Proceedings 2025-21

The Future of a Filipino Icon

The Jeepney and Role of Manufacturing

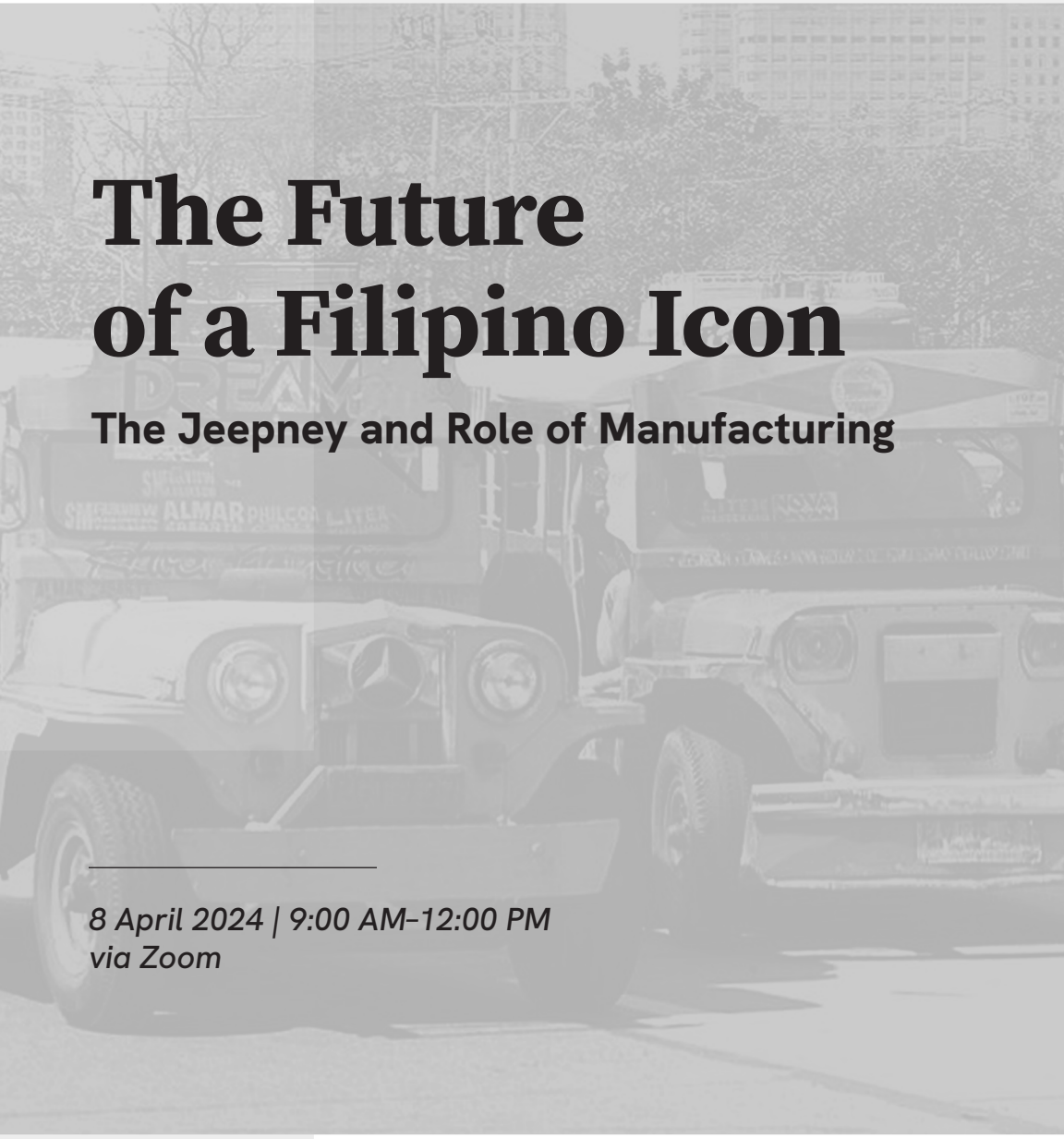
8 April 2024 | 9:00 AM–12:00 PM
via Zoom

upcids Political Economy

UNIVERSITY OF THE PHILIPPINES
CENTER FOR
INTEGRATIVE AND
DEVELOPMENT
STUDIES

The Future of a Filipino Icon

The Jeepney and Role of Manufacturing



8 April 2024 | 9:00 AM–12:00 PM
via Zoom

UP CIDS Proceedings
is published by the

University of the Philippines
Center for Integrative and Development Studies
Lower Ground Floor, Ang Bahay ng Alumni
Magsaysay Avenue, University of the Philippines
Diliman, Quezon City 1101

Telephone: (02) 8981-8500 loc. 4266 to 4268 / (02) 8426-0955
Email: cidspublications@up.edu.ph
Website: cids.up.edu.ph

cids.up.edu.ph

ISSN 2718-9295 (Print)
ISSN 2718-9309 (Online)

Cover image credit

"Traditional jeepneys along Elliptical Road in Quezon City on February 3, 2023"

Ben Briones, Philippine News Agency, Wikimedia Commons, https://commons.wikimedia.org/wiki/File:Traditional_jeepneys_along_Elliptical_Road_in_Quezon_City_on_February_3,_2023.jpg

Table of Contents

2 Opening Remarks

Rene Ofreneo, PhD

4 Presentations

4 Study on the PUV Modernization Program
Dr. Teodoro Mendoza

9 Viability of Locally Manufactured Hybrid or E-Jeepneys
Mr. Elmer Francisco
Architect Leonard John Sarao

14 Panel of Reactors

14 Response from Government

16 Response from UP Diliman on Possible Collaborative Efforts

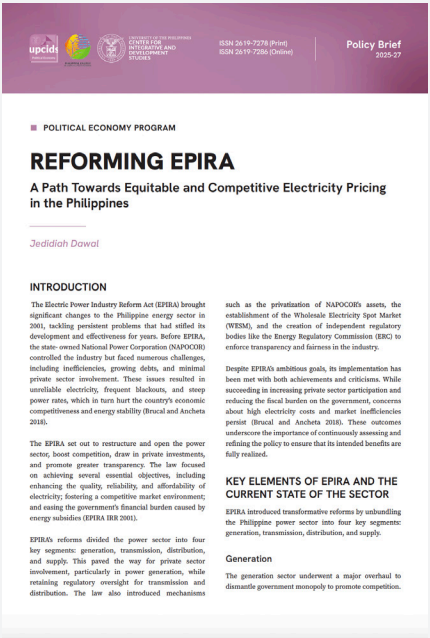
20 Open Forum

32 Closing Remarks

Dr. Antoinette Raquiza

35 References

Download related policy papers for *free*



ISSN 2619-7278 (Print)
ISSN 2619-7286 (Online)

Policy Brief
2025-27

POLITICAL ECONOMY PROGRAM

REFORMING EPIRA

A Path Towards Equitable and Competitive Electricity Pricing in the Philippines

Jedidiah Dawal

INTRODUCTION

The Electric Power Industry Reform Act (EPIRA) brought significant changes to the Philippine energy sector in 2001, tackling persistent problems that had stifled its development and effectiveness for years. Before EPIRA, the state- owned National Power Corporation (NAPOCOR) controlled the industry but faced numerous challenges, including inefficiencies, growing debts, and minimal private sector involvement. These issues resulted in unreliable electricity, frequent blackouts, and steep power rates, which in turn hurt the country's economic competitiveness and energy stability (Brucal and Ancheta 2018).

The EPIRA set out to restructure and open the power sector, boost competition, draw in private investments, and promote greater transparency. The law focused on achieving several essential objectives, including enhancing the quality, reliability, and affordability of electricity; fostering a competitive market environment; and easing the government's financial burden caused by energy subsidies (EPIRA IRR 2001).

EPIRA's reforms divided the power sector into four key segments: generation, transmission, distribution, and supply. This paved the way for private sector involvement, particularly in power generation, while retaining regulatory oversight for transmission and distribution. The law also introduced mechanisms such as the privatization of NAPOCOR's assets, the establishment of the Wholesale Electricity Spot Market (WESM), and the creation of independent regulatory bodies like the Energy Regulatory Commission (ERC) to enforce transparency and fairness in the industry.

Despite EPIRA's ambitious goals, its implementation has been met with both achievements and criticisms. While succeeding in increasing private sector participation and reducing the fiscal burden on the government, concerns about high electricity costs and market inefficiencies persist (Brucal and Ancheta 2018). These outcomes underscore the importance of continuously assessing and refining the policy to ensure that its intended benefits are fully realized.

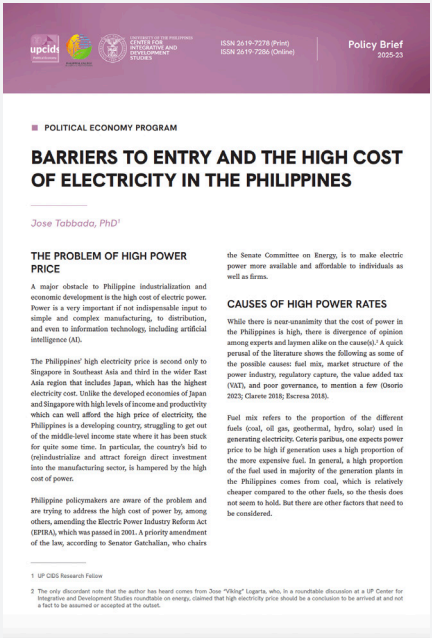
KEY ELEMENTS OF EPIRA AND THE CURRENT STATE OF THE SECTOR

EPIRA introduced transformative reforms by unbundling the Philippine power sector into four key segments: generation, transmission, distribution, and supply.

Generation

The generation sector underwent a major overhaul to dismantle government monopoly to promote competition.

Reforming EPIRA: A Path Towards Equitable and Competitive Electricity Pricing in the Philippines



ISSN 2619-7278 (Print)
ISSN 2619-7286 (Online)

Policy Brief
2025-23

POLITICAL ECONOMY PROGRAM

BARRIERS TO ENTRY AND THE HIGH COST OF ELECTRICITY IN THE PHILIPPINES

Jose Tabbada, PhD[1]

THE PROBLEM OF HIGH POWER PRICE

A major obstacle to Philippine industrialization and economic development is the high cost of electric power. Power is a very important if not indispensable input to simple and complex manufacturing, to distribution, and even to information technology, including artificial intelligence (AI).

The Philippines' high electricity price is second only to Singapore in Southeast Asia and third in the wider East Asia region that includes Japan, which has the highest electricity cost. Unlike the developed economies of Japan and Singapore with high levels of income and productivity which can well afford the high price of electricity, the Philippines is a developing country, struggling to get out of the middle-level income state where it has been stuck for quite some time. In particular, the country's bid to (re)industrialize and attract foreign direct investment into the manufacturing sector, is hampered by the high cost of power.

Philippine policymakers are aware of the problem and are trying to address the high cost of power by, among others, amending the Electric Power Industry Reform Act (EPIRA), which was passed in 2001. A priority amendment of the law, according to Senator Gatchalian, who chairs the Senate Committee on Energy, is to make electric power more available and affordable to individuals as well as firms.

CAUSES OF HIGH POWER RATES

While there is near-unanimity that the cost of power in the Philippines is high, there is divergence of opinion among experts and laymen alike on the cause(s).[2] A quick perusal of the literature shows the following as some of the possible causes: fuel mix, market structure of the power industry, regulatory capture, the value added tax (VAT), and poor governance, to mention a few (Osorio 2023; Clarete 2018; Escresa 2018).

Fuel mix refers to the proportion of the different fuels (coal, oil gas, geothermal, hydro, solar) used in generating electricity. Ceteris paribus, one expects power price to be high if generation uses a high proportion of the more expensive fuel. In general, a high proportion of the fuel used in majority of the generation plants in the Philippines comes from coal, which is relatively cheaper compared to the other fuels, so the thesis does not seem to hold. But there are other factors that need to be considered.

1 UP CIDS Research Fellow

2 The only discordant note that the author has heard comes from Jose "Viking" Logarta, who, in a roundtable discussion at a UP Center for Integrative and Development Studies roundtable on energy, claimed that high electricity price should be a conclusion to be arrived at and not a fact to be assumed or accepted at the outset.

Barriers to Entry and the High Cost of Electricity in the Philippines

cids.up.edu.ph/collection-database

Get your policy papers published.

Download open-access articles.

The Philippine Journal of Public Policy: Interdisciplinary Development Perspectives (PJPP), the annual peer-reviewed journal of the UP Center for Integrative and Development Studies (UP CIDS), welcomes submissions in the form of full-length policy-oriented manuscripts, book reviews, essays, and commentaries. The PJPP provides a multidisciplinary forum for examining contemporary social, cultural, economic, and political issues in the Philippines and elsewh ere. Submissions are welcome year-around.

For more information, visit cids.up.edu.ph.
All issues/articles of the PJPP can be downloaded for free.

Get news and the latest publications.

Join our mailing list to get our publications delivered straight to your inbox! Also, you'll receive news of upcoming webinars and other updates.

bit.ly/signup_cids

We need your feedback.

Have our publications been useful? Tell us what you think.

bit.ly/dearcids

About the Proceedings

The Philippine jeepney has symbolized Filipino ingenuity and resourcefulness. A legacy of the post-war era, the first jeepneys were made by reconfiguring military vehicles left behind by the departing American troops into open-aired public utility vehicles. Leading this effort of providing an affordable and accessible mode of transportation for working-class commuters were domestic manufacturers, notably, Francisco Motors and Sarao Motors. Since then small makers have joined the industry, making the jeepney a ubiquitous presence in the country's not only in the urban landscape, but also in the rural areas where public transportation is scarce.

Today, this heritage vehicle that has become a Filipino icon may soon be a thing of the past. The Philippine government's Public Transport Modernization Program (PTMP), launched in 2017 aimed at making public transport system "safer and more efficient, convenient, and reliable", has sought to phase out the traditional jeepneys, replacing them with imported bigger, airconditioned electric vehicles – each estimated to cost between P1.3 million to P3 million. Noteworthy, while the PTMP's aims are laudable, it is short on options that would allow Filipino manufacturers to modernize the jeepneys partly by tapping homegrown innovations and thus provide a path for jeepney drivers to own their vehicles, without losing their autonomy.

In an effort to promote an inclusive and Filipino innovation-driven Public Transport Modernization Program (PTMP) , the Political Economy Program (PEP) sought to examine the challenges of and possibilities for the jeepney local manufacturing for national industrialization. Specifically, the RTD aimed to:

1. shed light on the jeepney manufacturers' proposals and plans in response to the PUV Modernization Program;

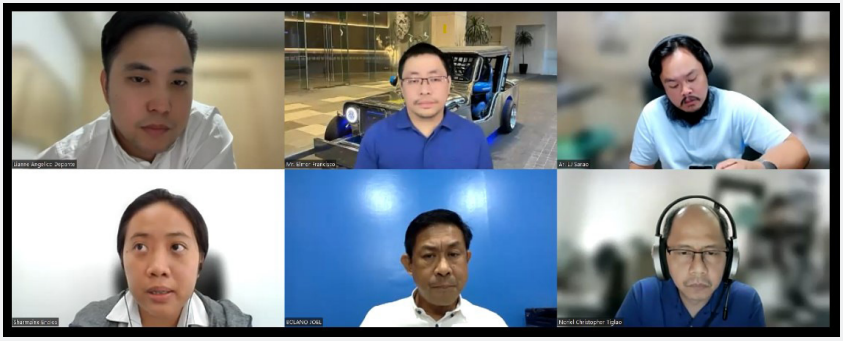
2. explore the possibility of tapping more affordable clean and green technologies for the jeepney in the transition to a low or zero carbon emission future;

3. promote collaboration among manufacturers, government, university research and development community, jeepney drivers, and other stakeholders on the issue of jeepney modernization; and

4. develop a set of recommendations for government agencies and financial institutions.

The RTD was moderated by Asst. Prof. Lianne Angelico C. Depante of the Faculty of Management and Development Studies, University of the Philippines (UP) Open University and was organized by the Political Economy Program (PEP). The Center for Integrative and Development Studies is UP's policy research unit which tackles policy issues pertaining to education and capacity development, development paradigms, and critical concerns in social, political, and cultural studies. PEP seeks to drive policy and institutional reforms by conducting problem-solving research, fostering multi-sectoral collaboration, and promoting a political economy approach to inclusive and sustainable development.

The RTD was held on 8 April 2024 from 9:00 AM to 12:00 PM via Zoom.



■ **Figure 1.** Asst. Prof. Lianne Angelico Depante of the UP Open University, Elmer Francisco of Francisco Motors, Ar. Leonard John Sarao of Sarao Motors, Sharmaine Enales of DOTr, Joel Bolano of LTFRB, and Dr. Noriel Christopher Tiglao of UP NCPAG answer the audience questions during the open forum of the RTD: Jeepney and the role of local manufacturing (from left to right, top down). Source: PEP

Opening Remarks

Rene Ofreneo, PhD

Professor Emeritus, UP School of Labor and Industrial Relations (SOLAIR)

In his opening remarks, Dr. Rene Ofreneo discussed the efforts of the Political Economy Program (PEP) to contribute to the revival and resurgence of manufacturing in the Philippines. He recalled previous efforts of the Program to bring together policy experts and concerned sectors to revitalize the maritime industry, following the filing for rehabilitation of Subic-based shipbuilder Hanjin Heavy Industries and Construction Philippines in 2019.

He also reiterated how different countries are currently focused on industrial policy, including the United States of America, Europe, and Russia. He highlighted the importance of inclusivity and participation of key stakeholders in the government's review and implementation of the Jeepney Modernization Program. As a side note, he also commented on the industry roadmaps that government has produced since 2012, but most of them remain aspirational. There was a lack of a "big push" on the part of the government. He gave the example of the Comprehensive Automotive Resurgence Strategy (CARS) Program of the Department of Trade and Industry (DTI), where the government did not prioritize local vehicle manufacturers, and instead sought international investors like Toyota and Mitsubishi by providing fiscal incentives amounting to approximately 17 to 20 billion pesos—money that could have been awarded to local manufacturers. Moreover, he asserted that industrial policies have a "nationality." Had the incentives been given to Filipino manufacturers, these would have greatly boosted domestic industry.

He called on the RTD speakers and participants to include the issue of "just transition" in the discussion. No one should be left behind while the country's economy is being restructured in response to climate emergencies and industrial changes. Dr. Ofreneo called for the "indefinite suspension" of the

jeepney modernization, instead of ending it at the end of April 2025. This is to address deeper issues including the country's lack of an efficient mass public transport system and the constant increase in the number of secondhand cars in major cities, resulting in a catastrophe or what is called "carmaggedon."

He believed that the roundtable discussion significantly contributes to the crafting of the solutions, and he looked forward to a productive conversation.

Presentations

Study on the PUV Modernization Program

Dr. Teodoro Mendoza

Science Director, Community Legal Help and Policy Center

Dr. Teodoro Mendoza presented his study on the PTMP, with a focus on jeepney modernization. He started his presentation on the meaning and goals of the PTMP.

> *"Ano po ang goals ng PUV modernization? Ito raw ay para maging safe, komportable, malinis, at sapat ang byahe. Magiging predictable ang travel time para makapasok tayo sa oras. Ito rin ay maging environment-friendly.. Sa jeepney modernization program, papalitan daw ang iconic traditional jeepneys nang mas ligtas, mas mabisa, at ecology-friendly vehicles.Hindi sila pollutive, walang hazardous gases, at particulate matter na marami daw doon ay mga carcinogenic"*[1]
>
> (What are the goals of the PUV modernization? It supposedly aims to make traveling safe, comfortable, clean, and adequate. It will also make travel time predictable. The Jeepney Modernization Program will replace the iconic traditional jeepneys with safer, more efficient, and ecology-friendly vehicles.[2])

1 This represents a near-verbatim account of the presentation. Minor edits and translations have been done for readability.

2 Lu, Brian James. 2024. "Navigating the landscape of jeepney modernization." *Philippine News Agency*, January 6, 2024. https://www.pna.gov.ph/opinion/pieces/813-navigating-the-landscape-of-jeepney-modernization

He discussed the heavy reliance of Philippine urban areas on public transportation: 80 percent of the overall ridership and trips depend on public transportation, 40 percent of which comprises jeepneys. He said: "*Kung aalisin natin ang mga jeepney, pilay po ang ating bansa. Pilay po ang mga komunidad natin.*" (Our country and communities will be crippled if we take away the jeepneys.) He also highlighted how jeepneys are used not merely for transporting people, but also for transporting goods to the market.Dr. Mendoza acknowledged the shortcomings of jeepney operators and drivers who mainly deploy the "cut and weld" assembly[3] and put the blame for the lack of standardization on the government. He also pointed to the problem of misplaced funding in which support goes to international investors instead of local fabricators and manufacturers.

The Department of Transportation (DoTR) Secretary Jaime Bautista said that jeepney modernization will strengthen the convenient, accessible, safe and secure, and affordable (CASA) program in the transport sector. Secretary Bautista added that more jobs will be generated among mechanics, dispatchers, and administrative staff, among others.

However, Dr. Mendoza pointed out that CASA does not mention the role of local manufacturers in the building of the modern e-jeepneys.

Dr. Mendoza's discussion outlines several key objectives of the Jeepney Modernization Program. These goals include the consolidation of the jeepney drivers and operators, route rationalization by local government units (LGUs), establishment of lay-over garages, and implementation of a Driver's Training Program. He highlighted that Department Order No. 2017-011, entitled Omnibus Franchising Guidelines, does not include any objectives related to local manufacturers of the modernized jeepneys who have had long experience in manufacturing. He asked, "Why were they not consulted by the government? Why prioritize the buying of more expensive imported vehicles?"

---

3 "Cut and weld" assembly in traditional jeepney manufacturing refers to the manual process of cutting metal components—often salvaged or repurposed—and welding them together to form the vehicle's chassis and body, allowing for highly customized, handcrafted designs typical of Philippine jeepneys.

One of the primary aims of the program is to bring together Jeepney drivers and operators into cooperatives or corporations. This consolidation is expected to streamline operations, improve efficiency, and enhance the overall management of public utility vehicles. This highlights the importance of making the actual stakeholders involved in the implementation of the program. However, Dr. Mendoza also pointed out that this goal can be difficult because the government wanted to phase out all traditional jeepneys so that the drivers give up their individual franchises and their units to the corporations or cooperatives. This does not only potentially harm the transport system and the commuters, but it also puts a pressure on the drivers, operators, and cooperatives to be able to finance the new replacement modernized jeepneys. The problem of bank financing also arises; government-owned banks, such as the Land Bank of the Philippines (LBP) and the Development Bank of the Philippines (DBP), may not be willing to lend to newly formed cooperatives who do not have the track records. He said this would have been an important issue he would have wanted to raise to the government-owned banks had they attended the RTD.

Another goal of the program is the Route Rationalization by the LGUs. This aims to optimize routes for better service delivery, reduce congestion, and improve traffic flow. However, Dr. Mendoza focused on the establishment of Lay-over Garages. Designated lay-over garages will be built to provide secure parking spaces and maintenance facilities for jeepneys. This ensures that vehicles are kept in good condition and are ready for operation. Despite these plans, Dr. Mendoza argued that finances and availability of space must be considered, especially for the already cramped Metro Manila.

Dr. Mendoza also examined the proposed implementation of Driver Training Programs or Driver Academy to ensure the safety and reliability of public transportation. It mandates comprehensive training programs for drivers that will cover various aspects of driving safety, customer service, and vehicle maintenance. But the question remains: who would pay for it? Would it be the government, or the drivers and operators?

One of Dr. Mendoza's main concerns about the proposed guidelines of the program is the non-inclusion of local manufacturers of jeepneys like Francisco Motors (established in 1947) and Sarao Motors, Inc. (established in 1953). As of date, there are more licensed manufacturers in the country of

jeepneys that were overlooked in the program. He proceeded to explain the implication of consolidation in financing, loan repayment, and passenger fare. The price of a modern Jeepney can range from PHP 1.0 million to PHP 2.5 million per unit, creating a substantial financial burden on small operators. Even with loans, government subsidies, and financing programs such as the DBP's PASADA project and LBP's SPEED project, they can only cover a fraction of the required funding. With high interest rates and long repayment terms, the financial viability of the program is in question. This might lead to an even bigger problem in fare adjustment, affecting the consumers. The provisional minimum fare of PHP 15.00 may not be sufficient to cover the costs of modernized jeepneys. Thus, fare may increase significantly to ensure financial sustainability.

For Dr. Mendoza, "High quality, safe, comfortable, and clean jeepney has [a] corresponding price to pay," including fare increase, which goes against the opinion of the DOTr that there will be no fare adjustment under the PUV Jeepney Modernization Program. He warns of the domino effect of the price increase, which may lead to higher cost of transport, to higher price of goods, and ultimately to higher inflation.

Additionally, to support the manufacturing of these modern vehicles, the government should be expected to provide subsidies to local assemblers. These subsidies shall ensure that the vehicles meet the stringent Philippine National Standards (PNS) and comply with the emission standards set by the Clean Air Act, in support of one of its major goals on ecological benefits.

Dr. Mendoza specifically highlights the critical role of local manufacturing in the production of various jeepney parts. By manufacturing non-technical components locally, such as rubber tires, the program aims to reduce production costs by minimizing the need for imported materials and promote self-sufficiency. This aligns with the broader goal of achieving a self-reliant transportation industry. To address the challenges and ensure the successful implementation of the PUV Modernization Program, Dr. Mendoza proposed the following recommendations:

1. Allow the overhaul or remanufacture of older engines that will reduce considerably their emissions and meet the emission standard. The 15 years and above age limit for engines must not be imposed. LPG-fueled

engines must be allowed to be used in jeepneys since they emit lesser hazardous gases;

2. Increase government subsidies for local assemblers to fabricate safe, comfortable, and low emission jeepneys;

3. Relax the engine type prescription (i.e., prescribing Euro-4 as stipulated in the Omnibus Franchising Guideline). Consider alternative, more sustainable options, like LPG-fueled engines or electric vehicles, depending on certain routes and terrains;

4. Encourage the local production of vehicle parts that do not involve advanced technology to reduce costs and support local industries. "Homegrown modernization" is the way to go; import-dependent modernization will drain the economy;

5. Implement a flexible fare adjustment mechanism to ensure that operators can meet their financial obligations without significantly burdening passengers; and

6. Adopt a phased approach to modernization, allowing for a transition period.

In the end, Dr. Mendoza believes that "homegrown PUV modernization should be viewed as a component feature of our overall sustainable and inclusive economic development framework."

Viability of Locally Manufactured Hybrid or E-Jeepneys

Mr. Elmer Francisco

Owner and CEO, Francisco Motors

Mr. Francisco started his talk by reiterating the company's 77-year history from 1947 to 2024. He emphasized its strengths, including brand loyalty of its customers and incomparable industry knowledge, making it the "world's biggest jeepney manufacturer."

He highlighted how the current Jeepney Modernization Program defeats its own goal of climate change mitigation because government agencies promote the use of imported but obsolete surplus engines—that is, Euro-4 diesel engines.

> *"Nagulat ako na tumaas 'yung presyo ng makina … tumaas nang isang milyon ang makina. From 400 thousand to 1 million 400 thousand… ang laki ng deperensiya. Parang presyong ayaw magbenta … Nag-usap kami ng iba pang manufacturers ng Euro-4 diesel engines sa Japan, sa China, sa Korea, at sa Italy. Bakit pare-pareho 'yung presyo nila? Isa lang 'yung opinion ko: nag-uusap usap sila na 'dapat ganito lang 'yung presyo natin.' Hindi pwede sa akin 'yun … Unang una, ang Euro-4 compliant diesel ay obsolete na sa ibang bansa … Bakit nila tinatapon 'yung mga basura nila dito sa Pilipinas? Tayo naman amazed na amazed. Dahil 'yun ang sabi ng DENR, ng DOTR … if your purpose is to mitigate climate change, you are not changing anything. Kung papalitan mo yung lumang diesel engine ng bagong diesel engine, you are not changing anything, it is still a pollutant … Let's face the truth: pera pera lang 'yan."*
>
> ("I was surprised that the price of the engine went up… the engine price increased by one million. From 400 thousand to 1 million 400 thousand… that's a huge difference. It's like a price that suggests that they don't really want to sell… We talked with other manufacturers of Euro-4 diesel engines from Japan, China, Korea, and Italy. Why do they all have the same price? My only opinion is: they're talking

> among themselves, saying 'this should be our standard price.' That's not acceptable to me... First of all, Euro-4 compliant diesel engines are already obsolete in other countries... So why are they dumping their waste here in the Philippines? And we're here, so amazed. Just because that's what the DENR and the DOTr say... If your purpose is to mitigate climate change, you are not changing anything. If you're replacing an old diesel engine with a new diesel engine, you are not changing anything—it is still a pollutant...Let's face the truth: it's all about the money.")

Mr. Francisco also added: "This is an economic problem that requires an economic solution."

He stressed his company's efforts, including locating its main office at a Special Economic Zone (SEZ) in Camarines Norte where the whole supply chain activities will be conducted. The SEZ would enable locators to access fiscal and non-fiscal incentives, such as duty-free importation of capital equipment, raw materials, etc.

Many local companies have joined the Francisco Motors in presenting to the government what they can contribute to the Jeepney Modernization Program. Mr. Francisco has been meeting with different groups (i.e., national government agencies, local government units, banks and investment corporations, international and local manufacturers, jeepney groups and operators like PISTON and MANIBELA) to create a whole ecosystem for the program, including the building of the jeepney terminals, charging stations, and green hydrogen-refueling stations. Francisco Motors is also pushing for industrialization by providing more jobs to Filipinos by repurposing old jeepneys to other uses. This includes the development of "Jeepney Plus" with the Department of Trade and Industry (DTI), which entails converting old jeepneys into food kiosks or workstations as a means of social enterprise.

Francisco Motors aims to make a significant impact on the environment, culture, economy, and society. Environmentally, the company plans to replace all fossil fuel-powered jeepneys with fully electric vehicles utilizing Hydrogen Fuel Cell Propulsion and electric Vertical Take-off and Landing Technology. This aims to drastically reduce greenhouse gas emissions and other pollutants. Culturally, Francisco Motors seeks to modernize the iconic jeepney design while preserving its cultural significance, equipping new jeepneys with

cutting-edge technology and top-quality standards to maintain the essence of this Filipino symbol. Economically, the company plans to establish a local green manufacturing facility, which will help achieve economies of scale, reduce production costs, and offer more affordable electric vehicles for both domestic use and export. He clarified that he is only against direct importation (not foreign manufacturers) as it robs the country of much-needed job creation. Socially, this effort is expected to create thousands of direct jobs for Filipino workers in manufacturing and millions of indirect jobs in the supply chain and related businesses.

Despite these ambitious goals, Francisco Motors faces several challenges. First is affordability. Most jeepney operators cannot afford new imported modernized mini-buses, which cost between PHP 2 million to PHP 3 million. Second is the opportunity loss with the approach of the government to jeepney modernization. The direct importation of mini-buses undermines the local automotive and spare parts manufacturing industry, depriving Filipino workers of potential jobs. Third is climate change. The ongoing use of fossil fuels poses a significant threat to humanity, contributing to climate change that harms health, safety, and ecosystems.

According to Mr. Francisco, his company is committed to overcoming these challenges and driving forward a sustainable, culturally respectful, and economically beneficial modernization of the jeepney. He commended Asec. Atty. Vigor D. Mendoza II of Land Transportation Office (LTO) for the support of their proposed modernized electric jeepneys.

Nevertheless, Mr. Francisco also said that despite their efforts to assist the government in speeding up the implementation of the program through research and to address stakeholders' issues, in general, concerned government agencies (e.g., LTFRB) expressed reservations about their proposal. Mr. Francisco said: "*Tinatanong ko ano 'yung reservations, sabihin mo sa amin para ma-address namin. Huwag na natin 'tong patagalin. Up to this day, wala pa rin akong nakukuhang sagot.*" ("I asked what their reservations are so we can address them and not cause further delays. Up to now, I have not received a response from them.")

Mr. Francisco described the solution offered by his company called the "TsuperHero Program." It offers free modernized Francisco Jeepney,

powered by Hydrogen Fuel Cell Propulsion, with Lifetime Warranty for all jeepney operators that have valid franchises, so long as they participate in the TsuperHero Program of the company that will maintain all the Fuel Cell Electric Jeepneys.

Mr. Francisco proceeded to showcase the design, specifications, and look of the modernized jeepney, maintaining the cultural, economic, environmental, and social impact they wish to make upon the program's implementation. According to him, the Francisco Jeepney has the advantages over other electric vehicles in the market, in relation to vehicle look, range, charging time, slope climb, and safety.

Equally important, he briefly provided a competitive income analysis, which shows that jeepney operators of Francisco Jeepneys will gain an additional income per unit of up to PHP 500,000 annually, compared to using Euro-4 and other electric vehicles.

Architect Leonard John Sarao

Operations Supervisor, Sarao Motors, Inc.

Ar. Leonard John Sarao started with a brief introduction and history of the company, from its beginnings during World War II to its later evolution through the development of electrical jeepney units.

He seconded the major points raised by Mr. Elmer Francisco, and discussed how their company, Sarao Motors, Inc. and others can indeed keep up with the modernization program. He reiterated: "this modernization program is not really something to worry about for local manufacturers because we have been around in this business since the 1950s, along with other manufacturers." The Philippines can manufacture more units, and even more advanced ones, as it is the original manufacturer of the products. Consistent with their mission to produce cost-effective jeepney for the Filipino commuters, local manufacturing can significantly aid in mitigating the possible rise in jeepney fare that would potentially affect the economy.

However, he also highlighted how the new units can be pricier than the older ones.

Ar. Sarao commented on the current implementation of the program:

> *"Jeepney modernization ... the idea is good, but its current implementation may have its drawbacks. Marami rin po talaga ang nahihirapan, mainly operators po na natatakot pa rin na mag-upgrade sa bagong unit kasi hindi po talaga biro 'yung milyon-milyong investment. Marami na rin po'ng nahihirapang maghulog 'dun sa mga nag-modernize na."*
>
> ("Jeepney modernization... the idea is good, but its current implementation may have its drawbacks. Many are really struggling, mainly operators who are still afraid to upgrade to the new units because the multi-million investment is no joke. Many who have already modernized are also having a hard time making their payments.")

He also offered a viable solution that lawmakers could potentially review:

> *"A probable solution is to repurpose those old jeepneys, kasi ano naman po ang mangyayari dun sa mga lumang jeepney once they get decommissioned already? Diba maiimbak lang 'yan sa yarda. Dadami lang 'yung waste na napo-produce. Maybe retrofitting a more cost-efficient, more fuel-efficient environmental engine, then i-mo-modify na lang 'yung body in order to cater to the Philippine standards. Ayun, mas konti pa po ang maitatapon doon."*
>
> ("A probable solution is to repurpose those old jeepneys, because what will happen to them once they get decommissioned? Won't they just end up stored in junkyards? That would only increase the waste being produced. Maybe we can retrofit them with more cost-efficient, more fuel-efficient, and environmentally friendly engines, then just modify the body to meet Philippine standards. That way, there will be less waste thrown away.")

Panel of Reactors

After the presentations of the representatives from local jeepney manufacturers, reactors from different sectors were asked to give insights on the current issues of the modernization program.

Response from Government

MS. SHARMAINE JOY ENALES

OIC-Program Manager – Public Transport Modernization Program (PTMP), Road Transportation and Infrastructure Department of Transportation

Ms. Sharmaine Joy Enales provided updates on the DOTr's current action plan to implement the PTMP. The DOTr issued new guidelines superseding the Omnibus Franchising Guidelines through DO No. 2023-022, or the "Guidelines for Public Transport Modernization Program (PTMP)." She clarified that the program is about changing not only jeepney units, but also the whole ecosystem of the country's transport system.

First among Ms. Enales' updates was on the extension of the re-fleeting period, which was originally set for just a year from the deadline of consolidation until the availability of the approved Local Public Transport Route Plan up to 27 months.

Second, the DOTr maintains the emulation of artistic designs in jeepneys to preserve the country's cultural heritage for as long as it is consistent with the enforceable Philippine National Standards (PNS). Furthermore, in compliance with the Electric Vehicle Industry Development Act (EVIDA Law), DOTr's guidelines reiterated the importance of using clean technology and other support facilities, mentioning how Euro-4 is just the minimum standard. They do not preclude the operators to use higher and better technology, such as Euro-5 or Euro-6, and most importantly the electric vehicles following the law's use of energy-efficient transport technology and energy sources.

Ms. Enales reported that (at the time of the RTD), there were already 66 modernized jeepneys that were awarded the Certificate of Compliance for passing the required PNS. Four (4) of the jeepneys had the iconic artistic designs, and 39 were locally assembled.

Access to fiscal and non-fiscal support was also part of the latest guidelines of the PTMP, allowing more channels for financing for transport service entities, such as other operational support like service contracting and fuel subsidy programs. LGUs were also given more authority to give incentives to operators participating in the program. On the call for support for the local manufacturing industry, Ms. Enales added that DOTr and DTI are already collaborating on this.

Lastly, she assured the participants that DOTr is making the necessary measures to enhance the policies and regulations for the PTMP. These are being done particularly in collaboration with partner agencies such as the Land Transportation Franchising and Regulatory Board (LTFRB), Land Transportation Office (LTO), Office of Transportation Cooperatives (OTC), and other agencies in the financing side and social support programs for other stakeholders of the project. They continuously revisit the guidelines and other policies necessary for the implementation of the program.

MR. JOEL J. BOLANO

Chief Transportation Development Officer, Land Transportation Franchising and Regulatory Board

Mr. Joel J. Bolano clarified some of the key provisions of the general guidelines of the PNS. First, he reported that, contrary to popular belief, there is no limitation on the design of the jeepneys as long as it follows the Philippine National Standards (PNS).

Second, on the possibility of fare increase, LTFRB assured that setting the standard fare across the country always undergoes discussions and hearings with other stakeholders, transport cooperatives, and other government agencies such as the National Economic and Development Agency (NEDA). He mentioned that even transport cooperatives and corporations that already

deploy modernized jeepneys prefer the current fare. An increase could lead to less passengers, and therefore a dip in their revenues.

Third, in terms of encouraging the repurposing of jeepneys and other PUVs, Mr. Bolano reinforced Ms. Enales' point on the government's efforts to study further how to best incentivize transport operators to move to the modernized units and scrap the old ones.

As a direct response to Francisco Motors, Mr. Bolano claimed that he was not able to see the specific communication that Mr. Elmer Francisco mentioned earlier. But he explained that for LTFRB to provide Special Permits, an operator must have an existing franchise to be able to traverse a route outside of its existing one. That said, he expressed appreciation of the Francisco Motors' TsuperHero Program, which aims to give free modernized jeepneys to operators. Given that 75 to 80 percent of jeepney cooperatives have already consolidated in compliance with the PTMP, Mr. Bolano suggested that Francisco Motors may already identify cooperatives with existing franchises that may be invited to avail of the TsuperHero program. LTFRB may then issue a provisional authority to those who already have existing franchise.

He also reiterated that the government is not trying to remove the jeepneys in the transport system of the country, but instead upgrade the traditional Filipino vehicle.

Response from UP Diliman on Possible Collaborative Efforts

DR. LEW ANDREW TRIA

Director of the Electrical and Electronics Engineering Institute, UP Diliman

Dr. Lew Andrew Tria supported the possibility of local manufacturing going into the electrification of vehicles. He stated that almost all of the suppliers of the parts needed for vehicles are available in the Philippines, although the domestic demand is not enough for what local suppliers require to be

sustainable. While the Philippines is exporting electronics to other countries, the local suppliers have not yet explored the possibility of supplying to local manufacturers because of this.

He highlighted that some countries have a national program in which their national governments procure electric vehicles, particularly for public transportation. Such countries require their local manufacturers to supply the national demand instead of opting for direct importation.

He agreed with the Francisco Motors and Sarao Motors, Inc.'s proposal for the government to incentivize local suppliers and manufacturers and to increase the national demand – both of which would aid the local economy. He also argued that it is possible to decrease the prices of the modernized jeepney by creating a local manufacturing industry through the help of domestic labor, assemblers, and suppliers. This does not only lessen the cost of production but also creates more job opportunities for the local engineers and other technicians to avoid sending them abroad.

DR. EDWIN QUIROS

Head, UP Vehicle Research and Testing Laboratory

Dr. Edwin Quiros focused on the local manufacturing of the automotive industry. In the early 1980s, he recalled a research project with different local parts manufacturers for the automotive industry and their capability to produce various component parts of vehicles. Their common response, "we can manufacture any parts that is needed, so long as you give us the volume." This meant that production is not a problem as long as it becomes economically feasible. Demand should be increased for the local manufacturers to be able to prosper, and this may only be possible through a partnership between the government and the private sector in a form of a national plan to develop the local automotive industry.

However, Dr. Quiros also asked the local manufacturers why, after decades in the industry, they were only able to produce jeepneys and not other automobiles. "Why did we not become a full-blown automotive manufacturing country [like other ASEAN countries]? What happened to us?" He also

extended the invitation to the local manufacturers to seek collaboration with engineers at UP to help them fulfill their vision.

Finally, he asked the government representatives at the RTD on how the local commuters would benefit from the jeepney consolidation, and the whole PTMP in terms of ensuring the availability of the rides, reasonable travel time from origin to destination, and affordable transport fare. He reiterated that it is important that ordinary citizens understand what PTMP is to be able to support it.

DR. NORIEL CHRISTOPHER TIGLAO

Professor, National College of Public Administration and Governance

Dr. Noriel Christopher Tiglao began by talking about an "integrated model of coordinated policy," which he proposed in a previous paper:

> "It is critical to note that a fundamental component of this dynamic framework is the pivotal role of a coordinated policy.... [T]he government's current efforts to modernize the jeepney transport sector is severely hindered by the lack of coordination among stakeholders and the absence of a well-crafted coordinated policy" (Tiglao et al. 2023a, 3).

Dr. Tiglao also reported that "human resource and organization issues continue to be a major stumbling block in ensuring the capacity of local government in pursuing modernization efforts and reforms" (Ng et al. 2020; Lidasan et al. 2010 as cited in Tiglao et al. 2023a, 7) . He added: "A collaborative governance and big data framework can set in motion a cycle of policy capacity development among concerned stakeholders that can, in turn, enable crowdsourcing and co-production activities. Under the purview of public transport modernization, co-production supports transition of informal transport to more modernized operations (consolidation, fleet management, EV operations)" (Tiglao et al. 2023a, 11-12).

Lastly, Dr. Tiglao presented the NCPAG faculty's recommendations on how the PTMP might be approached (Tiglao et al. 2023b, 3):

1. "Establish a multisectoral technical working committee composed of representatives from concerned national government agencies, financing institutions, transport groups, civil society, and the academe to firm up collaboration arrangements and leverage resources to support program implementation;

2. Develop a comprehensive database with an online dashboard on the state of PTMP implementation and public transport industry;

3. Conduct quick policy analysis and process evaluation studies of the various program components [of the modernization program] to determine whether program activities have been implemented as intended, assess the quality of the outputs, and identify needed policy interventions;

4. Establish medium and long-term multidisciplinary and interdisciplinary research and development programs on sustainable mobility through a network of living labs in the country focusing on transport governance, sustainable development, and inclusive transport;

5. Implement short-term, catalytic activities including the wider conduct of [LPTRP] Simulation Exercises (SimEx) … [to fast-track capacity building of LGUs in public transport route planning]; and

6. Develop and institutionalize a risk management plan … in order to align multi-agency strategic goals and objectives, prioritize activities and resources, and ensure the timely completion of the program."

Open Forum[4]

1. What is the current production capacity or timeline to develop future capacity of the local manufacturers? Is there a particular initiative that you want the government and other institutions to take regarding this problem?

   Francisco Motors (translated): What we are doing today in the economic zone in Camarines Norte is for the new plant to function at full capacity and manufacture 25,000 units per year. Before automation, the capacity of Francisco Motors was 12,000 units per year, which comprise jeeps, pickups of Mazda, Anfra, and vans. Now, with the new plant, we can do 25,000 per year.

   Sarao Motors, Inc. (translated): In the 1980s, with 130 laborers, we were able to churn out 50 to 60 units per month. Now, compared to Francisco Motors with its assembly line, in Sarao Motors we still do the traditional handmade production. Because the demand for motorized jeepneys is a bit low, we were forced to downsize our operations. Our process before was that while we were fabricating the chassis, someone was already making the body so that once the chassis was finished, it would go down the line and be mounted to the body, then the interior and mechanic covers. That was our process then. Now, to manufacture a single unit, it would take us around three to five months because we no longer have a fluid assembly line. Due to the pandemic and low demand for the jeepney, we have had to downsize the workforce and so people do multiple tasks. Only after the chassis is made can we start to work on the body and other mechanical tasks like mounting the engine, drivetrain, and suspension. The production time is longer. Again, this is due to the lack of the demand of the jeepneys. But who knows if the modernization program pushes through, or if retrofitting and repurposing the old jeepneys are possible? If this happens, we could increase the workforce and shorten production time.

---

4 This part contains English translation of the questions and answers during the open forum.

In terms of how the government can help or assist in the situation, I would agree with what Sir Elmer said earlier, we were never approached by the government with assistance. I am speaking on behalf of other manufacturers. There are a lot here in the Philippines. The economic effect of what will happen in the jeepney sector will have a huge impact in the Philippines. If it is given priority, then the workforce would definitely grow.

2. In many of our neighboring countries, the state, industry, and academia appear to have a benign relationship; they work together. In the case of Taiwan, the state has a very good relationship with the semiconductor industry. It helps the semiconductor companies by procuring technology abroad and then democratizing its replication at home. Do we have that kind of dynamic in the Philippines? Do you work with research institutions for our Research and Development (R&D) efforts? Can you cite any experience in this particular area?

Francisco Motors (translated): Actually, having a physics background, R&D is my turf. You imagine the results first, and then you do the research. What we actually do is backcasting and not forecasting; we imagine the result, and we go back from there to where we are right now to see how we can improve. That's how it works for us. We also do have access to different R&D institutions, and the global supply chain.

There are foreign companies that want to partner with us. However, like what I said, the condition that the vehicle will be made in the Philippines is non-negotiable for me. These foreign companies often argue that the jeepney be made in their home country, and just delivered to the Philippines once finished. But local jeepney manufacturing is not about sales; it is about the jobs and the multiplier effect. That is one of the purposes of the PUV Modernization Program. One of its purposes is to bring home overseas Filipino workers since there would be a lot of jobs waiting for them here in the Philippines. But something went wrong along the way; they just allowed direct importation.

We are not against the foreign companies. They can locate in the Philippines. They can do transfer of technology, but we cannot do direct importation. You import a thousand buses from China. How many jobs would this create for Filipinos? They will all become [sales] agents. For the multiplier effect, if Filipinos have no jobs, there would be less commuters for the jeepneys. Hence, we need the government to stop direct importation.

We also need to raise the demand for local manufacturers' products by government projects. But the Philippine government always favors imported goods over locally manufactured ones. Even if some parts like drivetrains are imported, let the assembly be made in the Philippines to give more employment to the locals. What I am saying is that the direct importation of completely built units should be stopped. That is what is killing our domestic industry. We would never achieve economies of scale if we allow that to continue. That is the problem.

Sarao Motors, Inc. (translated): In terms of R&D, we are not as big as we seem to be, but what we really do now is rely on foreign investors offering their technology. But like what Mr. Elmer said, what foreign investors prefer is to deliver completely built units and just have them rebranded with our name/company logo. That takes away the essence of providing jobs for Filipinos. Who will benefit if we keep importing? What we receive is only import tax. At least, if we ourselves manufacture, all our employees pay their taxes.

In the end, it is still helping the ecosystem of the Philippines. We still entertain foreign investors with the technology they provide. If what they offer works out, then we can consider [their proposal]. Otherwise, we look for other potential suppliers. Ultimately, what we want is to have the vehicles done and assembled here in the Philippines.

Francisco Motors (translated): Additionally, what we are currently doing right now is mass producing drivetrains here in the Philippines. We can even share those drivetrains with local manufacturers, reducing reliance on expensive foreign suppliers. The reason it took us a long time to [mass produce] is that there is no law in place, despite it being

pushed in the Congress for a long time. It was only in April 2022 that EVIDA[5] became a law. We have been trying to push for this since the 1980s, and it only came to fruition in April 2022 after the pandemic. We have the framework as well as the implementing rules and regulations for us to develop our own drivetrains here in the Philippines. I would also like to thank Dr. Quiros for his offer. We will approach you as we need more Filipino engineers to get this off the ground. That is what's most important for us.

Personally, I no longer want internal combustion engine, fossil fuel powered vehicles. It defeats the purpose of environmental sustainability or climate change mitigation if we continue to use fossil fuel powered vehicles when we can use full electric or hydrogen fuel cells. When you use hydrogen fuel cells, or green hydrogen, water vapor is your emission. We can do it here in the Philippines. We just need a little more time. We need more support from the government. I am not asking for any cumbersome support. My only request from the government is that when we need a policy or specific assistance, please act on it promptly, unlike the LTFRB, which takes so long to respond. In fact, the LTFRB hasn't yet seen my letter. I requested a special permit or a provisional authority for the pilot run of our vehicles. We will be very grateful if we receive LTFRB's response by tomorrow. My letter is asking for a special permit or a provisional authority to conduct our pilot. We offered to do it jointly with the LTFRB. Up to now, there is no government action. We need the government to act fast. Otherwise, please stay out of the way. If there is no objection, we will do it for you and we are not faulting you. I just want quick action for the benefit of the Filipino people.

5 EVIDA, also known as the Electric Vehicle Industry Development Act (RA no. 11697), is a law that stipulates a comprehensive regulatory framework for the creation, use, and/or development of electric vehicles in the country.

3. Someone from the media: What can the government do to reduce the increase in transport fares from PHP 15 pesos? Is incentivizing local manufacturing enough?

DOTr (translated): I think Mr. Joel Bolano from the LTFRB mentioned earlier how they evaluate and come up with a decision on fare increase. The approval of fare increase is not haphazardly decided; there is a process that they undertake. On the question of local manufacturing support, this is an activity that we have undertaken with other agencies, particularly with the DTI, which is the agency providing support for our manufacturing industry. We're currently in talks for a possible incentive strategy for our manufacturing sector, particularly in support of the local manufacturers. Since this initiative is from DTI, it would be best that they report on this. But rest assured that the government is working to address your concern on prices.

LTFRB (translated): If you would notice the increase and decrease in fare prices, the major component is the fuel price increase. I think it will boil down to the cost of fuel. Hopefully, the government will address the issue on fuel cost.

DOTr (translated): If I may add, along with the implementation of the program, we are trying to complement the PTMP with other support programs, such as service contracting and fuel subsidy. These are operational programs that would hopefully aid the transport service entities and their operations. Hopefully, this will cushion or subsidize the operations cost driven by the volatility of the fuel market price.

Sarao Motors, Inc. (translated): I believe that the issue of fares being tied to fuel market costs was relevant back when that was the only factor. But now, with modern jeepney units costing millions of pesos, the higher vehicle prices also directly affect the monthly amortization that operators must pay. That could also potentially increase the fare. Again, this is something new that everyone needs to ponder on.

Ted Mendoza (CLHPC) (translated): The study we conducted is based on the cost of the jeepneys of 2.5 million pesos per unit. Amortization is a huge factor. If the depreciation cost is considered, this would

be another issue altogether. In 2024, what still affects the cost is the price of fuel. The study we conducted was only based on the then 30 peso-fuel cost per liter; now it is around 55 to 60 pesos per liter. That is why the initiative of Francisco Motors is very commendable: locally manufacturing the new jeepneys could reduce the price of each unit by 60%. (Frankly, we were not able to do a financial analysis on electric jeepneys. I wished we had made contact with Francisco Motors which has been in the electric vehicle industry for quite some time now. But we did the research during the pandemic, so, it was more challenging to reach out to people.) So the direction really should be local manufacturing to mitigate the cost.

And I agree 100 percent with Mr. Francisco that what is killing the Philippines is importation, not only in jeepneys but even in food supply. Why do we have a high importation rate when we can locally produce? We are hoping that the government will consider the recommendations and initiatives of Mr. Francisco and Sarao Motors and other local manufacturers. And hopefully this would be extended not only to jeepneys but also to our marine vehicles, which we can actually produce locally. Hopefully, the government will be convinced not to rush into things with the jeepney modernization. We hope that DOTr and DTI would listen to the qualms of the public.

4. Dr. Antoinette Raquiza: First of all, I would like to know where the government got the 2.5 million-peso price range for e-vehicles. What factors, including the type of e-vehicles, were considered for government to arrive at the price of 2.5 million peso per unit? Based on this RTD, we have domestic manufacturers that could make e-vehicles for a much lower amount and which will redound to also other spillover effects.

I appreciate Ms. Enales' statement that we are in fact encouraging the local parts and components sector, but this is still different from promoting full-blown local manufacturing because the latter has spillover effects to other industries. So why do we have to settle for producing only parts and components when this is something we have already been doing for the past decades?

Finally, I would like to ask Dr. Noriel Tiglao what he thinks about the proposal for franchising, which is to have all jeepneys be registered under a cooperative or corporation? We have had experiences before with technology-driven organizing that compelled small farmers or small producers to group themselves into cooperatives, bereft of the social context. Such experiments proved a failure. So, how can this be improved? I understand what Mr. Bolano said that consolidation should make coordination and smooth implementation more possible. But are there other ways to make the adoption of e-vehicles work without compelling independent and autonomous drivers and operators to organize themselves quickly into cooperatives?

DOTr (translated): To clarify, DOTr is not the one setting the price for our modern PUV. Perhaps the 2.5 million figure is the average prevailing market price. If you really look at the universe of the existing PUV models, with Certificate of Compliance (COC), we have different classifications ranging from Classes 1 to 4. Based on the declared prices at the moment of those with COC, there are PUV models that cost around 1.3 million for Class 1 and we have some PUV Models that are at extremely high prices. So it is still up to our transport service entities to choose what is commercially palatable for their business plan as a cooperative. In terms of availability of choices, there are different PUV models that they can choose from with varying prices.

Now, our PUV model is based on the Philippine National Standards issued through the help of DTI-BPS [Department of Trade and Industry – Bureau of Philippine Standards]. These standards are referenced to some UN regulations or what we call UNECE [The United Nations Economic Commission for Europe] that other countries also follow in producing their vehicles. At the same time, we have locally patterned these to consider, for example the anthropometric size of the passengers. So, that's where we based the dimensional limits of our vehicles. In the crafting or making the PNS, it is not only composed of government representatives. It is also represented by the people from the academe, the commuter side, the civil society organizations, and the manufacturers as well.

Moderator: The domestic manufacturers seemed to suggest earlier that there might be collusion among foreign manufacturers when it comes to the prices.

Francisco Motors (translated): There is. I am not implying that. There really is. I know because they had invited me before to join them. I just don't want to join. I am not saying that it has something to do with the government, but it is something among manufacturers. But let us go back to the PNS. If you look at the PNS, the picture of the jeepney is wrong. It is a picture of a bus, not a jeep. What we are modernizing here is a jeepney, not a bus. Number 2, why is it that when it is during the congressional inquiry on the issue, the legislators were shocked to find that the pricing of Francisco Motors is less than a million? Even I was shocked to learn how expensive the price range is from other manufacturers . I would like to ask Mr. Sarao, in 2017 before the PUV Modernization Program, were you able to sell a jeep for more than 1 million pesos?

Sarao Motors, Inc. (translated): For public transportation, none.

Francisco Motors (translated): For public transportation, there is none. For Francisco Motors, we were not able to sell a single Jeep for more than one million before the PUV Modernization Program. What makes the jeepney expensive are the drivetrains, which are all directly imported.

The foreign manufacturers are also all colluding with the prices; an engine does not cost that much. Even full electric engines from us are not that expensive. In Rome, do what the Romans do. But when you are here in the Philippines, do what the Filipinos do. What we should do is to give Filipinos jobs. You would see it in the price. The modern jeepney is 2.5 million because its parts are directly imported. Let's do away with that. Let the government support local manufacturing of the drivetrains, which we (Francisco Motors) are doing right now.

The Francisco Motors team is talking with the DOTr secretary. I cannot submit the full details of the drivetrains yet because we want the best ones for the Filipino people at an affordable cost. I do not want to sell

jeepneys at 2.5 million pesos because it is pitiful for fellow Filipinos to drown in debt. What I did is to focus not only on manufacturing, but on the whole ecosystem. Let's zoom out. Again, it is an economic problem that needs an economic solution.

What Francisco Motors did is to change the whole business model; that is the document I submitted to the DOTr. With that [business model], we do not have to sell our jeepneys; we can give them for free. For the commuters, it will alleviate the cost of fares. There is an option for a fare matrix to lessen their cost following the pattern from other countries ... For 32 years, I have been dealing with operators. I have been dealing with drivers. I know what they are thinking. I know their problem. Their problem is the cost.

5. From a UP Diliman professor: While the iconic jeepney design is part of our heritage, isn't the cab-over engine design more practical on high volume roads than our traditional engine-in-front design? Have you considered constructing a prototype of a jeepney design as a tourist vehicle transportation? What are your thoughts in terms of capacity with the previous design?

Sarao Motors, Inc. (translated): Regarding the cab-over engine bay, we did not push to remove the "snout" of the jeepney due to the difficulty of maintenance. If you have driven the first- generation Toyota HiAce, you have to remove the driver's seat in order to access the engine bay. What Toyota did was to revert to the one with the "snout" to make it easier to access the engine bay from the hood. Moreover, during collisions, it has been proven that the mortality rate in passenger vans with a " long snout" is lower than those with a flat "snout." The passenger's knees become the "crumple zone" in vans with a flat snout. That's where we stand in terms of safety. For me, the design of the jeepney with a long "snout" is more accessible in terms of servicing the vehicle. It is a lot more convenient to have the engine bay away from the cab, and also to reduce the ambient heat generated by the motor. If it is placed under, it would be generating heat underneath the passengers. From that standpoint, it is more feasible to maintain the traditional face where the engine is in front. In terms of the capacity of the vehicle, it is the same. The only difference is that the

vehicle's dimensions are longer by a few feet. However, you can still fit 20 to 25 passengers, depending on the specifications of your jeepneys.

Francisco Motors (translated): In the making of the PNS, Mr. Sarao, were you consulted? Because I was not.

Sarao Motors, Inc. (translated): No, we were not consulted. The government did not consult us.

Francisco Motors (translated): In the first place, the study on the PUV Modernization Program was done by JICA (Japan International Cooperation Agency). The picture they have provided is the same as the one in Japan. That is what they know of a vehicle—a bus, not a jeepney. For the PNS, the first true manufacturers of jeepneys were not consulted. The concerned government agencies have just implemented it.

Dr. Tiglao (NCPAG): That is actually it. They were not consulted. [Guidelines were] unclear because these were not properly discussed and the manufacturers were not consulted. I think these are manifestations of a lack or absence of collaborative governance. We need to do better. We need mechanisms. I think there's no question that we should go for local, Filipino pride. What is missing in the roll out of the modern jeepneys is the lack of information in terms of efficiency gains, value engineering, and value analysis. It's just compliance on paper.

I think we should do better in terms of evaluating what is truly the design fit for Filipinos. I think there are already policy pathways that we could tap. One is the Creative Industries Act, which supports local creative industries. I think the jeepney sector can benefit from that. I think we need to recalibrate the EVIDA, because its focus is almost exclusively on electric vehicles, on batteries, and of course on the shift towards hydrogen. We also need collaborative governance. We need better information-sharing, and also more discussion and partnership.

The RTD ended with Dr. Raquiza highlighting important points in the discussion and how it would potentially aid the Philippine government and the Filipinos to arrive at a solution that would benefit every stakeholder. Specifically, she reiterated the decades-long significance of jeepneys to the daily lives of every Filipino, even in remote areas. She also gave her appreciation to the recommendations provided by the local manufacturers, Francisco Motors and Sarao Motors, as well as the inputs of representatives from the academe and government. Dr. Raquiza finally thanked the representatives from the government for providing policy insights on the PTMP.

Closing Remarks[6]

Dr. Antoinette Raquiza

Convenor, Political Economy Program
UP Center for Integrative and Development Studies

Magandang hapon sa lahat. (Good afternoon to everyone.)

Today's roundtable discussion (RTD) is about an issue that strikes at the core of our collective experience as a nation and is deeply embedded in the Filipino psyche. To generations of working-class Filipinos and just about any other public commuters, the jeepney provided a reliable, cheap, and accessible mode of transportation. For more than half a century, it has been a ubiquitous presence in the urban landscape, and among the primary mode of transportation for people and goods, even in the most remote areas in the countryside where no other public utility vehicle can and will go.

It is no wonder then that while no one will argue against the goals of the government's Public Utility Vehicle (PUV) Modernization Program, there is much concern about its implementation and, in particular today, the proposed phasing out of the traditional jeepney. Much of the concern, as mentioned by some of the speakers, is the one-size-fits-all approach to PUV modernization. Our default setting is to merely replace the traditional jeepney with imported vehicles, without exploring other less costly options, such as the development of more fuel-efficient or hybrid vehicles, or retrofitting of jeepneys in the transition to electric vehicles. This is something that I am happy to note we have explored this morning.

6 This section is a near-verbatim account of the Closing Remarks. Minor edits have been made for further readability.

This RTD stresses that we can, in fact, develop and produce our own jeepneys or e-jeepneys by supporting our manufacturers, and the science and technology community, our research and development here at the university and elsewhere, can provide. The Political Economy Program of the UP Center for Integrative and Development Studies hopes that this morning's discussion has contributed to broadening the options toward an equitable and participatory PUV Modernization Program.

For this, we would like to thank the presenters and other distinguished speakers: Professor Emeritus Dr. Rene Ofreneo and Dr. Teodoro Mendoza, Mr. Elmer Francisco of Francisco Motors, and Ar. Leonardo John Sarao of Sarao Motors. Thank you so much for sharing with us what you and your companies have been doing to serve the Filipino commuters.

From the government, we would like to give our appreciation to Ms. Sharmaine Joy Enales (DOTr) and Mr. Joel J. Bolano (LTFRB). Thank you so much for listening and responding to the questions and comments that were shared here. We hope that we will continue this conversation with you. Hopefully, we will also bring in the government financing institutions (GFIs) when we talk about the demand side [of the discourse]. A big part of that will be the role of credit and the role of other government agencies in ensuring that the demand side of jeepney manufacturing is responded to.

From the UP Diliman community, thank you so much to Dr. Lew Andrew Tria and Dr. Edwin Quiros for sharing their expertise and experience with us. We are happy to hear that the College of Engineering is onboard and willing to help in the manufacturing of e-jeepneys and other automotive vehicles, including the maritime or marine vessels. Thank you also to Dr. Noriel Christopher Tiglao for sharing with us his expertise as well as the work of NCPAG on collaborative governance.

Unfortunately, not present today are the government financial institutions. We also did not have representatives from the jeepney drivers sector. We did invite PISTON, but due to technical difficulties, it was not able to join us on Zoom this morning. Hopefully, in the future, PISTON as well as other jeepney drivers associations will be part of the conversation.

To the moderator, Asst. Prof. Lianne Angelico C. Depante, thank you for the fine work in moving the conversation forward. To everyone, including the media who joined us this morning, maraming, maraming salamat (thank you very much).

As Asst. Prof. Depante mentioned, PEP is releasing the proceedings. We will also be working on a Discussion Paper that will contain many of the proposals from this morning. As Dr. Ofreneo said, this is a conversation that needs to be continued. Unfortunately, our very first experience [holding a roundtable discussion on] the Hanjin shipping facility, everyone was actually high from the navy to the Board of Investments, to the Department of Trade and Industry, but what prevailed was the business side, which were the creditors.

Hopefully this time as our UP experts and local manufacturers mentioned, we have the capacity. We just need to join forces , the jeepney drivers and operators, and other stakeholders.

Let us stay engaged in the rollout of the country's PUV Modernization Program. Let us support the country's push for a zero-carbon emission technology that will do so in ways that will ensure that jeepney manufacturers, drivers, small operators, as well as the riders and the Filipino R&D community, are an integral part of the process. PEP joins the speakers for pushing for a just and smooth transition that will minimize dislocation of industry workers and the public commuters.

Maraming salamat at magandang hapon sa lahat. (Thank you and good afternoon.)

REFERENCES

Lu, Brian James. 2024. “Navigating the landscape of jeepney modernization.” *Philippine News Agency*, January 6, 2024. https://www.pna.gov.ph/opinion/pieces/813-navigating-the-landscape-of-jeepney-modernization

Tiglao, Noriel Christopher, Anne Clarice L. Ng, Mark Angelo Y. Tacderas, and Niki Jon Y. Tolentino. 2023a. “Crowdsourcing, digital co-production and collaborative governance for modernizing local public transport services: The exemplar of General Santos City, Philippines.” *Research in Transportation Economics* 100 (2023) 101328. https://doi.org/10.1016/j.retrec.2023.101328

Tiglao, Noriel Christopher, Kristoffer Berse, Antonio La Viña, Ma. Victoria Raquiza, Reiou Regie Manuel, and Micah Paula Milante. 2023b. “Go or No Go: Should the December 31 Deadline for PUV Franchise Consolidation Be Extended?” *NCPAGkilatis Policy Note No. 001-122923*. University of the Philippines National College of Public Administration and Governance, 29 December. https://pssc.org.ph/policy_briefs/go-or-no-go-should-the-december-31-deadline-for-puv-franchise-consolidation-be-extended/

CENTER FOR INTEGRATIVE AND DEVELOPMENT STUDIES

Established in 1985 by University of the Philippines (UP) President Edgardo J. Angara, the UP Center for Integrative and Development Studies (UP CIDS) is the policy research unit of the University that connects disciplines and scholars across the several units of the UP System. It is mandated to encourage collaborative and rigorous research addressing issues of national significance by supporting scholars and securing funding, enabling them to produce outputs and recommendations for public policy.

The UP CIDS currently has twelve research programs that are clustered under the areas of education and capacity building, development, and social, political, and cultural studies. It publishes policy briefs, monographs, webinar/conference/forum proceedings, and the Philippine Journal for Public Policy, all of which can be downloaded free from the UP CIDS website.

THE PROGRAM

The **Political Economy Program (PEP)** seeks to advance innovation-driven and equitable development through the conduct of problem-solving research on development policies and practice; the promotion of collaboration among the academe, government, industry, and other stakeholders in pursuit of inclusive technology and sustainable industrial policy; and the popularization of the political economy framework in the national conversations on policy options.

UNIVERSITY OF THE PHILIPPINES
CENTER FOR INTEGRATIVE AND DEVELOPMENT STUDIES
Lower Ground Floor, Ang Bahay ng Alumni, Magsaysay Avenue
University of the Philippines Diliman, Quezon City 1101

Telephone (02) 8981-8500 loc. 4266 to 4268
(02) 8426-0955

Email cids@up.edu.ph
cidspublications@up.edu.ph

Website cids.up.edu.ph