Innovation Versus Regulation: An Assessment of the Metro Manila Experience in Emerging Ridesourcing Transport Services

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Abstract: Rising mobility needs, coupled with the declining level of service of public transportation, has led to worsening congestion and commuting difficulties in urban centers. Ridesourcing transport modes, which allow commuters to book trips through their smartphones, have become popular as an innovative strategy to address these issues. This paper seeks to describe the characteristics of ridesourcing transport modes operating in Metro Manila (Philippines) and evaluate the effect of regulations on their service characteristics. The paper also evaluated the potential contribution of these innovative modes to the promotion of sustainable transportation using four factors: efficiency, safety, affordability, and congestion reduction. The Study establishes that the top reasons commuters use these Transportation Network Vehicle System (TNVS) are convenience, safety, and improved reliability and shorter waiting time. The Study concludes that there is still a need for regulators to supervise its operations to ensure consumer protection.

Keywords: Ridesourcing, Regulation, Innovation, Sustainable Transport, consumer protection

1. INTRODUCTION

The United Nations Environmental Programme (UNEP) estimates that 50% of the world’s population now reside in urban centers and projects that this will reach 80% by 2050. The Philippines is an example of this phenomenon where urban population increased from 29% in 1955 to 45% in 2015. By 2050, it is projected that the urban population of the Philippines will reach 60%. This increase in urban population has consequently increased the need for mobility in urban centers, like Metro Manila. In a study conducted by NEDA and JICA in 2014, traffic demand in Metro Manila was estimated to be 12.8 million trips per day, with 69 percent of these total trips done using public transport. However, public transportation development has been very slow due to underinvestment and lack of proper maintenance. It is estimated that around 180,000 passengers are displaced daily due to the constrained capacity and frequent breakdown of the EDSA MRT 3, one of the three main urban rail lines in Metro Manila. Road based public transportation modes are also considered unreliable and slow. In 2006, average bus travel speed along the EDSA (a major corridor in Metro Manila) was estimated to be between 18 min/km to 138min/km (Domingo, et.al. 2015). This condition has further deteriorated in the past few years. Due to these conditions, ridesourcing transport services have been gaining popularity as viable commuting option in key urban centers of the Philippines, particularly Metro Manila where the urban transportation problem is deemed most severe.

This paper seeks to describe the operations of application-based modes of public
transportation currently operating in the Philippines. It also attempts to evaluate the role of the government in the regulation of these modes in the light of consumer protection and the promotion of sustainable transportation using the criteria described in the next subsection.

2. SUSTAINABLE TRANSPORTATION

Although there are several definitions of sustainable transportation found in literature, this paper adopts that of the Centre for Sustainable Transportation (CST, 2005), which reads:

“A sustainable transportation system is one that:
- Allows the basic access needs of individuals and societies to be met safely and in a manner consistent with human and ecosystem health, and with equity within and between generations;
- Is affordable, operates efficiently, offers choice of transport mode, and supports a vibrant economy;
- Limits emissions and waste within the planet’s ability to absorb them, minimizes consumption of non-renewable resources, limits consumption of renewable resources to the sustainable yield level, reuses and recycles its components, and minimizes the use of land and the production of noise.”

The above quoted characterization of sustainable transportation is accepted by many experts including the Transportation Research Board’s (TRB) Sustainable Transportation Indicators Subcommittee and the European Council of Ministers of Transport (Litman, 2016). This paper will focus on four aspects of sustainable transportation in its analysis of emerging modes of public transportation: 1) efficiency, as manifested in reliability of service, 2) safety, 3) affordability, and 4) minimization of consumption of non-renewable resources such as fuel by reducing congestion.

3. RIDESHARING AND RIDESOURCING

To contextualize the research, this sub-section discusses the difference between ridesharing and ridesourcing. Ridesharing refers to a mode of transportation in which individual travelers share a vehicle for a trip and split travel costs such as gas, toll, and parking fees with others that have similar itineraries and time schedules. Conceptually, ridesharing combines the flexibility and speed of private cars with the reduced cost of fixed line systems, at the expense of convenience (Furuhata et al., 2013). Ridesharing is a powerful strategy to address traffic congestion, fuel emissions and gasoline dependency. A simple concept is followed: fill up empty seats to maximize the vehicle’s occupancy potential and reduce vehicles on the roadway. Unlike taxis and Transportation Network Companies (TNCs), drivers are not motivated by profit but by reduced travel cost. Passengers also have a common origin and destination with the driver (Rayle, et al, 2014 and Shaheen, 2014).

On the other hand, ridesourcing companies utilize technology to provide on-demand transport services with the promise of higher reliability and reduced wait times (Rayle, et al, 2014). In the Philippines, these are generally referred to Transportation Network Companies (TNCs) and defined as ‘an organization that provides pre-arranged transportation services for compensation using an internet-based technology application or a digital platform technology to connect passengers with drivers using their own personal vehicles’ (DOTC, 2015).
4. APPLICATION-BASED PUBLIC TRANSPORTATION IN METRO MANILA

This section describes the more prominent ridesourcing transport services currently operating three key cities in the Philippines.

4.1 Grab

GrabTaxi, a subsidiary of Malaysia’s MyTeksi, is a smartphone-based hailing and booking service first introduced in Metro Manila, Philippines in 2013. The service was later opened in three other urban centers, Cebu City, Davao City, and Iloilo City. The company has also expanded its services to include GrabCar (high-end cars that can be hired through the application on demand much like Uber), GrabHeli (currently packed as a 15-minute aerial tour between four helipads in Makati City, Pasay City, and Bonifacio Global City but is envisioned to serve as air taxi eventually), Grab Express (express delivery service), and GrabBike (motorcycle taxi service on demand).

4.2 Uber

Uber was introduced in the Philippines in December 2013. Unlike GrabTaxi, Uber provides pre-arranged transportation services for compensation, using an online-enabled application or platform technology to connect passengers with drivers using their own personal, non-commercial vehicles (Dela Paz, 2015).

In 2016, Uber introduced its ride-sharing services, UberPool and UberHop. UberPool matches riders ‘coming from the same area heading at the same direction at the same time’ for more efficient energy use and reduction of fuel emissions (Uber, 2016). On the other hand, UberHop ‘enables riders heading in the same direction to share a ride during rush hour for a flat fare’. As of April 2016, there were 9 pick-up and drop-off points in Quezon City, Mandaluyong City, and Makati City during the morning service and 9 pick-up and drop off points in the three cities, with Bonifacio Global City (BGC), a mixed use development, as an additional area for the evening service.

4.3 Other Ridesharing and Ridesourcing Services

A new entrant into the transportation market in Metro Manila is the ridesourcing motorcycle taxi service called Angkas (backride in the local language). It is unclear who developed or manages the smartphone application for this service. However, it is enterprising enough to take advantage of the worsening traffic situation in Metro Manila coupled with the surge in the number of motorcycles. Grab, for example, ceased operations of its GrabBike when the LTFRB issued a memo reminding about the prohibition against such services for public transportation.

Another ridesharing or carpool service available in Metro Manila, Wunder. This service was established in Germany and is probably operating closest to the original concept of carpooling in that it mainly depends on available vehicles for the typical commutes in the morning (e.g., home to workplace) and afternoon (e.g., workplace to home). It claims the following benefits (www.wunder.org):

- Sharing costs and saving money
- Meeting new people
- Reducing the number of cars on the road
5. BASIC CHARACTERISTICS OF Ridesourcing IN METRO MANILA

5.1 Uber Passenger Profile and Trip Characteristics

Among the various ridesourcing transport services in Metro Manila, Uber is the one that regularly conducts surveys with the view of service improvements. Based on the data shared by the company with the researchers, the number of Uber users, as denoted by the number of sign-ups has grown to over 433,000 since it was first introduced in 2014 (Uber, 2016).

![Uber sign-ups in Metro Manila and adjacent areas](image)

Figure 1. Uber sign-ups in Metro Manila and adjacent areas (Uber Philippines, 2016)

5.1.1 Trip Purpose

Results of the company’s 2016 survey which covered 1,450 respondents out of the 15,360 users who received the survey instrument, the key trip purposes for use of passengers are 1) Commuting to work/home (67%), 2) social activities (49%), 3) going shopping (30%), and 4) travelling to/from business meetings (29%).
5.1.2 Passenger Profiles, Preferences and Perceptions

Out of the total number of respondents, 57% do not own a car and 43% own one. Of those owning a car, 52% indicated that they are driving less and 15% stated that they have not changed frequency of driving due to Uber.

The respondents of the 2016 Uber Survey perceive that Transportation Network Vehicle Service (TNVS) like Uber have the potential to contribute to the overall transportation system efficiency by 1) improving private and public transportation connectivity, 2) make ride-sharing more convenient, and 3) reduce need for self-driving (Uber, 2016).
5.2 Operational Characteristics of Ridesourcing Services

In a study by Dela Pena and Dizon (2016), the reasons for passengers preferring GrabTaxi over conventional taxis are convenience, reliability, and safety. These are shown in Figure 5.

Convenience appears to be the top reason for a variety of reasons, including easy access of service through smartphone application, reducing the necessity to wait at curbside as when hailing regular taxi and the fare has already been set prior to the ride, eliminating negotiations with the driver.

Similarly, convenience was only found to be the top reason for preferring ridesourcing services like Uber and Grab in the study of Paronda, Regidor and Napalang (2016) with safety as the second main reason.

One key indicator for reliability is waiting time, which in the study of Dela Pena and Dizon (2016) is perceived to be longer for regular taxis, with an average weighted mean of 10.11 minutes for taxis and 9.27 minutes for GrabTaxi.
5.3. Socio-economic profile of Ridesourcing Transport Services Users

In the study of Nistal and Regidor (2016), the respondents profile indicate that users of both regular taxicabs and Uber belong to the middle income class.

The data from the various researches and surveys discussed in the previous subsections demonstrate that ridesourcing transport service is superior to regular taxi service in as far as safety, reliability, and convenience are concerned. It has also provided non-drivers and non-private vehicle owners an alternative mobility option. The TNVS also has the potential to facilitate connection to public transportation services and encourage carpooling.
6. REGULATIONS AND SUSTAINABLE TRANSPORTATION

Considering the exemplary operational benefits of ridesourcing transport service, it must then be asked: is it necessary to regulate its operations? This section outlines the role of regulations in the pursuit of sustainable transportation, which must be the highest goal of urban centers.

Regulation is defined by the Organization for Economic Co-operation and Development (OECD) as ‘the imposition of rules by government, backed by the use of penalties that are intended specifically to modify the economic behavior of individuals and firms in the private sector.’ It is considered as one of the three key levers of the state, together with fiscal and monetary policy, vital in the promotion of economic and societal well-being (OECD 2010). The traditional and ideal view of a regulation is as an instrument that will protect the consumer from the adverse effects of monopoly or externality. However, regulation aimed at consumer protection may also impose higher cost on the user, thereby adversely affecting the poor (UiM 2011).

Rietveld and Stough (2006) stated that the quality of regulations and institutions in a country influences promotion of sustainable transport, particularly on the following aspects: technological change, international agreements on taxation, mobility rights, and right to environmental quality. They further expressed that a regulation can play an important role in safeguarding equity and justice in the transport sector, which have immediate consequences for sustainability.

The OECD prescribes a spectrum of regulatory instruments available to policy makers, ranging from voluntary to regulatory tools. Voluntary instruments are non-regulatory and are market-oriented. On the other hand, regulatory tools include self-regulation, co-regulation, and command and control. In the self-regulation approach, the government specifies objectives and outcomes and allows the stakeholders to select means of compliance. This is seen to allow for more flexibility, reduces compliance costs, and encourages innovation. In co-regulation, the government and industry share the regulatory burden where a penalty can be imposed for breach of industry code. This approach will promote accountability and reduce utilization of government resources. However, it also has the potential to raise barriers to entry and unintended monopoly. The most stringent regulatory tool is the command-and-control where the government imposes requirements on the stakeholders for compliance to achieve a goal (OECD, 2002).

Figure 8. Spectrum of Regulatory Instruments
(Source: OECD, 2002)

7. GOVERNMENT REGULATIONS OF TNC/TNVS IN THE PHILIPPINES

In the Philippines, the Land Transportation Franchising and Regulatory Board (LTFRB), a line agency under the Department of Transportation (DOTr) is tasked with economic regulatory functions for road public transport services. It has the authority over public land
transport services in terms of:

a. Route/area of operation prescription and regulation in terms of viable route capacities;

b. Issuance of the Certificate of Public Convenience (CPC), otherwise called as franchise, to entities worthy to be public transport operators with corresponding franchising terms and conditions;

c. Prescription of fares/charges on public transport services;

d. Promulgation and enforcement of rules and regulations pertaining to public transport service operations.

The Agency is tasked to ensure the safety of passengers as well as safeguard them against sudden increase in fares, beyond their paying capacity. Towards the fulfillment of these tasks, the LTFRB monitors the entry of new public transportation providers.

Hence, when e-hailing transport services where introduced in the Philippines, LTFRB issued guidelines to regulate the operation of the two key players: the Transportation Network Companies (TNCs) and its contractor/partner, the Transportation Network Vehicle Service (TNVS). The requirements are summarized in the Table 1.

Table 1. TNC/TNVS Requirements

<table>
<thead>
<tr>
<th>For Submission Upon Application</th>
<th>For Submission Upon Hearing</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Formal offer of documentary evidence</td>
<td>▪ Photocopy of Passenger Insurance Policy (LTFRB Board Accredited Insurance Provider)</td>
</tr>
<tr>
<td>▪ Motion for Application of Provision Authority</td>
<td>▪ List of TNVS drivers and vehicles</td>
</tr>
<tr>
<td>▪ Filled out application form</td>
<td>▪ 2 copies of operator data sheet with recent 2”x2” picture</td>
</tr>
<tr>
<td>▪ Publication in major newspapers</td>
<td>▪ Statement of Financial Capability Form and Proof of Entries</td>
</tr>
<tr>
<td>▪ Proof of Citizenship</td>
<td>▪ ITR or BIR Certificate of Registration</td>
</tr>
<tr>
<td>▪ Proof of Good Standing (TNC)</td>
<td>▪ Certificate of Business Name (DTI)</td>
</tr>
<tr>
<td>▪ Proof of Accreditation of the Vehicle (TNC)</td>
<td>▪ Location Map of Garage or Address of Operator</td>
</tr>
</tbody>
</table>

Requirements For The Applicants Driver/s

▪ Proof of accreditation of the Driver by TNC
▪ Professional Drivers’ License
▪ NBI Clearance
▪ PNP Clearance

Requirements For The Applicant’s Vehicle

▪ OR/CR with Year Model or Delivery Receipt/Sales Invoice

Source: LTFRB

It must be highlighted that one of the key requirements for TNCs for the application of the permit to operate is the passenger insurance coverage in as much as comprehensive vehicle insurance only cover own damage to vehicle and theft. Another safeguard for passenger well-being, apart from the clearances from the police and National Bureau of Investigation (NBI), is the requirement for drivers to be accredited by the TNC, hence improving accountability. Even with the stringent regulation for entry, the number of applications for transport network vehicle service (TNVS) has ballooned to almost 30,000 in 2016 from only 3,000 in 2015 (Tan, K.J., 2016).

The LTFRB stopped granting franchises to Uber and Grab in July 2016 due to complaints from taxi companies. However, despite this stay, it is estimated that the number of
Uber and Grab vehicles has increased to 50,000. It is also estimated that there are about 26,600 unregistered TNVS drivers, prompting the LTFRB to announce that they will start impounding unlicensed/unregistered TNVs by July 26, 2017 (Talabong, 2017).

It also ordered Angkas to cease operations due to safety concerns (i.e., absence of passenger insurance). Motorcycle taxis are generally illegal in the Philippines and particularly in urban areas mainly due to safety concerns. This has been made into a policy in the recently published Omnibus Franchising Guidelines (DoTR, 2017).

8. RIDESOURCING SERVICES AND SUSTAINABLE TRANSPORT

The ridesourcing services in Metro Manila can be evaluated from the perspective of sustainable transport. In this case, sustainability is discussed in terms of reliability, safety, affordability, and traffic congestion reduction. These are discussed in the following sections.

8.1 Reliability

Recent researches on ridesourcing services like Uber and GrabTaxi and their variants in the Philippines have revealed that these have delivered on their promise of improved reliability and shorter waiting time for the most part. However, there have been reported instances when drivers of these services refuse to book passengers during inclement weather or holiday rush, particularly when the known destination is congested. This has prompted the LTFRB to step in and evaluate the booking process of TNVS (Lozada, 2015).

8.2 Safety

To date, there have only been a few reported cases of threats to the safety of passengers using TNVS in Metro Manila. However, the bigger issue is the lack of insurance for passengers using TNVS, which are largely non-commercial private vehicles. Comprehensive vehicle insurance only covers damage to own property, third party liability in case of road crashes, and theft. It does not cover passenger injuries. This was the intent of LTFRB when it imposed TNVS regulations.

8.3 Affordability

Another aspect of ridesourcing services that have been subject to deliberation for regulation is the matter of surge pricing, or the spiking of fares during peak periods due to increased demand. It was reported that during the Christmas rush in 2016, surge prices in Metro Manila were reported to vary between ₱2,000 to ₱28,000 per ride (CNN Philippines, 2016). This has prompted the LTFRB to issue a memorandum to the two prominent apps-based services in Metro Manila to put a cap on their fares. Specifically, Uber is directed “that the maximum allowable price surge on the fare shall be twice the rates for time covered and distance travelled excluding the base fare”. It likewise directed Grab Philippines to "lower its fare per kilometer from ₱12.00 - ₱16.00 to ₱10.00 - ₱14.00 depending on the type of vehicle used." These pricing mechanisms puts the commuters at the disadvantage and will potentially hinder those that are not willing to pay more from availing of the ridesourcing services. Based on an internal Study conducted by Uber and shared with the Study Team, the cap on surge pricing has resulted in the increase of the number of drivers who go offline during peak periods as evidenced by the ‘no cars available’ interaction.
On the other hand, the 2016 Forbes survey conducted by Ford Motor Company confirmed that “60% of the Filipino respondents said their commutes are getting more expensive, mainly because of higher fares, higher fuel costs, and choosing taxis and ride-hailing services over cheaper options” (Tordesilla, 2016).

The foregoing considerations highlight the vital importance of government to intervene and provide options for the riding public, apart from ridesourcing services.

8.4 Reduction of Congestion

With the rising popularity of ridesourcing services, many people have now shifted to being drivers for the companies as their main source of livelihood. This trend is supported by the reported sales increase of 98% by the Nissan Philippines Company in 2016. The company attributes the sale of the 4,500 units to ridesharing and e-hailing apps (Cacho, 2017). Thus, in this light, ridesourcing service does not directly contribute to the promotion of sustainable transportation.

One of the key strategic categories in addressing congestion in urban centers is to improve transportation options so as not to make private vehicle use as the only option. Ultimately, mass transportation must create the backbone of the whole mobility system of the city, with other modes of transportation providing access.

Thus, to ensure that the potential benefits of TNVS are realized for sustainable transportation system, these issues must be addressed:

- **Mode shift** – it must be evaluated whether passengers shifted from lower or higher capacity vehicles. If it is the latter, then this could translate to increase in car use, thereby exacerbating congestion. On the other hand, when passengers shifted from private transport to Uber/Grab, then this does not necessarily mean less car use because the Uber/Grab car simply replaced the private vehicle in terms of road space usage.

- **Trip chain** – there is also a need to determine the typical trip chains for multi-mode use by commuter, whether Uber or Grab served the main mode or used for the initial or last miles.
The rationalization of the public transportation system is within the jurisdiction of the government. Hence, it must ensure that hierarchy of public transport is a prime consideration in improving mobility of persons in communities.

9. CONCLUSIONS

Although it has been established in the studies that have been conducted and cited in this paper that apps-based transportation services provide alternatives to the riding public, it is also clear that government regulations are necessary to protect the rights and well-being of the commuters. Moreover, it is also the government’s task to ensure that the transportation system is planned well and the various transportation modes will be deployed where they are most appropriate.

It must be mentioned that regulations of TNC services is not unique to the Philippines. In 2013, the California Public Utilities Commission established regulations for TNC services which included driver background checks, driver training, drug and alcohol policies, minimum insurance coverage of $1 million, and company licensing through the Public Utilities Commission (Public Utilities Commission of the State of California, 2013). Uber was also asked to suspend surge pricing in New Delhi (Hawkins, 2016). Such parallels are not necessarily coincidence but reflect perhaps the reality that ridesharing and ridesourcing companies face as they take over from conventional modes of transport like the taxi. While this also underlines the clash between innovation and regulation, the latter should not be discarded in order to favor convenience alone. Ridesharing and ridesourcing should be part of the rational, integrated transport system, complementing other more efficient and higher-capacity modes.

It is recommended that Government consider the self-regulation option in dealing with the TNVS.

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