

The Philippines' Public Utility Vehicle Modernization Program

Introduction

At 71, Arthur Tugade is embarking on his toughest role yet. He had just been appointed to lead the embattled Department of Transportation (DOTr). But, growing up in the slums of Manila, he was no stranger to challenges.

When his law school classmate, Rodrigo Duterte, the anti-establishment candidate, ran for President during the 2016 national elections, Tugade supported his campaign but did not expect him to win. Political experts viewed Duterte's victory as a signal that voters were frustrated with the slow pace of change. His predecessor, Benigno Aquino III, had been too careful and unwilling to take risks.¹

When Aquino and his Transportation Secretary remarked that traffic was a sign of a "booming economy" and "was not fatalistic,"² they received intense public backlash and were accused of being unsympathetic to the plight of ordinary Filipinos. By 2015, the worsening traffic congestion had become a national crisis. With only a year left in office, the Aquino government introduced initiatives to help alleviate congestion, including the deployment of the Highway Patrol Group of the Philippine National Police to strictly enforce traffic rules, and the launch of the premium Point-to-Point Buses, which provided better service than traditional buses. But these efforts came a little too late.

The worsening traffic congestion, attributed in part to the unreliable public transportation system, required bold and ambitious solutions. The Duterte administration's Public Utility Vehicle Modernization Program (PUVMP) is a comprehensive system reform that aims to transform the road-based public transportation sector. Beyond fleet modernization, which aims to phase out the old carbon-emitting vehicles, the program also sought to introduce regulatory reforms. While the program covers all road-based public transportation, the government decided to prioritize jeepneys since they were the largest in number.

Previous administrations have tried to introduce reforms to the jeepney sector, but various transport groups and their political allies have successfully derailed these attempts. While acknowledging the need for modernization, these groups have opposed the program and refused to cooperate with the government, arguing that jeepneys should be rehabilitated instead of being phased out and replaced with minibuses that bears no resemblance to traditional jeepneys. Although considered by many as a nuisance on the road, jeepneys have undeniably become a cultural icon and a hallmark of Filipino ingenuity.

Tugade, however, was committed to implementing the program. The PUVMP was expected to be completed within the first three years of his term as DOTr Secretary. If successful, this program would be the first of its kind to be implemented at a national scale.

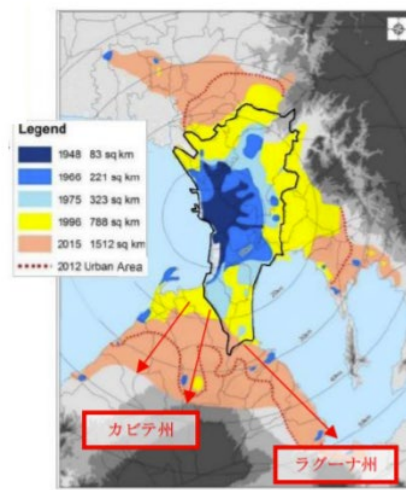
¹ <https://www.rappler.com/nation/aquino-administration-image-problem-urban-issues-traffic-transportation>

² <https://ph.news.yahoo.com/aquino-traffic-sign-booming-economy-110430239.html>

Traffic Congestion

Like many developing cities, the Philippines is urbanizing rapidly. From 2010 to 2015, its urbanization level increased by close to 6 percentage points reaching 51.2% or roughly 52 million people³. From 2010 to 2019, its economic growth has averaged at above 6%, making it one of the fastest growing economies in the region.⁴ Metro Manila, the country's capital region, accounts for close to two-thirds of the country's economy. With economic activity and opportunities disproportionately concentrated in the metropolitan area, people from nearby regions travel to Metro Manila daily, bringing the daytime population up by at least 1 million,⁵ and contributing to traffic congestion. Unsurprisingly, Metro Manila has consistently landed in the top 10 cities with the worst traffic congestion.⁶ Other metropolitan areas, such as Cebu and Davao, are also experiencing worsening congestion.

Exhibit 1. The Expansion of Metro Manila⁷



Source: JICA

The Japan International Cooperation Agency estimates that the country loses \$70 Million a day in 2017 due to traffic congestion. Without any interventions in place, this figure could increase to \$108 Million by 2035⁸.

Roughly 70% of travel demand is serviced by public transportation⁹, but private vehicles, which only account for 31% of trips, take up 78% of the road.¹⁰ With a growing middle class and an unreliable public

³ <https://psa.gov.ph/content/urban-population-philippines-results-2015-census-population>

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<https://www.bis.org/review/r210212j.htm#:~:text=Real%20GDP%20growth%20had%20averaged,average%20from%202010%20to%202019.&text=After%20exhibiting%2084%20consecutive%20quarters,GDP%20decline%20of%2010%20percent>

⁵ <https://openjicareport.jica.go.jp/pdf/12247623.pdf>

⁶ <https://www.rappler.com/moveph/advocacies/manila-worst-traffic-waze>

⁷ https://www.meti.go.jp/meti_lib/report/2019FY/000798.pdf

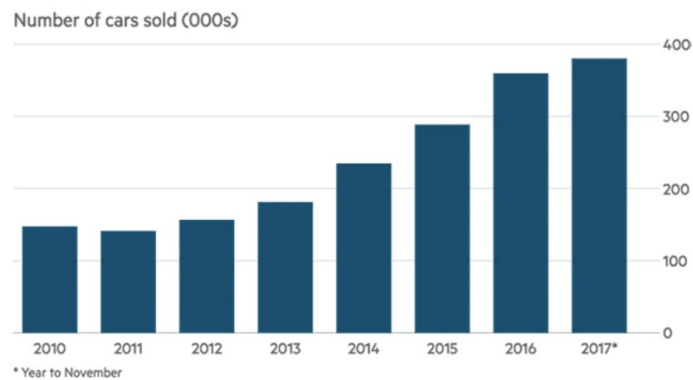
⁸ <https://www.jica.go.jp/philippine/english/office/topics/news/180920.html>

⁹ https://openjicareport.jica.go.jp/pdf/12149605_01.pdf

¹⁰ https://www.meti.go.jp/meti_lib/report/2019FY/000798.pdf

transportation system, Filipinos have turned to automobiles, further adding to congestion. Due to its flexibility and affordability, motorcycles have also become popular in recent years.

Exhibit 2. Increasing Car Sales in the Philippines



Source: Financial Times

Mass Transportation System in the Philippines

While the Philippines has four commuter and urban railway lines, serving Metro Manila and its adjacent regions, mass transportation is still dominated by road-based modes and includes jeepneys, buses, UV Express. Among these modes, jeepneys are the most popular and account for roughly 40% of all motorized trips in the country.¹¹ Although buses are an important transport mode in Metro Manila, and while other major urban centers have started deploying buses to service passengers, most Philippine cities have narrow roads which cannot accommodate buses.

Buses and jeepneys operate on fixed routes, with the former typically running on arterial roads and the latter on primary and secondary roads.¹² The UV Express was originally intended to provide point-to-point service for passengers, but due to poor enforcement, they have operated like buses and jeepneys. Unlike the railway lines, which are heavily subsidized by the government, road-based transport modes rely on farebox revenues.

The public transport sector in the country is poorly coordinated and highly fragmented, with an overwhelming number of single operators. For instance, in Metro Manila, there are over 43,000 jeepney franchises—which authorize jeepneys to operate a route—and roughly 24,000 owners (operators),

¹¹ <https://www.changing-transport.org/modernizing-public-transport-in-the-philippines/>

¹² <https://www-sciencedirect-com.proxy.library.upenn.edu/science/article/pii/S0965856418315416?via%3Dihub>

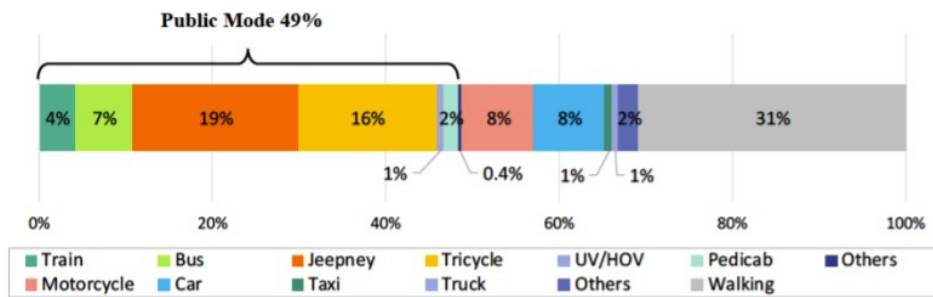
leading to a vehicle/franchise ratio of 1.25. For UV Express, the market is even more fragmented, with a ratio of 1.2.

Exhibit 3. Road-based Public Transportation Modes - Jeepney, Bus, and UV Express



Source: Philippine Daily Inquirer / Manila Bulletin

Exhibit 4. Current Transport Means Ratio in Metro Manila¹³



Source: JICA

Exhibit 5. Public Transportation Agencies in the Philippines

The Philippines’ Department of Transportation (DOTr) is the lead agency mandated to prepare plans and formulate policies. For road-based transport, the DOTr has attached agencies mandated to implement its policies, including the **Land Transportation Franchising and Regulatory Board (LTFRB)**, which awards public transport franchises and regulates fares, the Land Transportation Office (LTO), which is responsible for vehicle registration, and the Office of Transportation Cooperatives (OTC), which accredits transport cooperatives.

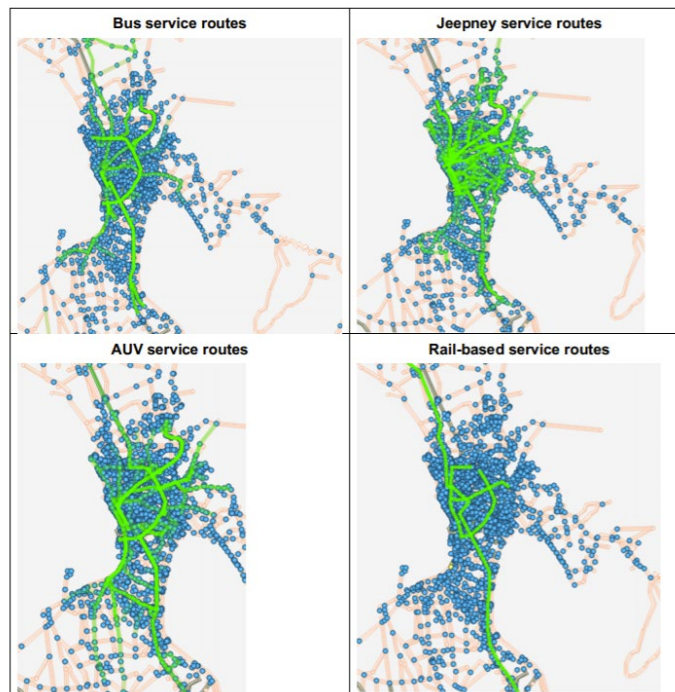
¹³ https://www.meti.go.jp/meti_lib/report/2019FY/000798.pdf

Exhibit 6. Buses, jeepneys, and UV Express in Metro Manila¹⁴

Mode	Buses	Jeepneys	AUVs (UV Express)
Units	9,669	54,843	5,953
Routes	98	685	137
Franchises	263	43,541	2,622
Operators	157	24,387	2,527
Operator – Franchise ratio	1.7	1.8	1.0
Operator – Unit Ratio	29.7	2.2	1.2
Franchise – Unit Ratio	17.7	1.25	1.2
Average speed (km/h)	17.5	14.0	25.2
Average length of route (km)	37.6	11.3	15.2

Source: LTO, LTFRB, DOTr

Exhibit 7. Public Transport Routes in Metro Manila¹⁵



Source: Biona/ GIZ

King of the Road

When Americans troops departed the Philippines after World War II, they left behind surplus military jeeps. Filipinos then repurposed these vehicles to accommodate more passengers, elongating its body, adding side-facing passenger seats, and decorating its steel frame. As the demand for jeepneys grew,

¹⁴ https://www.changing-transport.org/wp-content/uploads/2016_Full_NAMA_Concept_Jeepney_NAMA.pdf

¹⁵ Ibid.

small, family-owned businesses started manufacturing them from scratch, typically using secondhand engine from Japan, and sourcing 20% to 50% of its body from surplus materials locally.¹⁶ The jeepney sector and its ancillary industries are an important source of income and employment. In Metro Manila alone, over half a million people are believed to be involved in the sector.¹⁷

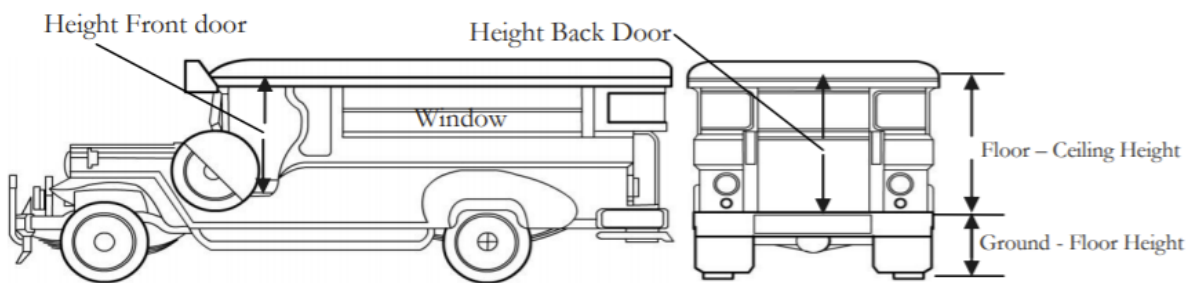
Over seven decades later, the jeepney remains the most popular mode of mass transit. Although exact figures are hard to come by, it is estimated that there are around 180,000 jeepneys nationwide, with over a third in Metro Manila alone. Forced to squeeze into a tight space, most passengers find riding a jeepney uncomfortable, but with a base fare of only PHP 9 (\$.019), it was affordable and offered the cheapest service. Its size was also well-suited for narrower roads and passengers were provided with a door-to-door service. Because there are no environmental or safety standards regulating the jeepney, they are also heavy polluters, contributing 7% of GHG emissions in the transport sector.¹⁸

Exhibit 8. Evolution of the Jeepney - American Willy Jeep (left), Traditional Jeepney (center), Modern Jeepney (Right)



Source: Land Transportation Franchising Regulatory Board

Exhibit 9. Anatomy of a Jeepney



Source: Vergel, et al.

¹⁶ <https://www.wctrs-society.com/wp-content/uploads/abstracts/lisbon/selected/01306.pdf>

¹⁷ https://www.changing-transport.org/wp-content/uploads/2016_Full_NAMA_Concept_Jeepney_NAMA.pdf

¹⁸ Ibid.

Jeepneys typically load and unload passengers in the middle of the road. They are also infamous for cutting off other motorists, are blamed for contributing to worsening traffic congestion, and posing road safety hazard. Their brazen disregard for traffic rules has earned them their nickname of “king of the road”.

This reckless driving can be attributed in part to the “boundary system”, an exploitative system that has thrived for decades. The driver pays a fee (“boundary”) to the jeepney operator (owner) for using their vehicle. Since the driver’s revenue depends on the ridership, the system has incentivized them to overload their units and encouraged street competition. Drivers also often work extended hours to make ends meet.

The Modernization Program

Arthur Tugade was only a few months into his stint at DOTr secretary when several groups staged a transport strike to protest the modernization program, forcing some schools to suspend classes and leaving several commuters stranded. Although there have been several attempts to push for modernization in the past, transport groups have successfully derailed its implementation. But Tugade was resolute. His resolve to scrap jeepneys was also personal. “Where am I coming from when I am insisting on the modernization program? My son died of asthma...That’s why I don’t like anything that emits smoke. That’s why I hate any form of transportation that pollutes the air and causes asthma.”¹⁹

In 2013, the government issued a policy phasing out units that were older than 15 years as part of its broader efforts to modernize public transport services.²⁰ A group of transport operators filed a petition at the Court of Appeals to suspend the phaseout, but in 2015, the court ruled in favor of the government.²¹ Transport officials later clarified that the phaseout will not happen in 2016, leaving the decision to the incoming administration.²²

After months of planning, the DOTr launched the Public Utility Vehicle Modernization Program (PUVMP) in June 2017. PUVMP is often equated with a jeepney phaseout, but its objectives go beyond fleet modernization. The flagship program of the Duterte administration aims to restructure the transportation industry, reform existing regulations and practices, and provide a safe, comfortable, reliable, and environmentally sustainable transportation for passengers.²³ Although the program targets to reform all road-based modes, including buses and the UV Express, the government decided to prioritize jeepneys, which are the largest in number²⁴.

Unlike Seoul’s Public Transport Reform Program, where reforms were drastically introduced, the DOTr opted for a more gradual approach, targeting the full implementation of the PUVMP to June 2020²⁵. The three-year transition period would give industry players enough time to adjust to the new system.

¹⁹ <https://tribune.net.ph/index.php/2019/02/11/the-art-tugade-story-man-in-a-million/>

²⁰ https://ppp.gov.ph/in_the_news/ltfrb-sets-final-projects-for-aquinos-term/

²¹ <https://www.manilatimes.net/2015/08/05/business/dotc-puj-operators-tackle-jeepney-modernization/206792/>

²² <https://www.pressreader.com/philippines/the-freeman/20160622/281651074401030>

²³ <https://ltfrb.gov.ph/puv-modernization-2/>

²⁴ <https://www.rappler.com/nation/dotr-launches-public-utility-vehicle-modernization-program>

²⁵ <https://www-sciencedirect-com.proxy.library.upenn.edu/science/article/pii/S0965856418315416?via%3Dihub>

Program Components

The program has ten components, all of which are intended to be rolled out during the transition period.

Regulatory reform. The Omnibus Franchising Guidelines provides the framework and regulations for the program, outlining the new franchising procedures, providing vehicle specifications, and laying out other operational details.

The program significantly changes the process of awarding franchises. Under the existing system, operators would be granted a franchise for a single or a certain number of units to operate a route. A new franchise will be issued on the same route if the Route Measured Capacity, a formula the DOTr uses, determines that additional units are necessary. This meant that several operators could ply the same route. Under the new system, the LTFRB invites operators to apply for a route and specifies the number and type of units required. Only corporations or cooperatives are eligible to participate in the selection process, and only one group will be granted with a franchise.

Route Rationalization and Local Public Transport Planning. Route rationalization aims to simplify the current network and provide more efficiently planned routes. The appropriate type and quantity of public transit will be identified in each corridor based on passenger demand, which means that jeepney drivers and operators may be displaced from the routes they are currently serving. The route rationalization studies only include Metro Manila. Other local government units will receive capacity training from various academic institutions and will be tasked to prepare their own public transport route plans.

Fleet Modernization. Unlike traditional jeepneys, modern units must comply with safety and environmental standards. Vehicle dimension standards were formulated to ensure the safety and convenience of passengers. The modernized unit will have a larger capacity, carrying up to 30 passengers from the current 16 to 24. Jeepneys usually running on Euro 2 engines had to upgrade to Euro 4 or electric engines. The new vehicles will also be equipped with on-board devices such as CCTV, GPS, Automated Fare Collection System, speed limiters, and Wi-Fi.

Industry Consolidation. Small industry players are required to merge and form a cooperative or set up a corporation. By consolidating, operators can apply a fleet management system to help them manage and dispatch their vehicles more efficiently. The capital and operating expenses are also spread among the group, relieving jeepney drivers from responsibility of having to shoulder these costs. Only consolidated groups are eligible for financing and can apply for a franchise to operate.

Financing. Since affordability of the modernized units is one of the program's biggest challenges, the DOTr partnered with two government banks to provide subsidies and concessional loans to jeepney operators, following a 5-6-7 model. Banks required an equity down payment, which was 5% of the vehicle's cost. To help operators cover the upfront capital, the government subsidizes up to PhP 80,000 (\$1,672) of the equity requirement. Borrowers are charged with an interest rate of 6% annually and the loan is payable in 7 years. They will also be given a six-month grace period before their first amortization payments are due.

Vehicle Useful Life. The scrappage program ensures that old units will not be sold or repurposed. The proceeds can be used to help finance the new units.

Stakeholder Support. Skills training, livelihood support, and employment assistance will be provided to affected stakeholders. In April 2019, the “Tsuper Iskolar” program was launched, with 900 drivers identified as the initial beneficiaries.²⁶

Exhibit 10. Components of the PUVMP



Source: Department of Transportation

The Halfway Mark

The Taguig Transport Service Cooperative (TTSC), chaired by Freddie Hernandez, was one of the first groups selected by the DOTr to participate in the PUVMP’s pilot implementation. Hernandez was hesitant at first, but “felt pressured” when told that the government would choose a different group if his cooperative “did not accept the program.”²⁷ In November 2018, TTSC started operating 20 modern units. Today, it has a fleet of 90 units, with each generating PhP 7,000 (\$146) in profits daily. Having experienced the benefits of modernization firsthand, Hernandez has become the poster boy for the PUVMP.

Like Hernandez, most modern jeepney operators were happy about their revenues, and some are already looking to expand their operations. Because of the increased vehicle capacity and longer operating hours, ridership has gone up, although the figures varied by route.

The fare for modern units remained the same at PhP 9 (\$.019) for units without A/C, but had a 20% premium for those with A/C. The cost of operating the modern units, however, were higher compared to traditional units. Modern jeepneys also had to cover monthly subscription costs for on-board devices.²⁸ Despite this, profits for each unit ranged from PhP 4,000 (\$84) to PhP 10,000 (\$209).

Drivers and conductors are now salaried employees, work in eight-hour shifts, and are guaranteed fixed income as well as health and employment benefits. While they previously had to maintain and repair the unit themselves, the manufacturers now cover this expense. No longer constrained by the boundary

²⁶ <https://www.tesda.gov.ph/Gallery/Details/10295>









²⁷ <https://newsinfo.inquirer.net/1315421/amid-pandemic-more-questions-raised-over-jeepney-modernization>

²⁸ https://www.changing-transport.org/wp-content/uploads/2019-11_GIZ_Jeepney-Modernisation_Early-Evaluation_final.pdf

system, drivers do not have to compete for passengers. However, since passengers have become accustomed to road-side pick-ups and drop-offs, modern jeepney drivers still stopped frequently and indiscriminately, allowing passengers to board at non-designated stops.²⁹

Passengers have also embraced the new jeepneys, with some preferring to wait longer just to get on a modernized vehicle. The new jeepneys are more comfortable. Most units have A/C installed, providing relief from the tropical heat. The jeepneys also have free Wi-Fi, which helped pass the time during the rush hour traffic.³⁰

Exhibit 11. Comparison of operational characteristics of traditional and modern Jeepney ³¹

Average (range)		Traditional Routes	Modern Routes	Average % ch.
	Daily operating hours	14hrs (13-15hrs)	19 hours (11-22 hours)	+36%
	Vehicle utilisation	127km (60km-190km)	150km (80-220km Euro IV diesel) (80-120km E-Jeepney)	+18%
	Days of operation per week	5.6 days (5.5-6 days)	6 days	+7%
	Staff per vehicle/day	1 driver (1-2 drivers)	2 drivers, 1.5 conductors (1-2.5 drivers, 0-2.5 conductors)	+350%
	Daily staff earnings	650 PHP (11.57 EUR) (574-755 PHP – 10.21-13.44 EUR) (non-salaried)	600 PHP (10.68 EUR) + benefits (537 M/W-1,000+ PHP – 9.56-17.80+ EUR) (salaried)	~
	Vehicle capacity	20 seats (16-24 seats)	30 seats max. (22-24 seated)	+50%
	Fuel economy	5.9 km/l (4.2-7.8 km/l)	5.2 km/l (4.2-6.2 km/l)	-12%
	Fuel economy per passenger/km	111 km/l	156 km/l	+41%
	Daily ridership Pax./day/vehicle	300 (150-350)	460 (Euro IV Jeep 300-750) (E-Jeepney 200-250)	53%

Source: GIZ³²

²⁹ Ibid.

³⁰ <https://tribune.net.ph/index.php/2019/09/23/i-love-this-ride/>

³¹ Ibid.

³² https://www.changing-transport.org/wp-content/uploads/2019-11_GIZ_Jeepney-Modernisation_Early-Evaluation_final.pdf

Challenges Ahead

Although initial evaluations and feedback from transport groups who have modernized were positive, the program has been beset by several challenges. With only a little over six months left until the June 2020 deadline, less than 3% of jeepneys nationwide have been modernized.

Most of the modernized jeepneys are operating on developmental routes, which are routes previously unserved by public transportation, instead of the existing routes since the government struggled to convince traditional jeepneys operators to modernize their units. Several industry players, who were worried about losing their autonomy or did not get along with their cooperative's leadership, have also resisted consolidation. Since their franchises were still valid, they continued operating their routes, and at times, competed with modern jeepneys for riders.

The prices of the modern units have increased sharply in two years since the program was launched. From PhP 1.6 million (\$33,470) in 2017, modern jeepneys were now sold at an average of PhP 2.4 million (\$50,206). Despite the 50% increase in vehicle costs, the government's equity subsidy was still pegged at PhP 80,000 (\$1,672), which meant that transport operators had to secure additional financing to meet the banks' equity requirement.

Although the DOTr was studying proposals to increase the equity subsidy, government funds were also limited. The Department of Budget and Management has initially appropriated PhP 2.2 billion (\$46 million), which would only cover the subsidies of around 28,000 units. Additional allocations would depend on the program's progress and future tax collections, which meant that it would have to compete for funding with other priority projects. By the end of 2019, less than 3% of this budget has been utilized.

Transport operators, whose financial literacy was limited, have complained that the banks' requirements were too cumbersome. Since most operators were also unbanked, they were unsure about taking out loans, fearing repercussions if they were unable to make their payments on time. The low budget utilization could also be attributed to the supply of modern units, which has failed to keep pace with demand. Local manufacturers could only produce 30 to 50 units each month, and while several firms have started importing units to meet the demand, the government banks and transport operators were generally skeptical about these units' quality.

Providing loans to replace 180,000 units would require PhP 300 billion (\$6.3 billion)³³, but government banks have only allocated PhP 2.5 billion (\$52 million) for their loan facility so far. The government was relying on private financing institutions to fill the gap once the sector has shown positive repayment performance. Although supportive of the modernization program, private institutions could not match the concessional rates offered by government banks and were hesitant to extend credit to jeepney operators who they viewed as potentially high-risk clients.

Finally, the DOTr and its attached agencies' institutional capacities were limited compared to the scale and scope of the program. These institutional limitations are a major reason behind the program's slow implementation.

³³ https://www.changing-transport.org/wp-content/uploads/2019-11_GIZ_Jeepney-Modernisation_Early-Evaluation_final.pdf

The Critics – An Alternative PUVMP?

In October 2018, almost a year and a half after the program was launched, Arthur Tugade was summoned yet again before the Senate. Several Senators have been critical of the PUVMP, with the most vocal being Grace Poe, who ran an unsuccessful presidential campaign in 2016.³⁴ Poe previously recommended that the modernization program should be done in phases, focusing on highly urbanized cities first before expanding it nationally.³⁵

During the Senate hearing, there were several proposals to extend the transition period, but Tugade remained firm, "We shall continue with the PUV Modernization Program. For the sake of this country, let us have political will. No delays, no postponement, let us get this done."³⁶ With government programs in the Philippines closely tied to election cycles, and without any assurance that the program would continue beyond the Duterte administration, government officials wanted to complete the jeepney modernization within their term.

In August 2019, Poe filed a bill pushing for "just and humane" modernization program. Under her proposal, operators only have to upgrade their engines instead of purchasing a new unit. Transportation officials and vehicle manufacturers have already dismissed this proposal arguing that, "Euro 4 compliance cannot be met by merely replacing a used surplus diesel engine with a Euro 4 diesel engine".³⁷ Poe's bill also raises the equity subsidy to 10% of the vehicle cost, caps the interest rate to 4%, and extends the payment period to at least 15 years.³⁸

With the deadline for modernization drawing near and realizing that transport officials will not give in to political pressure, the transport strikes have only intensified. While acknowledging the need for modernization, various transport groups have opposed the program claiming that it was anti-poor. Even with financing subsidies and concessional loans, the modernized units were beyond reach for most jeepney drivers, who were only earning around PhP 650 (\$14) daily. Unable to comply with the demands of the program, transport groups feared that small operators might lose their franchise to large corporations. George San Mateo, a convenor of the No to Jeepney Phaseout Coalition, added that the program will displace 600,000 jeepney drivers and 250,000 small jeepney operators, and that, forcing operators to buy expensive and imported jeepneys will only benefit corporations, manufacturers, banks.³⁹ Instead of a jeepney phaseout, the groups are advocating for the rehabilitation of their old units.⁴⁰

Discussion points

With only a few months left before the program's deadline, and under 3% of jeepneys modernized, what course of action should the Department of Transportation take? Should the government implement all program components at the same time? If not, which program component should they prioritize? Should the government have focused on modernizing jeepneys first?

³⁴ Note: Presidents are elected to a 6-year term and they cannot seek a second term.

³⁵ <https://www.rappler.com/nation/senate-poe-jeepney-modernization-cost-operators-drivers>

³⁶ <https://news.abs-cbn.com/business/10/13/18/why-transport-cooperatives-support-jeepney-modernization>

³⁷ <https://www.carguide.ph/2018/04/why-cant-jeepneys-just-use-new-engines.html>

³⁸ <https://newsinfo.inquirer.net/1315421/amid-pandemic-more-questions-raised-over-jeepney-modernization>

³⁹ <https://www.manilatimes.net/2016/01/31/news/top-stories/groups-to-protest-jeepney-phaseout/242408/>

⁴⁰ <https://businessmirror.com.ph/2019/10/01/despite-transport-strike-puv-modernizations-a-go/>