys compared to traditional combustion engine vehicles. However, their analysis excluded the capital costs of vehicle acquisition and amortization payments, which are still shouldered by the cooperatives and are funded by their revenue streams alongside government subsidies. This research adds on to the analysis of using the farebox recovery ratio by including these additional capital costs, and how government investment and subsidies alleviate these financial challenges for transport cooperatives.

3.2.2. Government subsidies in public transportation

Provision of public transport subsidies has been practiced internationally since the 1960s and 1970s (Estupiñan et al., 2007). Subsidies channeled to transport suppliers or operators are considered *supply side* subsidies. The objective of supply side subsidies is to lower the cost of service to users by partially shouldering costs that would otherwise be funded by fares. According to a 2009 US Washington State Department of Transportation report on transit farebox recovery and subsidization, the median farebox recovery ratio of major transit systems in the US is 35%, in Europe 44%, Canada 56%, and Asia 137%. This data shows that government transit subsidies are essential for public transport to operate in developed Global North countries, while in many Asian countries, fare revenues are expected to be enough to recover operating costs – referred to as a *cost recovery fare*. In the Philippines this is traditionally the case across road-based public transport services, and supported by Gaspay and Salison (2024). Meanwhile, Philippine rail systems are subsidized to ensure affordable fares.

For example, in 2023 the LRT-2 line received subsidies equivalent to 51% of the fare cost per passenger (Relativo, 2023), which equates to a 49% farebox recovery ratio. There was a proposal to decrease government subsidy to 46% per passenger, which would result in a fare increase of Php 2.50.

Supply side government subsidies ensure that fares are low and affordable. Without adequate government subsidy, high operating and capital costs of transit services will make farebox cost recovery difficult without imposing equally high fares to the public. In the case of the PUVMP, transport cooperatives and operators have to shoulder the high capital cost of acquiring brand new modern vehicles, in addition to higher operating costs (Pontawe & Napalang, 2018) compared to traditional units. **We argue that the combined high capital and operating costs warrant adequate government subsidies that at the minimum ensure cost recovery for transport cooperatives.**

3.2.3. Issues with supply side transit subsidies

According to Estupiñan et al. (2007), when supply side subsidies are provided as *unconditional operating and capital subsidy* – meaning annual cost deficits of public transport operators are fully shouldered by the government, subsidies may lead to raised costs and reduced efficiency of public transport. For example, if subsidies are merely linked to kilometers traveled, unnecessary additional trips may be done by the driver to boost their recorded travel distance. On the other hand, if subsidies are merely linked to the number of passengers served, then it may lead to drivers competing for passengers, similar to how public utility vehicles tend to compete for passengers under the boundary system. Estupiñan et al. state that government funding incentives must be linked to carefully-designed performance and productivity conditions to avoid efficiency problems. Subsidies through service contracting that clearly stipulates a designed route service plan including standard frequencies and headways can reduce the risk of efficiency problems. Chang et al., (2022) state that changes must be made in key performance metrics that focus on public transport user-and-system-centered indicators for the monitoring and evaluation of government transport programs. Measurable improvements in passenger service quality associated with a high level of public transport service will provide support for further government investment in public transportation.

4. CONCEPTUAL FRAMEWORK

The research follows a cost recovery framework towards just transition in the context of industry consolidation and financing of fleet modernization components of the PUVMP. The new framework adds to the traditional public transport farebox recovery model by introducing new cost items brought by the PUVMP: consolidation (cooperativization) costs and fleet modernization capital costs, as well as new financial inputs from non-transport revenue sources and government investment in the form of service contracting and equity subsidies.

Given these new variables, the simple goal of overall cost recovery is achieved when the sum of all financial inputs equal the sum of a cooperative's expenditures and obligations. While being a conservative framework that aims for cost recovery instead of net profitability, it ensures that key conditions of just transition are met–transport worker salaries and benefits are paid, modern PUVs can be adequately financed, and overall operations are viable.

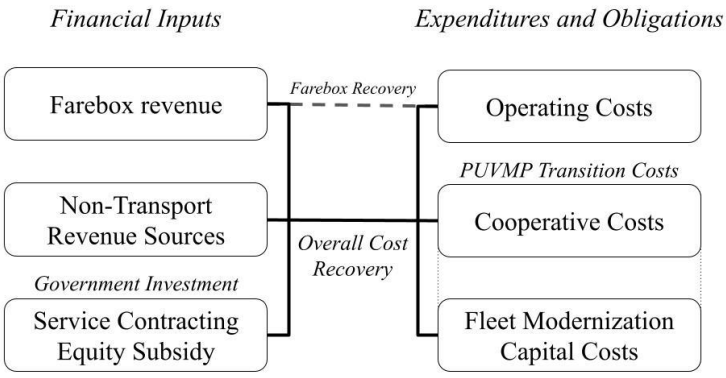

Figure 1. Cost Recovery Framework for Just Transition in PUVMP Industry Consolidation and Financing

5. METHODOLOGY

The research employs a case study approach to examine the experiences and conditions faced by transport cooperatives that underwent consolidation and modernization in compliance with the PUVMP. The research explores case studies of selected transport service cooperatives from the National Confederation of Transport Workers Union (NCTU), an umbrella organization of associations, unions, and federations of various land transport workers in the Philippines.

For many years, NCTU has advocated for aspects of the PUVMP grounded in a just transition – where the government provides subsidies for financing modernized units, transport workers are given sufficient time to establish systems and processes, and commuters benefit from quality transportation services guided by performance metrics. As a result, the research identified their cooperatives as the most suitable for conducting case studies and financial analyses to determine the recommended level of funding needed from the government to support transport workers in successfully transitioning into stable cooperatives capable of providing coordinated transport services.

The selected transport cooperatives for the study are members of NCTU from the following regions: National Capital Region (NCR); CALABARZON (Region IV-A), and Central Visayas (Region VII). They were selected as case studies to represent the characteristics and experiences of transition to the PUVMP across different regions in the Philippines.

Focus group discussions and key informant interviews were conducted with leaders and staff members of each cooperative to learn about their service characteristics, consolidation history, and current challenges with the program's implementation. Focus group discussions with Cooperatives IV-A and NCR were conducted on October 3, 2024, while VII was on October 9, 2024.

Readily available pertinent documents and data such as annual financial statements from 2020 to 2023, loan term agreements, service contracting agreements, and fleet operational characteristics were also obtained from the cooperatives. The data was then examined using financial analysis to determine their cost recovery ratio, defined as the ratio of overall operational and non-operational revenues to the cooperative's operational and non-operational costs, including additional costs from amortization payments for modern units.

We then examine the current level of government investment received by the cooperatives and how this affects their financial situation relative to operational and non-operational revenues and costs. A proposed ideal amount of government investment will then be determined

that ensures cost recovery considering the amortization costs of the cooperative for modern jeepney units.

6. RESULTS AND DISCUSSION

For the purposes of the study, cooperatives will be labeled using the region they represent, namely "Cooperatives NCR, Region IV-A, and Region VII".

The three (3) cooperatives in the study all consist of jeepney operators who consolidated and registered as cooperatives during the early stages of the PUVMP. They have differing member registration schemes, with different membership fees and capital shares per member.

The provincial cooperatives IV-A and VII have acquired modern jeepney units through financing loans, with IV-A having 87 modern units and VII having 16 units. VII has emphasized the contribution of service contracting in aiding them to acquire additional units. In addition to this, VII emphasized that there was a need to reach out for assistance from non-government organizations such as other cooperatives in order to acquire said units.

During the discussion, the members of VII expressed their difficulty consolidating into a cooperative, stating that:

> *"From registration.. mahirap talaga. Hindi lahat ng members naintindihan yung functions and duties and responsibility ng coop. From the start, walang gustong maging officer. Nung nagka-unit, marami nang gustong maging officer… Sa kanila, big issue po talaga ang pagma-manage."*

> *"Starting from the registration, we were faced with difficulties. Not all of the cooperative members understood the duties and responsibilities of a cooperative. Right from the start, the issue was no one wanted to become an officer. However, upon the acquisition of units, there were interests for members to become officers."*

In addition to this, VII mentioned how through external help from NCTU, the process became easier stating that:

> "*Nung nag-start kami, with the help of NCTU, na-approve yung loan namin from Landbank to acquire 10 units. Nung nagsimula na ng operations, masaya yung mga member. (Pero) dun namin na-feel.. may bayarin ka every month. Yung competition.. we feel na mabigat na. Monthly na dapat mong habulin sa loan amortization…Yung nagkaroon na ng Service Contracting, mahalaga po talaga.*"

> *"When we started, with the help of NCTU, our loans to acquire 10 units were approved by Landbank. We started our operations and the members were happy. (But) during this time we felt our responsibilities, you have monthly payments, there's competition. Service Contracting was very helpful."*

While Cooperatives IV-A and VII were able to acquire modern units, Cooperative NCR has not been able to receive a bank loan for the purchase of modern units and continues to only operate traditional units. According to the members of Cooperative NCR, the Development Bank of the Philippines has responded but has not approved their loan request, even with the endorsement of the LGU. They have not received a formal explanation on why their request has not been approved, even though many other cooperatives including IV-A and VII, along with

many other cooperatives within Metro Manila and nationwide have been granted loans for modern units. Members of the cooperative believe that this may be due to recent Senate Hearings that caused a temporary deferment of the PUVMP implementation, which caused confusion regarding the continuation of the implementation of the program.

Table 1. Consolidation background of each cooperative

	Region IV-A	NCR	Region VII
Year of Consolidation	2018	2017	2018
Number of member-operators	2400	160	50
Number of routes	45 (with 8 modernized routes)	6	6
Number of modern PUJ units	87	0	18

6.1. Cooperative revenue and expenses

Cooperatives IV-A and VII earn revenue from daily operations of modern jeepneys and also traditional jeepneys in the case of cooperative VII. Cooperative NCR, not having acquired modern units, earns solely from the operations of traditional jeepneys. They shared that this was not enough to sustain the cooperative's expenses stating that:

> "*Kulang po talaga. May daily quota kaming iniimplement sa mga drivers, pero di talaga kaya. Maraming dumadaan, maraming other coops plying the same route.*
>
> *"Our revenue is insufficient. We have a daily quota that we implement to our drivers, but it is not enough. There is competition, many other cooperatives plying the same routes."*

All three cooperatives benefit from service contracting funds from the government for both modern and traditional unit operations. Aside from revenue from daily operations, IV-A and VII earn additional revenue from other sources such as auto supply sales, diesel sales, and advertisements. IV-A also earns revenue from Automated Fare Collection System (AFCS) card sales.

Table 2. Revenue Sources of Each Cooperative

	Region IV-A	NCR	Region VII
Daily Operations of Modern Units	✓	✗	✓
Daily Operations of Traditional Units	✗	✓	✓
Service Contracts of Modern Units	✓	✗	✗
Service Contracts of Traditional Units	✓	✓	✗
Autosupply Sales	✓	✗	✗

Diesel Sales	✗	✗	✓
Advertisements in modern units	✓	✗	✗
AFCS Card	✓	✗	✗
Insurance Commissions	✓	✗	✗

Cooperative expenses depend on whether the jeepney fleet is managed by the cooperative or still under individual operators. As seen in Table 4, Cooperative NCR only pays for office rental, utilities, and supplies. Since the cooperative does not have a modern jeepney fleet yet, existing traditional jeepneys of member operators were not consolidated as a fleet, and operational expenses are still handled by operators individually. According to their members, fleet management of traditional units is not cost effective. IV-A and VII with their fleet management already have operational expenses as cooperatives including salaries of driver and operators, fuel, maintenance and repair, and terminal and garage rental.

Table 3. Expenses of Each Cooperative

	Region IV-A	NCR	Region VII
Fuel	✓	✗	✓
Maintenance and Repair	✓	✗	✓
Office Supplies	✓	✓	✓
Office Rental	✓	✓	✓
Terminal Rental	✓	✗	✓
Garage Rental	✓	✗	✓
Salaries	✓	✗	✓
Registration Fees and Permits	✓	✗	✓
Loan Interest	✓	✗	✓
Coverage for Accidents	✓	✗	✓
Utilities	✓	✓	✓

6.2. Financing strategies and current government assistance received

Loans for the purchase of modern jeepney units by IV-A and VII are from the Development Bank of the Philippines (DBP) and Landbank respectively, with loan terms stated in Table 5. IV-A has also been able to purchase 2 modern units directly through cashout from funds earned

from government service contracting, while VII has also acquired units through a cooperative bank and in-house financing. Additionally, the leaders of Cooperative VII shared that due to their early commitment to the program, they were able to acquire the modern units at a lower price back in 2019.

Table 4. Financing Strategies of Modern Units in Each Cooperative

	Region IV-A	NCR	Region VII
Loan with the Development Bank of the Philippines (DBP)	85 modern units	✗ Has not received a loan yet	✗
Loan with Landbank	✗		10 modern units
Cashout: Revenue from Service Contracts	2 modern units		2 modern units
Cooperative Bank, monthly tranches	✗		5 modern units
In-house financing, post-dated check	✗		1 modern unit

Table 5. Loan Term Agreements

	Region IV-A	NCR	Region VII
Financing Institution	Development Bank of the Philippines (DBP)	✗ Has not received a loan yet	Landbank
Years to pay	7		7
Interest per annum	6%		6%

Table 6. Other Forms of Government Assistance Received

	Region IV-A	NCR	Region VII
Grant from the Provincial Cooperative, Livelihood & Entrepreneurial Development Office (PCLEDO)	P20,000 (in 2022) P50,000 (in 2024)	✗	✗
Equity Subsidy	P160,000 per modern unit for 85 units, subtracted from amount loaned in the bank	✗	P160,000 per modern unit for 10 units, subtracted from amount loaned in the bank
Fuel Subsidy	Php10,000 per unit (2024)	P5,000 per unit (2024)	Has not received fuel subsidy yet
Service Contracting	P20/km for traditional units	P4/km for traditional units	P20/km for traditional units

P26/km for modern units	P26/km for modern units

Government support has been through an equity subsidy of Php 160,000 per modern unit, which is subtracted from the initial principal cost paid to the bank. IV-A also received funding from grants from the Provincial Cooperative, Livelihood & Entrepreneurial Development Office (PCLEDO) in 2022 and 2024. The government service contracting program also provides a subsidy equivalent to Php 26 per kilometer traveled per day for a modern jeepney, and Php 20 per kilometer traveled per day for a traditional jeepney. However, this "service contracting" scheme is not implemented consistently year-round but is instead implemented for short periods of time, ranging from 10 days to 2 months at a time, according to a key informant. As such, existing subsidies from government service contracting cannot be considered as regular sources of revenue aimed at recovering both operational and amortization costs, but are rather closer to lump sum transfers received when there is government funding available. It is also important to stipulate that the current service contracting program is being implemented nationwide which results in varying conditions for funding disbursement.

Moreover, Cooperative NCR has received a fuel subsidy of P5,000 in total per unit in 2024. This is, however, conditional if fuel prices reach 80 dollars per barrel. Cooperative IV-A also received a fuel subsidy in 2024, at P10,000 per unit. In the next section, we attempt to determine a hypothetical government service contracting model that is better aimed towards cost recovery for cooperatives.

6.3. Financial analysis of Cooperative IV-A

The analysis aims to determine the cost recovery ratio of the cooperative and determine an ideal amount for government subsidy given a cost deficit. Financial data from Cooperative IV-A was the most complete from the 3 case studies, and analysis from this point will focus on their data. For cost recovery analysis, their financial data for the year 2023 was used due to its completeness. The summary of the cooperative's revenue sources from January 2022 to June 2024 is indicated in Table 7.

Table 7. Cooperative IV-A Revenue Sources from January 2022 to June 2024

Annual Income Source	MPUJ Farebox Revenue	Trad PUJ Farebox Revenue	MPUJ Service Contracts	Trad PUJ Service Contracts	Other Revenue Streams	Total Revenue
2022 (Jan - Dec)	₱0.00	₱0.00	₱0.00	₱8,021,000.00	₱71,500.00	₱8,092,500.00
2023 (Jan -Dec)	₱67,687,782.00	₱0.00	₱0.00	₱0.00	₱50,034.00	₱67,737,816.00
2024 (Jan - Jun)	₱10,315,714.00	₱0.00	₱11,526,065.20	₱2,829,135.97	₱6,799.00	₱24,677,714.17

In 2022, IV-A did not have modern public utility jeepney (MPUJ) units yet as they were still purchasing units and arranging the loan term agreements with DBP. Traditional PUJ revenue did not contribute to cooperative income, which came solely from service contracting.

By 2023, they have already entered the loan and started operating modern PUJs, which explains the jump in MPUJ farebox revenue. There was no government service contracting subsidy received for 2023, so all operating and capital expenses were shouldered by the cooperative.

In the first half of 2024, their farebox revenue is noticeably smaller compared to the 2023 annual farebox revenue. According to a key informant, the *ber*-months (September to December) usually bring higher passenger ridership and fare revenues, and their revenues are still expected to increase by the end of the year due to the holiday rush. They also continue to gain revenue from service contracts from both modern and traditional PUJs. According to them, through their effective fleet management of modern units, the competition between modern and traditional units plying the same routes was minimized.

6.4. Cost recovery analysis of Cooperative IV-A

The cooperative's revenue line items are categorized into 2 categories:

- Operational revenue refers to the fares collected from the daily operations;
- Non-operational revenue refers to items that are not directly associated with fleet operations such as membership fees, penalty and certification fees, consolidation fees, and bank interest.

Table 8. Total Annual Revenue for 2023

Total Annual Operating Revenue	₱67,687,782.00
Total Annual Nonoperating Revenue	₱225,269.00
Total Annual Revenue	**₱67,913,051.00**
Total Monthly Revenue	**₱5,659,420.92**

Moreover, the cooperative's cost line items are categorized into 2 categories:

- The cost of service line items refer to items that are dependent on the size of the cooperative's fleet such as driver's and conductor's Fees, incidental expenses insurance, repairs and maintenance, gas, oil, lubricants, and depreciation of the units;
- Administrative and operational expenses are items that are incurred to keep the day to day of the cooperative functional and running such as social security contributions, travel and transportation, etc.

Table 9. Total Annual Cost for 2023

Total Annual Cost of Service	₱56,213,484.31
Total Annual Admin and Operating Expenses	₱7,307,238.48
Total Annual Cost	**₱63,520,722.79**
Total Monthly Cost	**₱5,293,393.57**

Through a loan with the Development Bank of the Philippines (DBP), the cooperative purchased their modern fleet of 85 units in 2022 at P1.95 million per unit, with an equity subsidy of P160,000 per unit from the national government. The equity subsidy amount was determined by the Land Transport Franchising and Regulatory Board (LTFRB)'s Department Order No. 2020-006. This leaves the final cost per unit at P1.79 million.

Table 10. Computation of total Cost per unit at current equity subsidy

Cost/unit	₱1,950,000.00
Equity Subsidy/unit	-₱160,000.00
Total cost/unit	**₱1,790,000.00**

According to the cooperative, their loan term agreement with the DBP is set at a 6% interest rate per annum for 78 payment periods. This means that for 78 months from the start of the agreement, they need to repay DBP P27,770.46 per modern unit per month or P2.36M per month for the entire fleet.

Table 11. Loan Terms Agreement with DBP

Principal/Amount borrowed	₱1,790,000.00
Rate	6% per annum
Payment periods (months)	78
Payment per period	**₱27,770.46**
Units loaned	85
Total monthly amortization payment for entire fleet	**₱2,360,489.36**

The cost recovery ratio is then computed by dividing the total monthly revenue by the sum of the total monthly cost and total monthly amortization payment for the entire fleet. The cost recovery ratio differs from the farebox recovery ratio which is defined as the ratio of fare revenues with only operating costs, and is therefore expected to be higher when non-operational costs and amortization payments are not considered. But in the case of cooperatives undergoing modernization in the PUVMP, the capital cost of modern units is a significant factor that needs to be considered alongside operational and non-operational costs.

Table 12. Cost recovery ratio of Cooperative Region IV-A in 2023

	Cooperative IV-A 2023
Cost recovery ratio	73.94%

A cost recovery ratio of 73.94% was calculated for Cooperative IV-A in 2023, meaning that fare revenues do not fully recover the cost of operations and amortization payments. According to the focus group discussion with the cooperative, while they were not able to fully recover their total costs for the year, they were able to stay afloat due to the service contracting funds that served as a 'shock absorber' for their finances.

It is also important to note that the cost recovery ratio of Cooperative IV-A is still higher compared to transit farebox recovery ratios seen in developed countries with government-subsidized public transportation such as those in the US (35%) and Europe (44%), but much lower than the Asian average of 137% (WSDOT, 2009). This highlights the financial impacts of PUV modernization for cooperatives. On the other hand, it emphasizes the idea that public transport is a public service and that its operations are not generally profitable from fare collection alone. When public transport as an industry and service is not inherently profitable due to operating and capital costs, government investment should be a basic service provided to the sector who should not be expected to shoulder cost deficits.

For a hypothetical supply side subsidy scheme in which the government covers the cost deficit coming from both operational and amortization costs, ideal government financial support is calculated, shown in Table 13. Government subsidies were identified in two forms: equity subsidy to be paid once during procurement of modern units; and subsidy through net service contracting which is to be implemented on a regular basis year-round.

Cost recovery analysis was done considering two cases: the existing Php 160k equity subsidy; and a proposed Php 500k equity subsidy. The higher equity subsidy value is advocated by the Move As One Coalition (2021), a civil society organization of over 140 organizations, to cover at least 25% of the average cost of a modern jeepney unit—providing an incentive for owners of traditional jeepneys to participate in the modernization program. This proposed amount of Php 500k equity subsidy is actively lobbied by civil society groups during public budget hearings and stakeholder consultations.

The analysis shows the impacts of higher equity subsidies in the amount of service contracting subsidy needed for cost recovery. The additional government subsidy for cost recovery is computed by subtracting the revenue from the sum of the total cost and amortization.

Table 13. Ideal Government Support per Subsidy Scheme

	With Php 160k Equity Subsidy per unit	With Php 500k Equity Subsidy per unit
Monthly Amortization per Unit	₱27,770.46	₱22,495.63
Total Monthly Amortization for the entire fleet	₱2,360,489.36	₱1,912,128.25
Monthly ideal total government subsidy through service contracting	₱1,994,462.01	₱1,546,100.90
Annual ideal total government subsidy through service contracting	₱23,933,544.09	₱18,553,210.80
Ideal annual government subsidy through service contracting per unit	₱281,571.11	₱218,273.07

To ensure cost recovery, the government must ideally provide the following additional subsidies through service contracting:

- Php 282k per unit per year at the current 160k equity subsidy scheme
- Php 218k per unit per year at the proposed 500k equity subsidy scheme

6.5. Hypothetical net service contracting schemes

Given a defined amount for annual government support, we recommend it to be provided through a net service contracting scheme which provides financial support as an incentive for satisfactory performance of a standardized service plan. Based on provided average operational characteristics of Cooperative IV-A shown in Table 14, the effective per-kilometer rate to be paid to cooperatives within the proposed service contracting scheme was calculated and shown in Table 15.

Table 14. Cooperative IV-A Modern PUJ Route Operational Characteristics

Average round trip distance (km)	40
Average number of round trips per day	5.25
Average total kilometers per day	210
Annual kilometers traveled*	54,600

*Assumption: 5 days of operations per week per unit

Table 15. Proposed Service Contracting Payment per Subsidy Scheme

	160k Subsidy One-time	500k Subsidy One-time
Proposed service contracting payment per km per unit	₱5.16	₱4.00
Current Government Service Contracting Payment Scheme	P20/km for traditional units P26/km for modern units	

It can be seen that based on the data from Cooperative IV-A, the per-kilometer rate in a proposed net service contracting scheme is much lower than the current rate used by the government in their limited implementation of service contracting programs, resulting in up to an 85% decrease if paired with a 500k one-time equity subsidy per unit. However, it is important to note that this value is designed for a net service contracting scheme that is implemented year-round, unlike the current implementation of service contracting experienced by Cooperative IV-A which has inconsistent and shorter implementation periods. Additionally, other forms of service contracting programs are being implemented in other regions nationwide, including gross service contracting or *Libreng Sakay* services, or fuel subsidies as in the case of Cooperative NCR.

In designing service contracting schemes, the metric for payments to cooperatives should not be solely based on the number of kilometers traveled, as it may risk the running of unnecessary and excess trips during off-peak hours to artificially boost the number of kilometers traveled per unit. Estupiñán et al. (2007) raises this point as it has been observed that supply side subsidies tend to result in raised costs but without a clear improvement in the level of performance or benefit to the commuting public. We recommend that subsidy payments be linked to clear performance metrics, such as adherence to a proper schedule of public transport trips, with different vehicle frequencies and headways for peak and off-peak hours, designed using passenger demand data to be reliable and efficient in actual operations.

An example of this type of service contracting scheme is Quezon City's Bus Augmentation Program or *Libreng Sakay*. While being a free-ride public transport service with 100% of operating costs effectively subsidized by the local government, the payment of subsidies is still based on adherence to the program's terms of reference which differs for each route. In their case, there are requirements following defined schedules and headways, designated bus stops, and a maximum number of standing passengers to ensure comfort. Government service contracting programs should follow this format of establishing service plan requirements so that improvements in the public transport system that benefit the commuting public can be incentivized by government funding while providing support for transport workers.

Additionally, for the provision of equity subsidies, the government should actively monitor and regulate the per-unit costs of modern vehicles which are observed to rise with the current demand brought by the PUVMP. If the amount of equity subsidy is reactive to the costs of modern units, there is a continuous incentive for unit costs to continue to rise, burdening both transport workers and the government.

These findings illustrate that financial viability is at the core of just transition under PUVMP. The financial burdens of consolidation, acquisition of modern PUVs and loan

amortization, worsened by inconsistent government investment programs do not only affect the annual audited financial statements of cooperatives. They also shape the everyday labor conditions of transport workers who absorb these risks. When government investments are irregular or when amortization costs exceed revenues from farebox and service contracts, transport workers face income stability, are pushed into longer working hours to maximize fare revenue, and experience heightened uncertainty about their continued participation in the industry. Thus, financial structures are inseparable from the well-being of transport workers as major stakeholders of the transition to modernization. Cost recovery is therefore not merely a fiscal concern, but a prerequisite for just transition by maintaining decent work conditions and preventing the displacement of vulnerable PUV drivers and operators.

7. CONCLUSION

The case studies of NCTU transport cooperatives show the diverse experiences of transport workers undergoing franchise consolidation and fleet modernization under the PUVMP. The cases of Cooperatives IV-A and VII can be considered as successful cases based on the definition of Sunio et al. of successful cooperatives in the PUVMP pilot implementation, in that they are able to operate and manage a modern PUV fleet with government support. Cooperative NCR is a notable case because they are unable to comply with the requirements for vehicle modernization due to not being granted a bank loan for buying modern jeepney units. This puts into question the commitment of the government in the program and the factors that influence why cooperatives are unable to participate in the program and why banks are reluctant to provide loans for modern vehicles.

The research successfully shows that a successful transition of a transport cooperative in the PUVMP necessitates government support. In the case of NCTU cooperatives, government support was in the form of equity subsidy, service contracting, and fuel subsidy. Each cooperative emphasized that government support, especially service contracting, was instrumental for them to sustain their transition and modernization. The additional revenue from service contracting enabled cooperatives to fund the purchase of modern vehicles. This shows that adequate government investment should address the primary point of opposition for the implementation of the PUVMP which is the high cost of purchasing modern jeepneys. We then argue that through a cost recovery framework that can be adjusted to the financial contexts of each transport cooperative, adequate government investment can be determined that will ensure that transport workers are equitably supported in a just transition approach to public transport modernization.

While this study centers on industry consolidation and financing, the cases also show that the financial position of cooperatives has direct operations and labor implications. Irregular service contracts, high amortization obligations, and insufficient sources of revenue translate to income stability and require workers to absorb additional operational and administrative tasks, such as longer driving hours, limited trip dispatching, or expanded cooperative duties. In this context, achieving cost recovery is not merely a matter of stabilizing cooperative finances, but a prerequisite for ensuring stable compensation, predictable work arrangements, and decent work standards throughout the transition to modernization. These findings therefore underscore the need for government investment mechanisms that are both financially robust and reflective of the actual economic needs, operational environments, and lived experiences of transport workers.

While the just transition framework identifies decent work as a central component, current assessments tend to emphasize the financial rehabilitation and operational performance of

transport cooperatives. This limited evaluative scope overlooks the broader social dimensions of the transition, particularly its implications for the livelihood and well-being of transport workers. A more comprehensive understanding of just transition requires extending the analysis to include income stability, occupational safety, social protection, and overall quality of work experienced by drivers and other transport workers. In this context, well-funded and sustained government investment, especially a robust service contracting program, becomes critically important. Service contracting not only supports the economic viability of cooperatives but also provides predictable earnings, reduces the need for excessive working hours, and enhances job security for workers. Integrating service contracting as a strategic investment within the just transition framework ensures that modernization efforts do not merely achieve financial recovery, but also contribute meaningfully to the creation of decent, dignified, and sustainable livelihoods in the public transport sector.

We therefore recommend that, as part of the new PTMP implementation, a dedicated government unit be established to analyze the financial performance of transport cooperatives and design a standardized investment framework towards just transition within the PTMP. Such a framework should integrate equity subsidies and service contracting that ensures cost recovery at the minimum for cooperatives while upholding just working conditions and fair compensation for transport workers. Additionally, service contracting schemes must incorporate rigorous monitoring and evaluation systems to guarantee that improvements in commuter service quality are consistently achieved and maintained.

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