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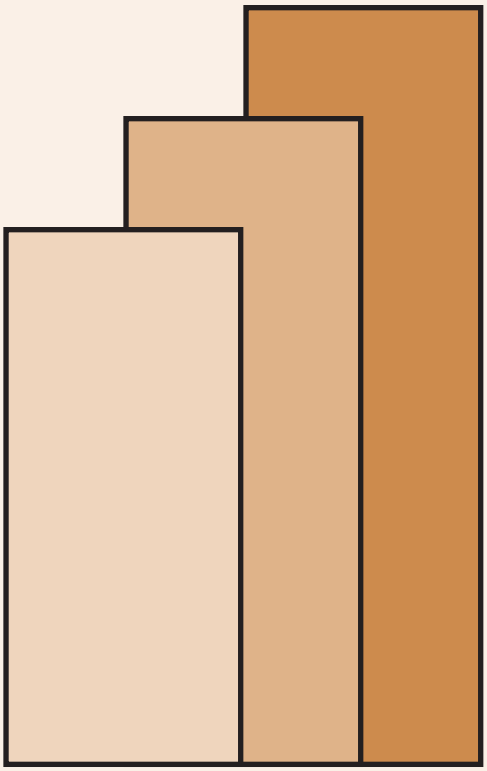

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Competition for the Market: A Policy Framework for Improving Bus Operation along EDSA

Gilberto M. Llanto and Hope A. Gerochi[1]

Abstract

The EDSA bus market is fiercely competitive. In theory, allowing competition among many bus operators is expected to result in cost-effective and reliable transport services, and efficient use of roads. However, in reality the outcomes are far different: daylong traffic jam and poor bus service along Metro Manila's most important road artery.

This paper examined an option proposed by some quarters that consolidating bus operation along EDSA will solve road congestion. It was thought that having fewer but bigger bus operators will be the solution. Based on a review of country experiences, this paper argues that one way to address road congestion and other market failures in the bus markets is to shift the regulatory framework for bus transport services from the current competition "'*in the market*" (the status quo) towards competition "*for the market*." Bus consolidation is an initial step to relieve the roads of traffic congestion but it is not a sufficient condition for sustainable quality bus service. However, casting bus consolidation within a competition for the market regulatory framework presents a better and more workable option for improving bus transport services in EDSA.

The alternative regulatory approach called "*competition for the market framework*" provides a stronger incentive for bus operators to consolidate because a competitive tendering mechanism is used to select an optimum number of formal bus transport operators that will serve the market. Government takes more control of critical aspects of bus services (design of the bus network, quality standards, frequency, among others), which, thus, provide an opportunity to address the market failures that are inherent in liberalized

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urban bus markets. The government via its pipeline of BRT projects – including one being prepared for EDSA – seems to lean in favor of this framework. To be effective and to encourage the application of this new framework also to non-BRT corridors, complementary reforms have to implemented in parallel and these would include improving the capacity of regulatory agencies, institutions (rules of the game), procurement, contract monitoring and traffic management.

Key words: *urban bus market, market failures, consolidation, competition-for- the market, competitive tendering, bus-rapid-transit system (BRTS), competition- in- the market, bus transport, traffic management, bus regulation, urban transport*

A. Introduction

Metro Manila is the country's main urban agglomeration and economic center, accounting for a disproportionate size of the Philippine GDP (37%) despite occupying less than 1% of the country's total land area. With 12 million people living in 632 sq. km. land area, it is the most densely populated city in the country. For the past few decades, Metro Manila had been grappling with increasing congestion of its major roads. A recent study by JICA (2014) estimates that Metro Manila traffic costs about PhP 2.4 billion in losses per day and will likely increase to PhP 6 billion a day without intervention. For Epifanio de Santos Avenue or EDSA, considered as Metro Manila's busiest thoroughfare, Domingo et al. (2015) estimated that the annual social cost of congestion (forgone wages of passengers and bus operating costs) is about PhP 5.5 billion.

The roadway (EDSA) can be assumed to be a fixed public resource. As a national highway, EDSA can be freely accessed by cars, taxis, Asian utility vehicles (AUVs), and buses, but not by jeepneys, which are banned from this thoroughfare. Without an efficient traffic management, the huge demand for EDSA has led to severe road congestion. Experts have suggested a number of measures to address this situation, e.g., opening roads in private subdivisions as parallel or alternative roads because EDSA can no longer be widened,

reducing the number of vehicles on the road through number coding schemes, consolidating bus operation, and recently by imposing a tax on secondary vehicles of motorists. This paper examines the case for bus consolidation as a strategy for relieving road congestion along EDSA. The focus is on buses, which occupy less road space per passenger and have a great potential for easing road congestion if commuters use them more than private cars or taxis.

The bus sector was liberalized in 1992 to encourage competition in the market and this was expected to effectively address the burgeoning demand for public transport arising from population growth and in-migration from the countryside. The liberalization of the bus sector has resulted in the proliferation of bus operators and high volume of bus units plying the major thoroughfares of Metro Manila. **Table 1** shows the prevalence of small operators with few bus units (10-14 units per operator on the average). Currently, 12,595 buses operate within Metro Manila and from neighboring provinces to Metro Manila. Of the total number of franchised bus units in Metro Manila, 3,711 operate the Manila-EDSA route while 1, 632 franchised bus units ply the non-EDSA routes (**Table 1**). It is noted that there are also thousands of buses that operate without the required franchise (called "colorums"). Some estimates indicate that around 4,000 to 5, 000 buses are illegally operating along EDSA (Panti 2013).

Meanwhile Domingo et al (2015) observed that there is an excess supply of buses especially during off-peak hours of the day. PLANNADES (2007) found that bus occupancy rate within EDSA was as low as 52% and thus the buses were running half-empty a lot of time. The daily operation of such an immense volume of buses and inefficient traffic and pedestrian management has contributed to road congestion. This has caused unjustifiable and lengthy travel time for commuters. The market failures inherent to liberalized bus markets are detailed in Section E of this report.

Table 1. Number of Operators and Buses, Manila Bus Routes

Route	Number of operators	Number of buses	Average no. of bus/operator
Manila EDSA Route	266	3,711	14
Manila Non-EDSA Route	128	1,632	13
Manila-Provincial North Bound	371	3,684	10
Manila-Provincial South-Bound	357	3,568	10
TOTAL	*1,122*	*12,595*	*11*
Alabang-Fairview	21	341	16
Baclaran-Novaliches	17	171	10

Source: Land Transportation and Franchising Regulatory Board (LTFRB)

The large number of small bus transport operators is likely to indicate substantial competition in the bus market. Domingo et al (2015) validated this using the Herfindahl-Hirschman Index (HHI) and applying it to the selected intra-city routes[2]. The HHI index shows substantial competition in the selected routes. (**Table 2**). It was expected that competition for passengers on the road would result in more efficient transport services. In reality, however, the current bus market structure, characterized by easy entry of hundreds of small operators and oversupply of buses, has led to a rather chaotic situation along EDSA.

[2] The routes, Alabang to Sm Fairview and Baclaran to Novaliches, were selected on the basis of length of route, number of passengers and operators, and population density along the route

Table 2. Market Structure of the Bus Transport Sector, Selected Routes

Route	Characteristics	Distance (round-trip)	HHI	1/HHI	Number of Operators	Level of Competition
Alabang-Fairview	Busiest, highest number of operators, one of the longest routes, through EDSA and major residential and commercial areas	87.42 km	0.087	11.5	21	Substantial
Baclaran - Novaliches	One of the busiest routes, highest average number of passengers	64.6 km	0.070	14.3	17	Substantial

Source: Domingo et al. 2015

Over time, bus transport services along EDSA and adjoining roads have deteriorated, leading to a very fragmented and disorganized bus market characterized by an excessive number of vehicles run by numerous operators owning small and inefficient fleets, an average of 13 vehicles per operator, as indicated in Table 1. Poorly enforced bus regulation has led to the proliferation of bus transport operators with overlapping routes. A 2006 JICA-funded route revalidation survey on EDSA revealed that about 30 operational routes cover the section of EDSA from Guadalupe in Makati City to Kamias, Quezon City the most congested stretch of EDSA.

The situation is exacerbated by the poor driving behavior of bus drivers that is mainly motivated by the compensation arrangement between them and their respective operators. Bus operator profit depends on the number of passengers transported daily by a huge number of old and inefficient buses. Because of a monitoring problem, the operators base the compensation of the bus driver and the bus conductor[3] as a percentage of bus ticket sales. This provides the driver and the bus conductor with the incentive to do whatever it

[3] The bus conductor takes care of fare collection inside the bus. The compensation scheme is called "boundary" system in local parlance.

takes to pick up as many passengers as possible and as time or road space would allow. The unintended effect is widespread poor driving behavior which has become a public safety hazard and a cause of traffic congestion. It seems that LTFRB's Memorandum Circular No. 2012-001 which requires operators to provide compensation based on a fixed amount plus a portion based on performance has failed to weed out the so-called "boundary system" for compensating drivers of public buses and jeepneys. Under this Circular, the fixed component is equivalent to the minimum wage in the region where the bus operates. The performance-based component is based on the net income of the bus operator and on employee safety records.

Domingo et al. (2015) suggested that one strategy to address congestion along EDSA is to consolidate the numerous bus operators into a fewer but more manageable number of operators or bus consortiums. With fewer bus transport operators monitoring and regulation will be easier. It was pointed out that bus transport consolidation will also provide an opportunity for consortium members to exploit economies of scale and self-regulation.

This study examined bus transport consolidation as a supply- side measure to address road congestion, determined options for consolidating bus transport operation, and identified implementation benefits, costs and risks. The paper also yielded important insights for competition policy given the unique characteristic of the bus market in that unlike other types of services, it can suffer from too much rather than too little competition.

B. Overview of the Rules for Entry and Exit, Fare Regulation and Institutions in the Bus Market

To set the context of the paper, this section briefly summarizes the rules for entry and exit, fare regulation and key institutions in the bus market.

Entry and Exit and Fare Regulation

Market entry and exit in bus services in Metro Manila was formally liberalized in 1992. At least two bus companies are allowed to operate on an identified bus route. A new operator may apply for franchise with the Land Transportation Franchising and Regulatory Board (LTFRB) to operate on a new or existing route. The franchise applicant has to provide proof that conditions for entry are satisfied. The LTFRB uses a Route Measuring Capacity (RMC) test as a screening process to determine the merits of granting franchises. Box 1 shows the conditions for granting bus franchises. A bus operator who has been given a franchise or Certificate of Public Convenience (CPC) may provide bus transport services to the public during a five-year period. The CPC can be renewed up to 3 years. The LTFRB regulates the fares of non-air-conditioned buses. For air-conditioned buses, requests to increase fares are subjected to a public hearing by the LTFRB.

Box 1. Conditions in Granting Bus Franchise to New Entrant

The new entrant will be allowed to operate in an existing route upon satisfaction of any of the following conditions: (i) the new operator is able to provide a more efficient/cost-effective service than existing operators; (ii) the new operator introduces quality or service improvements and/or innovative/technologically-advanced services; (iii) the route warrants additional capacity; (iv) the practice of existing operators result in lack of competition; (v) the existing operators have ceased operation; and (vi) the existing operator/s have violated the terms of their franchise rules and regulations.

Source: Domingo et al. (2015)

Aside from LTFRB, a number of institutions play a role in the development and management of road-based urban transport system in Metro Manila (**Table 3**).

Table 3. Institutions in road-based urban transport system, Metro Manila

Agency	Function
Department of Transportation (DOTr)	Primary body tasked with policy setting and planning of transport systems; regulates transport operations and implements transport projects through its attached agencies.
Land Transportation and Franchising Regulatory Board (LTFRB)	An attached agency of DOTC primarily responsible for regulating and supervising motorized land-based public transportation services (except tricycles) and regulates fares
Land Transportation Office (LTO)	An attached agency of DOTC primarily responsible for driver licensing and registration of all motorized land-based transportation vehicles and for enforcing RA 4136 (Land Transportation and Traffic Code)
Department of Public Works and Highways (DPWH)	Responsible for the planning, design, and construction of national roads and bridges
National Economic and Development Authority (NEDA)	Responsible for the coordination of policies in the transport sector (roads, maritime, air, etc.) in the Philippine Development Plan
Metropolitan Manila Development Authority (MMDA)	Responsible for traffic management within Metro Manila.
Local Government Units (LGUs)	Responsible for construction and maintenance of streets, traffic management and transport regulation within the city or municipality.

Source: Napalang and Regidor 2015 and Domingo et al. 2015

C. Metro Manila Bus Consolidation in the 1970s

Bus sector consolidation is not new to Metro Manila. There is, however, very scant information on how it was implemented in the late 1970s. At that time, Metro Manila had a multitude of independent private bus operators providing inadequate services, which faced stiff competition from the ubiquitous jeepneys (Rimmer 1989). The chaotic situation prompted the government to establish a public utility company in 1974, the Metro Manila Transit Corporation (MMTC), to operate and compete in the market for urban bus services in a bid to improve the quality of transport services in the metropolis. The private operators were then encouraged to consolidate into bus consortia. Guariño et al. (2001) indicated that the proposal to form a manageable number of bus consortia was aimed at producing economies of scale in operations, which would enable them to borrow capital from commercial banks to procure new vehicles. However, there were difficulties in complying with the consortia requirements and raising financing for new vehicles. The government eventually bought brand new buses and leased them to private bus operators at a subsidized rate. Fourteen (14) bus consortia, including MMTC were formed in 1981, operating in designated routes. MMTC had the largest market share and operated in less profitable routes to perform its social mandate as a government owned and controlled corporation. However, 7 out of the 14 bus consortia defaulted on their leases due to mounting operating and maintenance costs, prompting MMTC to assume control of operations (Rimmer 1989). This added to the financial burden of MMTC, which was itself already operating at a loss, quite typical of publicly owned and operated bus companies. A severe transport crisis in 1989-1991 brought about by the rapid increase in passenger demand and inadequacy of public transport led the government to adopt another lease program, this time, for imported second-hand buses. The intention was to encourage private sector investment in bus operations (Guariño et al. 2001). Eventually the various bus consortia folded up, MMTC was privatized, and the urban bus market was liberalized and took its present form where numerous bus transport operators compete to deliver bus transport services in the metropolis. It should be noted that both buses with franchises (legal) operate side by side with buses without franchises (illegal, called “colorum” buses in local parlance). However, with poor regulation, the expected efficient and quality service provided by freely competing

franchised bus operators did not materialize. There was an oversupply of buses, many of which were old or ill-maintained, owned by numerous operators, franchised and not, providing token services. Despite an apparent oversupply of buses, commuters complained of the difficulty of getting a ride and poor service. Bus drivers behaved poorly on the road as they tried to outdo each other in transporting as many passengers as possible because they were paid on commission basis, that is, depending on the volume of passengers transported (so-called "boundary system").

Guariño et al. (2001) indicated that the experience of having bus consortia in the 1970s did not work due to (i) the inadequate fare structure to cover increasing costs, (ii) stiff competition with jeepneys, (d) maintenance costs charged by the government- accredited contractors that have impacted the finances of of the bus operators, (iii) the absence of comprehensive operating guidelines in the implementation of the consortia, and (iv) bus operators' tendency to operate the buses themselves despite the presence of a consortia.

There were shortcomings in the bus consolidation done in the 1970s but consolidation seems to have remained as an attractive idea. As part of its responsibility for traffic management for Metro Manila, MMDA presented a draft consolidation scheme that would organize bus operators into four to six self-regulating bus consortia based on factors such as travel destination, location of garages, and routes, among others. The proposed scheme did not get the support of bus transport operators. It seems that at a least a few operators thought that bus consolidation will affect current franchises, routes and ultimately the profitability of the bus transport business.

To determine how an efficient consolidation may be done, it is important to first understand how the current form of competition in the bus market has led to the suboptimal outcomes, and secondly, why these outcomes have persisted. We discuss these through the lens of market failures, and assess bus transport consolidation under two scenarios: (i) bus consolidation under the current framework of 'competition in the market' and (ii) bus consolidation under a 'competition for the market' framework.

D. Competition in the Urban Bus Market and Market Failures

The present problems in the bus sector are not unique to Metro Manila. Many cities in various parts of the globe have liberalized their respective bus markets to address transport inefficiencies and ease the fiscal burden arising from publicly operated bus services or to meet increasing demand for public transit services. The common experience was how to deal with the conundrum brought by increased competition in the bus market. Allowing more competition, in theory, was expected to result in more affordable and reliable transport services, and efficient use of roads. However, the equilibrium outcome has been less than optimal and this was pervasive in many liberalized bus markets: the persistence of high transport fares, excess entry or oversupply of vehicles, poor quality of buses, unpredictable frequencies, excessive dwell times in bus stops and aggressive driving behavior that often causes or exacerbates road congestion. In some countries there is evidence of price collusion or cartelization amongst operators (such as in pre-reform Bogata, Colombia where a bus cartel lobbied for fare hikes and extending the service life of buses, as cited in Echeverry et al. 2005). These outcomes showcase the consequences of market failures wherein the urban bus market produced too many buses than what is socially optimum, thereby imposing negative externalities such as road congestion, long waiting and travel time, and deteriorating air quality. Weak enforcement of rules and inadequate regulation on market entry only compound or prove to be counterproductive in addressing these failures.

Market failures

The outcomes identified above are typical of bus markets where buses directly compete for passengers on the road (commonly known as *competition in the market* framework). It is important, however, to understand that in such a framework, market failures and outcomes are not purely negative externalities (e.g. congestion or pollution) nor are they brought about by policy failures but are also consequences of the economic characteristics of the business (Estache and Gomez-Lobo 2005). Consider the following:

1. *Absence of curb rights* - Street or road curbs and bus stops are public property.[4] Since no one has property rights or exclusive use to these areas, buses and other forms of transport service feel free to compete for passengers on the curb. This means entry to the passenger market is relatively unrestricted, which encourages bus drivers plying the same route to race each other to the bus stops to pick up passengers, reflecting weak incentives for bus operators to provide reliable and scheduled services.[5] The "boundary" system of compensating bus drivers and conductors exacerbates the free-for-all, winner-take-all attitude behavior in bus stops along EDSA.

2. *Waiting or search costs* - Passengers incur waiting or search costs if they want to "shop around" for the lowest priced or the highest quality buses (Gomez-Lobo 2007). Because passengers cannot differentiate whether the next bus will offer a lower fare or high quality service, and also because they want to reach their intended destination soonest, passengers would tend to board the first bus to arrive. Since passengers value time more than these variables, demand for buses is relatively inelastic. This blunts incentives for any price competition or to improve quality of services. As a result, bus markets are characterized by high bus fares and proliferation of poorly maintained or ageing bus fleets. This outcome is reinforced by regulatory capture, particularly in developing countries where institutions are weak. In Santiago City in Chile in 1980s, for example, bus fares increased by as much as 100% after liberalization and these are considered unrelated to increases in fuel prices (Estache and Gomez-Lobo 2005).

[4] According to Klein, D., A. T. Moore, and B. Reja (1997): *Curb Rights: A Foundation for Free Enterprise in Urban Transit.* Washington D.C.: Brookings Institution Press, as cited in various literature reviewed.

[5] The lack of property rights has a different implication for markets in developed countries where demand for public transit is low. In this case, there is underinvestment in regular, high quality bus services since operators would not be able to recoup investments if illegal operators can easily operate along the same corridor or route.

Thus, in many cities that liberalized their urban bus markets, a "competition in the market" framework supported by a weak enforcement of regulations that are supposed to enhance market competition yielded certain negative outcomes. Many passengers who prefer cheaper and better quality transport services started to use more often the available alternative transport service providers. In the case of Metro Manila where fares are regulated, commuters who prefer better quality transport services at the prevailing regulated fare have chosen to take alternative modes of public transportation such as the MRT3 whose fares are highly subsidized and cheaper by the distance (Mijares et al. 2014) or to seek out a highly differentiated bus service such as the premium Point-to-Point or P2P express buses that offer services to and from designated stops along EDSA. Despite the findings of excess buses on the road, DOTC supported the fielding of additional buses offering a though highly differentiated service, that is, "from point to poin." This is perhaps linked to the inability of MRT3 to cope with demand and the P2P was meant to service this segment of the market i.e. those who left the normal bus market because of their preference for higher quality transportation service. It is plausible that even if passengers had to incur waiting costs to endure long lines to board the MRT3 or pay a higher fare for the P2P bus, the total value of the trip (MRT3 or P2P fare plus the net travel time savings) is much higher than the total trip value provided by the regular (non-premium) buses[6].

3. *Principal-agent problem* - The poor and aggressive driving behavior – long dwell times along the curb to load passengers, racing to bus stops, obstructing other buses from loading potential passengers to maximize revenues, and outright flouting of the rules – that contributes to road congestion and compromising road safety, is rooted in the compensation arrangement between the operator (principal) and driver (agent). Because the principal cannot monitor the work effort of bus drivers and contractors, it seems logical to base the driver's daily compensation on the number of

[6] An interesting query is whether the prevailing regulated bus fare is too high relative to the quality of bus transport service offered in the market.

passengers transported and the corresponding volume of ticket sales. To get as much daily compensation, the driver has the incentive to pick up as many passengers as possible with little regard for road safety and road congestion. The driver's incentives are aligned with the operators' goal (i.e. the number of passengers of carried) but the problem is the negative externalities brought about by boorish driver behavior. Bus conductors are tasked to collect fares from passengers on behalf of operators and here, there is a great possibility of fraudulent reporting of actual revenues. This is another monitoring problem faced by the owner (principal) and the remedy given is the hiring of bus inspectors to do spot checks of tickets sold to passengers. This is not a perfect solution to the monitoring problem because the bus conductors, drivers and bus inspectors may collude. The added monitoring cost helps explain the predominance of operators owning small fleets, which makes it easier to determine erring driver/conductors (Estache and Gomez-Lobo 2005).

4. *Information Asymmetry* – Bus operators know the true cost of providing the service more than regulators and they can easily the quantity (for example, number of vehicles deployed to the streets on any given day) and the quality (for example, bus availability or frequency, dwell time along bus stops) of services. The bus service could be at or below the socially optimum level depending on the effort of bus operators and the regulator faces, therefore. a classic information asymmetry situation. The information problem can be seen in fare setting and in route franchising in the Philippines.

   Efficient fare regulation has a central role in achieving the socially optimum level of service in the bus sector. This has to do with allowing operators to have sufficient revenues to recover costs and address their profit objectives. However, it seems that a key characteristic of fare setting – which is true across countries – is that it is politically controlled to ensure affordability or to induce entry/exit decision and frequency (Estache and Gomez-Lobo 2005). If fares are high relative to the operational cost of providing bus services, this will be welcome to bus operators but at the same time, this could induce many attempts to enter the market. The number

of applicants allowed entry will depend on how the regulator sees the market. In some instances, excessive entry results in wasteful duplication of services and unbridled competition, which is the present case in EDSA. A good number of buses ply EDSA almost empty during certain hours of the day and clog the curbs to get passengers without concern for the disturbance such boorish behavior creates.

On the other hand, setting fares at very low levels could lead to perverse behavior by the operator, e.g., scrimping on routine maintenance and other operating expenses, instructing drivers to cut trips and these are activities or decisions that are very difficult to monitor and determine from the vantage point of the regulator. With thousands of buses, both legal (that is, with a transport franchise) and illegal (without a transport franchise) plying EDSA and other major thoroughfares of Metro Manila, the regulator is hard pressed monitoring and enforcing quality bus service for the riding public. The asymmetry of information is also reflected in the route franchising practice in the Philippines. Bus operators know more than regulators which routes are viable and profitable and thus, the identification of routes has been left to prospective operators. As a consequence, more than 30 operational routes pass through the section of EDSA from Guadalupe, Makati City to Kamias, Quezon City with an excessive number of buses plying these overlapping routes (JICA 2006).

Another phenomenon showing the problem of information asymmetry and the seeming inadequacy of the regulatory institutions to deal with it is the *"kabit"* practice among transport providers, whether they are bus, taxi or jeepney operators. The "kabit" practice is about a bus operator allowing another operator to use his government issued franchise for a fee. Ostensibly the franchised bus operator operates a fleet of buses he owns but in reality a few of these buses are owned by a second or even a third operator secretly paying him a fee. This happens without knowledge of the regulator, or in the event this becomes known in the open, regulatory capture ensures that the status quo remains. The "kabit" practice has led to the fragmentation of the ownership structure of the franchised and to the lack of discipline in the city streets because of diffused and opaque accountability.

Regulatory issues and responses

How have authorities addressed these failures in the form of policies and regulation? **Table 4** shows some of the recent regulatory actions targeted to manage entry and the volume of buses in Metro Manila and the compensation arrangement between operators and drivers:

Table 4. Selected Regulatory Responses

Issues	Regulatory Response	Outcomes/Remarks
• Oversupply of buses	• Nationwide moratorium on issuance of new franchises in 2003 (LTFRB) • Bus Rationalization Program 2007 (LTFRB) • Steeper penalties for illegal or 'colorum' vehicles (Joint LTO-LTFRB Memo 2014-01) • Route Measured Capacity (RMC) applied to new franchise applications (LTFRB)	• Loose monitoring and enforcement of moratorium • Strong pressure/ lobbying from bus operators led to continued entry in the bus market • RMC considered ineffective for overlapping routes (JICA 2007)
• Frequency of service	• Modified Unified Vehicular Volume Reduction Program or UVVRP (implemented by MMDA) or commonly known as the number coding scheme. Vehicles are banned on plying the streets one day a week from 7 a.m. to 7 p.m. depending on the last digit of its	• Extending the UVVRP to public transportation sends wrong signal in terms of favoring private transport over public transport

Issues	Regulatory Response	Outcomes/Remarks
	plate number (i.e. banned on Monday - 1,2; Tuesday -3,4; Wednesday -5,6; Thursday-7,8; Friday-9,0) except for a certain window (10am-3pm). Initially applied only to private vehicles but later expanded in 2010 to include public transport vehicles such as buses[7]. • Organized Bus Route or OBR (implemented by MMDA) scheme to control frequency along EDSA by imposing a common dispatching service. "Q" cards used to manually manage headways. Five control points and eight checkpoints were set up through which the flow of buses along the routes that ultimately overlap along EDSA can be monitored and regulated the flow of buses. Later upgraded by using radio frequency identification (RFID) technology. • A Bus Management and Dispatch System (BMDS, implemented by MMDA) is currently being implemented. It applies a segregation system that also checks for outstanding traffic currently conducted at 4 points in Alabang (Muntinlupa), Baclaran (Pasay), Fairview (Quezon City) and	• Manual OBR unsuccessful mainly due to flawed dispatching and slow processing of violations • BMDS dispatching not consistently implemented; checks for driver violations are currently being conducted only at Fairview and Navotas.

[7] The MMDA has recently amended the UVVRP scheme by eliminating the window hours (10 am -3 pm) and extending the ban to 8 p.m. on Monday to Saturday.

Issues	Regulatory Response	Outcomes/Remarks
	Navotas. Drivers with outstanding cases are not allowed to drive until cases are resolved.	
• Compensation contract between operator and driver (e.g. "Boundary System" wherein driver's take home pay depends on the fare collection after an agreed fixed amount or boundary is paid to the operator for the use of the bus)	• Part-fixed - part-performance based compensation directive (LTFRB 2012-001)	• Difficult to monitor compliance due to numerous operators. • Operator revenues are anchored on number of tickets sold thus there is little incentive to change the status quo

Source of basic data: LTFRB, Napalang and Regidor 2015, and informant interviews.

Overall the regulatory responses were well intended but weak or inconsistent enforcement, the strong lobby from the bus operators or sectoral accommodations (as documented in Domingo et al. 2005) made them relatively ineffective. The regulatory responses failed to recognize the special characteristics of the bus market as discussed above and tackled mostly the symptoms rather than the root of the market failures. The response on changing the boundary system is perhaps an exception but without the collective agreement of operators and an effective monitoring and enforcement, it is unlikely that the proposed change will be adopted by operators and drivers alike. The lack of access to and gaps in important industry information makes regulation less effective, making institutions vulnerable to regulatory capture. For example, LTFRB has scant information on the financial

aspects of bus operations, causing difficulties for the agency in setting appropriate bus fares based on hard evidence. A JICA study (2007) noted that LTFRB records on transport franchises and LTO data on vehicles do not match. This makes it problematic to verify franchises and address the problem of illegal or 'colorum' buses.

E. Consolidation as a Regulatory Response

The worsening traffic conditions in Metro Manila has prompted the Metro Manila Development Authority (MMDA) in 2012 to consider the consolidation of some 100 operators on EDSA and other major roads into four to six "self-regulating consortiums," noting that many half-empty buses end up "choking traffic when they form long queues at the stops."[8] MMDA presented a draft consolidation plan based on factors such as travel destination, location of garages and routes, among others. The plan, however, did not prosper as many operators felt that the scheme would affect their current franchises – specifically their routes – and did not take into account the fact that each bus company already has its own garages or depots. Despite MMDA's argument that consolidation will improve bus revenues and will enable the pooling of resources for operations and maintenance, the bus operators ignored the proposal. In a study done at the National Center for Transportation Studies, Guarino and others (2001) seem to support the argument against economies of scale as data from Metro Manila bus operators indicate that the profitability of bus operation was not significantly influenced by the fleet size

An extreme option to address the problems in the bus market as described above is to have one operator. Sometimes the single operator is a government entity/corporation tasked with the mandate to provide transport services itself. The experience of many countries which started with public monopoly shows that this option is ineffective due to the lack of incentives for efficiency and productivity, and the resulting fiscal burden arising from subsidies typically provided to the sole (monopoly) government-owned corporation created to provide bus transport services. Involving government in the provision of transport

[8] *http://newsinfo.inquirer.net/357607/draft-scheme-to-reduce-empty-buses-on-edsa#ixzz45Da1rcbj*

services is not an efficient solution at least in the country based on the experience of MMTC as described above. Even though MMTC was not established as a monopoly, the government's foray in bus operations (**Box 2**) offers a cautionary tale on government's involvement in the provision of transport services.

Box 2. The Metro Manila Transit Corporation

Presidential Decree No. 492 in 1974, created the Metro Manila Transit Corporation (whose buses are commonly known as the 'Love Bus') due to the inability of a legion of independent bus operators to provide adequate transport services. It was set up to attain five policy objectives but the results of this intervention resulted in totally different outcomes and even exacerbated the wasteful competition among private and informal operators:

Objectives	Results
To eliminate destructive competition and service duplication among different transport modes and firms	Competition and service duplication heightened by a new, large company, MMTC
To rationalize route allocations	MMTC could operate in any route without a franchise; in contrast, franchises for private operators controlled by the Board of Transportation
To achieve economies of scale in operations, overhead facilities and logistics support	Economies of scale of overhead or operations not achieved
To develop a metropolitan transport firm with a strong financial base and efficient operations	With consistently large deficits and poor productivity MMTC has developed neither a strong financial base nor efficient operations
To work towards a standardization of bus fleet and other equipment	Acquisition of buses from manufacturers in seven different countries went against the aim of fleet standardization

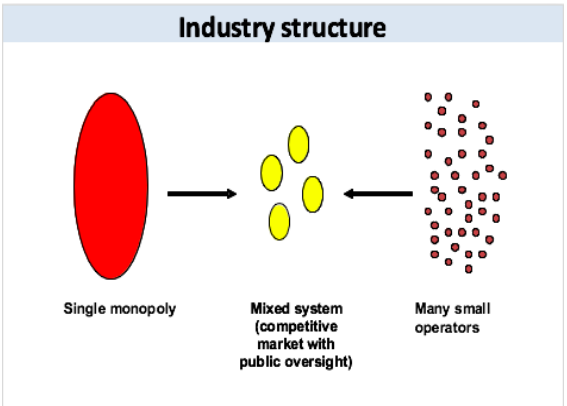
Source: Roschlau, M.W. 1985. Public Transport in the Provinces: A Study of Innovation, Diffusion and Conflict in the Philippines. Ph.D. dissertation. Australian National University, as cited in Rimmer 1989

MMTC's financial and operational performance was poor. The company accumulated a deficit of more than PHP 140 million during its first four years of operation which at that time was equivalent to acquiring 4,800 jeepneys with seating capacity of about 75,000 or double the seats provided by MMTC's fleet. The deficit was attributed mostly to its role in pioneering services in areas neglected by private companies and to high maintenance costs. MMTC suffered low productivity (e.g. six to ten employees per bus) and absenteeism was also rampant. Its operations rapidly deteriorated between 1983 and 1987 with a decline in the number of buses in operation (e.g. only 8 of the 21 double- decker buses were in service by 1989). Debt equity ratio increased from 8.1 in 1983 to 11 in 1997. The Aquino Administration later recommended privatization, a belated recognition that government was an expensive and less efficient provider of services. The MMTC eventually folded up and gave up its operation.

Source: Rimmer 1989

The liberalization of the bus industry has its merits: it has attracted private sector investment into the bus sector and for markets where demand is high (typical of developing countries), private bus services were able to reach more people than thought possible. The problem, however, is that liberalization has produced the other extreme outcome wherein the industry is now characterized by atomized, small numerous operators and excessive competition. This is what happened to the Metro Manila bus market and consolidating bus operators to a manageable few was considered as a practical solution to the current problems in the bus market. Consolidation was envisioned to result in weeding out 'colorums,' formalizing them and mitigating the excesses of competition (**Figure 1**). It was also thought that having fewer operators in the industry would also be desirable from the perspective of operators because of better returns on their investments. The mixed system which offers a more competitive bus market will still be with public oversight and is a viable option between a single monopoly operator and a system with many small operators with perhaps a few that can be considered as marginal players.

Figure 1.



Source: ADB, Industry Transition, BRT Training Series (Undated)

The recent attempt of MMDA to draw up a consolidation plan for bus operators plying EDSA and other major roads clearly shows that it was not an easy feat and would not prosper by relying simply on the good will of the numerous operators. Forcing operators to consolidate or giving them generous incentives if they consolidate will not necessarily lead to more efficient service. Perhaps fewer operators after consolidation will generate sufficient revenues to recover their investments but with ineffective regulation, the riding public is not assured of efficient service. While there could be more effort to enforce regulations, information asymmetry problems and the current industrial organization of this sector could frustrate such efforts.

In this regard, the experience with bus consolidation in the 1970s is instructive. The consolidation efforts in the 1970s failed for several reasons. The bus operators who had been consolidated into a few bus consortia tended to still act or operate individually on their own It seems that inertia and the presence of influential owners and bus lobby groups were also significant factors, among others, behind the ineffectiveness of the bus consolidation effort. In terms of addressing market failures that affects market entry and driver behavior, the approach did not work because there was little difference in the quality of the services provided by the bus consortia and the individual operators who were still allowed to operate. Buses competed for passengers regardless of safety and quality of service standards and held decisions on frequency of trips, among others. It was a chaotic bus market and a more effective regulatory and monitoring framework would have certainly prevented the deterioration of bus service along EDSA and also the whole of Metro Manila.

For consolidation to work in a liberalized bus market with its peculiar characteristics as discussed above a more workable operational framework has to be developed. Establishing an efficient filtering mechanism for entry into bus operation is a first step. It could provide a strong incentive for operators to devise ways to improve their service delivery capability. A filtering mechanism may have several features: (i) sufficient proof of ability to operate a modern and consumer-focused bus service through deployment of bus units that are not more than two or three years old, (ii) financial and management capacity and (ii) access to financing to upgrade vehicles and services, among others.

A good filtering mechanism will make the franchise more valuable such that it acts as an efficient market entry regulation to address the problems of an oversupply of buses offering inadequate service, proliferation of old and highly polluting vehicles on the street, thereby reducing air pollution and improving fuel consumption.

Is there another way to bring about bus consolidation? The next section discusses an alternative to the present approach of direct competition in the market. The alternative to be discussed below has the potential to improve service efficiency and promote an integrated and coordinated bus sector without resorting to public monopoly.

F. Competition for the Market as an Alternative Competition Framework and Basis for Consolidation

In cities that successfully addressed market failures in liberalized bus markets, the starting question was whether the existing competition framework was the most appropriate given the circumstances. Gwillian (2005) observed that in very large cities in developing countries where inadequately regulated free market with increasing supply of buses failed to provide "disciplined, safe and environmentally acceptable" bus operations, the introduction of "competition for the market" as a suitable framework for improving bus services has produced positive results. In contrast to "in-market competition" wherein buses compete for passengers on the road (Metro Manila's existing framework), "competition for the market" requires bus operators to compete *ex-ante* under a tendering mechanism espoused by government for the right to provide services in a particular bus route.[9] "Competition for the market" can be viewed of as a form of entry regulation policy to address excessive entry in markets (Mougeot and Nagelen, 2005).

In many ways, the responses to address the market failures described above are akin to regulating a natural monopoly. Direct competition or "competition in the market") will not likely result in optimal outcomes in the urban bus market. This is because the economic characteristics of the business make it more efficient to limit the number of players operating in the market and their scope of influence. For example, stronger regulatory oversight is needed to limit the market power of bus operators, which they can effectively yield due to the existence of search costs. The absence of curb rights necessitates the need for strict coordination of service frequencies to ensure order on the road which is difficult to accomplish if there are numerous operators in the market.

[9] For a formal definition of 'competition-for-the-market', see http://regulationbodyofknowledge.org/market-structure-and-competition/competition-market/

It has been recognized that for industries that exhibits characteristics of natural monopolies (e.g. water, electricity, and telecoms), competition *for* the market is an appropriate alternative to direct competition. Based on our review of the distinct characteristics of the bus market, it seems that interventions similar to regulating a natural monopoly may apply to it. Earlier we discussed certain market failures such as search cost, lack of curb rights, agency problem, and information asymmetry that set the bus market apart from other markets. On the other hand, Gomez-Ibanez (2003) pointed out that a small percentage of industry investments are immobile and durable (fixed costs), for example, bus stations and terminals, which may give rise to problems regarding their exclusive use. This is addressed by having government ownership of such facilities, which are made available to competing private companies. Gomez-Ibanez (2003) further noted that there is little evidence of economies of scale for firms with more than fifty buses in industrialized countries, and such economies of scale are probably exhausted with even smaller fleets in developing countries, giving the Sri-Lanka bus sector as an example. Guarino, et al. 2001 study (NCTS) seems to support the argument against economies of scale as data from Metro Manila bus operators indicate that the profitability of bus operation was not significantly influenced by the fleet size.

The tendering mechanism provides a strong incentive for existing numerous operators to consolidate as only the optimum number of formal operators will be allowed to serve the market via a concession contract. The government in this case would need to design or define the optimal market structure e.g. how many operators will be granted franchises to operate, the type and quality of the services to be provided, how these operators will be compensated, among others. The tendering mechanism also ensures that only the most efficient bidder who can provide services in the market at a specified price or condition (e.g. criteria could be based on lowest gross payment or subsidy required for the service or a mix of a number of variables), will be selected. It should be noted, that in many country cases that we reviewed, the shift to the competition for the market framework did not result in a monopoly provision *ex-post* (i.e. one operator per route) but competitive tension was retained by allowing more than one company to operate a route (such as in Bogota, Colombia in Box 2). In this case, at a given tariff and vehicle specification, bidders

may offer different bids in terms of subsidy or compensation (gross contract) for the service. The bidder that offers lowest subsidy or compensation for the service is allocated more of the bus service schedule and while the next lowest bidder is offered less. The procuring entity would need to set an acceptable range of bids in this case. For cases where only one operator is allowed per route, costs and performance can be benchmarked against similar bus operators or commonly known as yardstick competition (such as in Norway as described in Estache and Gomez-Lobo 2005).

Many cities in developed and developing countries, such as London (UK), Seoul (South Korea), Curritiba (Brazil), Bogota (Colombia), Santiago (Chile), Jakarta (Indonesia), to name a few, instigated reforms in their respective bus markets by adopting the competition for the market framework. The shift paved the way to consolidate bus operators as part of implementing a hybrid system of public and private provision which made it possible to improve the outcomes in liberalized urban bus markets. The hybrid system is typically characterized by:

- There is vertical separation of transportation services and fare collection.
- Government provides the common infrastructure such as bus ways, terminals, and stations and procures private sector services to operate buses that will use these public assets. One key difference in this alternative system vis-à-vis the status quo is that government takes the responsibility for the other critical aspects of bus service provision such as determination of routes, frequency of service, quality standards and the integration of tariffs.
- The private sector operates bus services under a concession or service contract. An independent private concessionaire is also contracted to collect revenues to ensure transparency.
- Private bus operators are not necessarily paid by the number of passengers transported but by other performance and/or operational indicators (e.g. kilometers run). Revenue collection is centralized and operators are paid depending on their performance based on specific and measurable indicators.

The modification of the usual competition framework to a "competition for the market" framework often comes with (i) a redesign/design and integration of the transport network to harness economies of scale and passenger density; (ii) some regulatory control on market entry, frequencies and tariffs; (iii) the set-up of an integrated revenue collection system to break the link between revenues and the number of passengers carried to address the poor behavior of bus drivers and other principal-agent problems, (iv) introduction of quality and technical specification of vehicles in contracts; and in many cases, (v) the creation of exclusive bus lanes or Bus Rapid Transit system to reduce travel times and improve overall efficiency of services (Estache and Gomez-Lobo 2005).

Benefits and outcomes of competition for the market – the case of TransMilenio, Bogota, Colombia

The shift to a competition for the market framework in many cities led to a vast improvement in efficiency in bus services vis-à-vis the status quo. Tariff escalations, such those as in the case of Santiago, Chile, were reversed, while passenger travel time and overall quality of services were generally improved in many of the cities (Hook, 2005, World Bank, 2002 and World Bank-Public Private Infrastructure Advisory Facility, 2011). There are of course variations in outcomes across cities depending on the strength of institutions or whether the transition was undertaken with complementary reforms. **Box 3** presents the case of Bogota City's TransMilenio to illustrate how competition for the market consolidated the numerous operators and transformed the city's bus services.

Box 3. TransMilenio: Consolidation and Competition for the Market

The case of TransMilenio – a gold standard BRT system in Bogota, Colombia – showcases the hybrid private-public model that replaced direct competition in the provision of bus services. Prior to the bus reforms, Bogota's bus market was serviced by small private operators, mostly non-formal companies that rent out vehicles to small bus owners or drivers, who controlled the allocation of routes. Roads were overcrowded with buses with many partially occupied. TransMilenio was established to rationalize bus routes in order to reduce the number of buses.

Bogota's City Government transitioned the bus network into a "trunk and feeder" system at the same time that the TransMilenio system was implemented. The consolidation of numerous bus operators was done by competitively tendering concession contracts for TransMilenio trunk and feeder routes, specifically requiring bidders to have certain minimum working capital to be incorporated as a formal business. The selection criteria awarded points for experience, including having existing operators in their consortia, bus quality and control of emissions. TransMilenio concession contracts also required discarding a fixed number of old buses and allocating equity to individual bus owners in the new companies. New transport firms that were formed were subjected to the leadership of a central authority, the TransMilenio, S.A. Other key elements of the TransMilenio system include the following: vertical separation of transportation service and fare collection, bus remuneration based on kilometers traveled rather than passengers carried, fare setting based on long-term recovery following a tendering process (i.e. competition for the market), and exclusive curbside service in metro-like stations, which constitute an organized system of express and regular routes and facility transfers.

The first phase of TransMilenio took only two years to complete. Shortly after its launch in 2001, significant improvements in bus services along its corridor were observed. There were fewer number of buses operating, that is, from 670 buses per hour to 270, an increase in vehicle occupancy, reduction in travel times of passengers by as much as 32 percent due to the segregated bus lane, abatement of pollution fell by 9 percent in some areas of the city and overall improvement in bus transport service in terms of quality of safety, efficiency and reliability.

Sources: Echeverry et al. 2005 and Hook 2005

TransMilenio addressed market failures in the bus markets as follows:

- On the absence of curb rights, it designated exclusive bus transit lanes and stations.
- On the principal-agent problem, it established a prepayment scheme, in which users buy tickets in booths located in the stations that are similar to metro systems around the world; bus drivers do not collect fares and their salary is determined by a labor contract that is unrelated to the number of passengers carried

- On information asymmetry – it invested in traffic demand modeling and planning to gain control over the bus system information while subsequent tendering process; concession contracts were awarded through competitive tendering, thereby allowing bus operators to self-select and reveal private information
- On aggressive competition for passengers, it issued gross-cost contracts based on kilometer runs plus some form of performance-based remuneration, e.g. keeping timely bus schedules rather than the number of passengers carried; more than one company were selected to compete for service on the same route or corridor but only a part of the total bus service schedule is allocated to each operator
- On the lack of incentive to maintain buses, it imposed fines in terms of a decrease in the number of kilometers assigned to an operator in weekly schedules for failure to properly maintain the vehicles as indicated by the number of breakdowns, among others; to reward bus operators who maintain their buses so that they may deliver efficient service, the concession period could be extended up to 10 years or until the average kilometer run per bus reaches about 850,000 km. whichever comes first.

Opportunities and challenges for Metro Manila

Given the experience of other cities that faced similar issues in the bus sector, transitioning to a competition for the market framework can greatly benefit Metro Manila (particularly EDSA) and other congested cities in the Philippines. The move towards this direction started with DOTC's and the Cebu City Government's ongoing implementation of the Cebu BRT Project, considered the first BRT in the country once it becomes operational. The NEDA Board has recently approved two other BRT projects, namely, the Metro Manila BRT Line 1, which will traverse Espana Boulevard and Quezon Avenue in December 2015, and the EDSA BRT running from Monumento to Diosdado Macapagal Avenue and Roxas Boulevard in September 2016. The two BRT projects form part of DOTC's medium-term plan in improving public transport systems in Metro Manila. DOTC has i established a steering committee and a project management office to oversee the BRT projects in its pipeline:

- National BRT Steering Committee – tasked to provide policy guidance and oversight of all BRT studies, projects and operational systems. Members include

DOTC (chair), Department of Finance (DOF), Department of Public Works and Highways (DPWH), Department of Interior and Local Government (DILG), LTFRB and representatives of LGUs where BRT projects are going to be implemented.

- National BRT Program Management Office (NPMO) under DOTC – tasked with planning and evaluation, resource mobilization, implementation, operations, monitoring and reporting, and promotion and communications

It is noted that competitive tendering has the potential to provide efficiency gains even in non-BRT corridors (i.e. areas where there are no exclusive bus lanes) as indicated in the case of Santiago, Chile and London in the United Kingdom (see Gomez-Lobo and Briones 2013). LTFRB has attempted to apply competitive tendering to the allocation of regular routes in Metro Manila but this did not prosper due to a negative legal opinion (dated April 18, 2013) handed down by the Department of Justice (DOJ).

The DOJ, citing certain provisions of the 1987 Constitution, said that "the subject proposal is clearly opposed to the . . . mandates of the Constitution such that the implementation thereof would be vulnerable to a constitutional challenge". The DOJ expressed concern that competitive tendering could result in providing the winner with an unequal opportunity to acquire or be awarded a franchise, that is, the Certificate of Public Convenience (CPC), and thereby making the CPC/franchise holders as the exclusive PUV operator in a given area. **Box 4** reproduces *verbatim* the salient points of a DOJ letter to LTFRB, expressing its opinion about the competitive tendering process proposed by the latter.

Box 4. Department of Justice Legal Opinion No. 26, series of 2013

"We have reservation on the proposed plan to award franchises to operate public transportation through public bidding. Article XII of the 1987 Constitution, insofar as pertinent, is clear and explicit, thus:

> "Section 1. T**he goals of the national economy are a more equitable distribution of opportunities, income, and wealth**; a sustained increase in the amount of goods and services produced by the nation for the benefit of the people; and **an expanding productivity as the key to raising the quality of life for all, especially the underprivileged.**
>
> In the pursuit of these goals, **all sectors of the economy and all regions of the country shall be given optimum opportunity to develop**. Private enterprises, including corporations, cooperatives, and similar collective organizations, shall be encouraged to broaden the base of their ownership.
>
> **Section 11. No franchise, certificate, or any other form of authorization for the operation of a public utility** shall be granted except to citizens of the Philippines or to corporations or associations organized under the laws of the Philippines, at least sixty per centum of whose capital is owned by such citizens; nor shall such franchise, certificate, or authorization **be exclusive in character** or for a longer period than fifty years. Neither shall any such franchise or right be granted except under the condition that it shall be subject to amendment, alteration, or repeal by the Congress when the common good so requires. **The State shall encourage equity participation in public utilities by the general public.** The participation of foreign investors in the governing body of any public utility enterprise shall be limited to their proportionate share in its capital, and all the executive and managing officers of such corporation or association must be citizens of the Philippines." (Stress added)

"To our mind, the subject proposal is clearly opposed to the above-quoted mandates of the Constitution such that the implementation thereof would be vulnerable to a constitutional challenge".

"For one, the plan is undeniably a block to the attainment of the constitutional goal towards a more equitable distribution of opportunities, income, and wealth not only insofar as the underprivileged are concerned since, in truth and in fact, not every sector of the economy

will be given an opportunity to acquire or be awarded a franchise or a CPC to operate a PUV as the grant thereof would, as you yourself admitted, be decided by the highest bidder".

"For another, the proposal, if implemented, could result in the CPC/franchise holder's becoming the exclusive PUV operator in a given area more so when no one can outbid him. This is undeniably against public interest as it, in effect, will prostrate the just, impartial and fair participation of the general public in the operation of public utilities which the Constitution ordains to be encouraged.

Besides, Section 16(a) of Commonwealth Act No. 146, as amended, categorically and exclusively enumerates the requirements before a CPC for the operation of a public utility may be granted, Thus, the Supreme Court, in "*Kilusang Mayo Uno Labor Center vs. Garcia, Jr.,* 239 SACRA 386, said:

> "A certificate of public convenience (CPC) is an authorization granted by the LTFRB for the operation of land transportation services for public use as required by law Pursuant Section 16 (a) of the Public Serviced Act as amended, the following requirements must be met before a CPC may be granted, to wit (i) the applicant must be a citizen of the Philippines, or a corporation, co-partnership, association or joint stock company constituted and organized under the laws of the Philippines, at least 60 per centum of its stock or paid up capital must belong entirely to citizens of the Philippines; (ii) the applicant must be financially capable of undertaking the proposed service and meeting he responsibilities incident to its operation; and (iii) the applicant must prove that the operation of the public service proposed and the authorization to do business will promote the public interest in a proper and suitable manner. It is understood that there must be proper notice and hearing before the PSC can exercise it power to issue a CPC".

Source: Department of Justice letter to the Department of Transportation and Communication, dated 18 April 2013

There is a need for government to address this policy issue in land transport. The DOJ's opinion struck down the plan of DOTC and LTFB to use public bidding in awarding franchises for providing land transportation services by citing both constitutional and legal provisions that seem to prohibit competitive bidding. This has the potential of frustrating the shift to "competition-for-the-market" through competitive tendering that experiences in

other countries have demonstrated large efficiency gains for customers or users of bus transport.

The present approach for granting a transportation franchise to interested applicants is based on the LTFRB's assessment of whether the applicant fulfills satisfactorily the requirements for the award of a CPC as described in the above-quoted provisions of the Public Service Act (**Box 4**). The LTFRB selects the franchise holder based on an assessment of the following criteria: a) Filipino citizenship, b) financial capability to undertake the proposed services and meet responsibilities incident to the operation, and c) the operation of the public service proposed will promote the public interest in a proper and suitable manner.[10] It is noted that the current criteria of a CPC are totally devoid of any requirement to meet certain service standards, which may partly explain the presence of ill-maintained, poorly driven and unreliable bus transports on the streets. Because of the lack of competition among applicants to select the most abled service provider who meets safety and reliability standards, public transport services in the country tend to be poor in quality and relatively unsafe.

A more stringent screening process of bus operation franchise applicants through competitive tendering will ensure better quality and safer transport services. As for the concern of one operator having exclusive rights on a given area, the application of the competition for the market framework does not necessarily imply exclusive or monopolistic provision of services. Based on the experience of BRT systems in other countries, more than one bus operator may operate in the same corridor by assigning the highest number of kilometers in a weekly schedule to the winning bidder, and the next highest number of kilometers to the second highest bidder.

In any case, the current legal opinion makes it difficult for LTFRB to move away from the current practice of granting franchises although some measures to improve service provision could be undertaken despite this constraint. For example, LTFRB applied a selection process that made use of a prequalification stage to screen prospective operators for DOTC's express P2P buses. Also, the provision of bus services under the approved BRT projects will be done via the BOT law which allows competitive tendering for franchises.

[10] Section 16(a) of the Public Service Act

The BRT lines approved by the Government provide an opportunity to demonstrate how the competition for the market framework selects the best bus transport operators from among the applicants. The next key issue is how to ensure that the framework is effectively implemented. Gomez-Lobo (2007) indicated that expectations have to be tempered as there are also risks and regulatory failures associated in competitive tendering. What are the costs and risks in competitive tendering under a competition for the market framework as an instrument for consolidating bus operators in order to improve the efficiency of the EDSA bus market? The next section explores in detail the costs and risks in consolidating via competitive tendering.

F. The Costs and Risks of Consolidation under Competition for the Market Framework

Section E of this paper explained that effective regulation is necessary to make bus consolidation under a competition for the market approach to work. As for competitive tendering under a competition for the market framework, the emphasis from the regulatory perspective is on restructuring institutions and building their capacity to undertake procurement, monitor and enforce contracts (Gwilliam, 2005). Below are some of the risks and associated costs related to consolidating the bus market via competitive tender:

- Renegotiation is likely to happen when contracts are inadequate in providing economic incentives that will address the needs of the service/network and provide some financial certainty and legal protection to service providers (Gomez-Lobo, A. and J. Briones. 2013). To mitigate this risk, careful preparation of concession contracts is imperative as it is crucial in the acceptability and success of transitioning to the competition for the market framework. Effective risk allocation and incentives are important in structuring contracts. However, it should also be recognized that no contract is perfect and thus problems can still arise. Thus, shorter contracts may be advisable at the initial stages to test its efficacy and after which it can be modified (Gomez-Lobo and Briones 2013).

Lessons from existing PPPs contracts handled by DOTC (especially from MRT 3) would also prove to be valuable and mobilizing a credible transaction adviser can also lend support to building the capacity of the procuring agency and credibility to the PPP process.

- The risk of not attracting enough firms to compete during tendering can blunt the benefits of competition. Ensuring contracts are clearly defined and the integrity of the bidding process can help mitigate this risk.

- Political obstacles and/or influential bus operator lobby can oppose actions towards any type of consolidation option as earlier noted in Section E of this report. Investing in consensus building and communication are important. Another way of counteracting this risk is to promote collective action of commuters and other stakeholders who stand to benefit from the reform. An information campaign to target these stakeholders and involving media and civil society can play an important role towards this effort. The presence of strong political leadership and support is also vital in light of varying interests and degrees of influence of key stakeholders in the market (World Bank 2009). This was especially a key factor in the success of the bus reforms undertaken in many of the cities that undertook reforms in their respective bus markets.

- Institutional capacity constraints and fragmentation have been well documented in various studies (Domingo et al. 2015, Napalang and Regidor 2014 and all the JICA studies reviewed). Strengthening contract enforcement and management is important in mitigating regulatory failures that might offset any gains from the reform. This will entail ensuring institutional capacity in service planning, procurement, contract management, and monitoring and evaluation) is in place. The effective coordination of institutions with overlapping mandates in transport is likewise critical as cited by JICA studies. The issue of coordination is very

critical for EDSA because it is the transport corridor that traverses four different cities of Metro Manila, each of which has a fiercely autonomous local government.

- Complementary reforms such as route rationalization, organization of bus network (e.g. trunk and feeder) and tariff integration were important ingredients in bus reform in many countries. It is also crucial to view the reforms from a holistic objective of supporting a more efficient and integrated transport network rather than a piecemeal corridor project. This has been the lesson in the first phase of TransMilenio wherein the sizeable benefits described in Box 3 were overshadowed by negative spillovers (pollution, congestion and worsening travel time) in other corridors where most of the vehicles displaced by Transmilenio were relocated (Echeverry et al., 2005). These reforms are also important in having a sustainable transport system and ensuring that operators will earn an appropriate return to cover the costs of service provision.

- Regardless of how consolidation is implemented, it is important to note that some operators would need to leave the market and depending on the political economy situation, some resources would be needed to aid the transition. For example, a program to compensate an operator to scrap excess vehicles based on some criteria such as vehicle age, model, etc. can be put in place, as done in Colombia, Panama and Mexico (Darido et al. 2014). The negative spillover effect of TransMilenio on corridors that are still operating under direct competition (i.e. competition in the market) for example, could have been avoided if scrapping of vehicles were fast tracked (Echeverry et al. 2015). Also, loss in employment can be mitigated if other underserved routes can be assigned to excess operators. A re-skilling program or training for other forms of livelihood can be a way to ensure that affected operators or drivers have an alternative form of making a living. In the case of BRTs, new jobs are created as workers are needed in the day-to-day operations of the new system, including manning terminals, stations and in the upkeep of the BRT infrastructure.

Based on our assessment, the biggest challenges to any plans to implement bold reforms in the Metro Manila bus market are institutional and political in nature. Mitigating the risk emanating from these factors requires the strengthening of the capacity of existing government transport agencies and building a strong consensus among different stakeholders to support and advocate the reforms. Resources would also be needed to ensure complementary reforms are undertaken for an orderly transition to a consolidated bus market.

G. Conclusion and Recommendations

The worsening situation of Metro Manila's traffic, especially along EDSA, is rooted in the fact that rising incomes and urban growth have resulted in more vehicles on the road and that there has not been a major effort to improve mass public transport and infrastructure in the country, in particular in Metro Manila in the past years. Years of neglect to invest, improve transport systems, regulate effectively, and fear of the strong lobby of incumbent transport operators against reforms in the bus market have resulted in an inefficient and chaotic transport system in Metro Manila.

The MRT3, the light rail transit that services EDSA, for example, carries about 132% more than its maximum capacity of 350,000 passengers.[11] The MRT3 offers a relatively faster way to travel along the corridor but inefficient pricing has made it highly subsidized, which means it is very dependent on the government budget allocation, essentially a political process. Thus, it currently suffers from frequent breakdowns and has become a very unreliable means of transportation. Despite these shortcomings, commuters still endure the long lines that extend all the way down to blocks of city streets just to catch a ride simply

[11] Average daily ridership (entry and exit) for year 2014 is 463,463 based on DOTC data: http://www.dotc.gov.ph/index.php/2014-09-02-05-02-46/2015-03-13-05-20-05 (accessed March 15, 2016). Information on the maximum capacity of MRT 3 is from http://mrt3.com/index.php/trains.html (accessed March 16, 2016).

because the alternative is the much more chaotic on-grade bus transport system along EDSA. The irony is that buses along EDSA are plying the streets most of the time half-empty. Building additional capacity for urban railway will require enormous investment costs and will take time a long time to accomplish. In addressing pressing traffic problems in the EDSA corridor and also along other major thoroughfares in Metro Manila, reforming the bus market to provide high capacity and efficient bus services is a low-cost and immediate solution.

Consolidation offers a first step towards rationalizing bus operation and improving transport services along EDSA. We argued in this paper that consolidation under the current competition in the market framework where buses directly compete on the road offers limited gains because of the structure and organization of the bus market and the inability to address certain market failures. Given these limitations, shifting the competition framework from direct competition to 'competition for the market' via competitive tendering offers a viable alternative. The framework acts as an entry regulation policy, creating a stronger incentive for numerous operators to consolidate as they have to compete for the right to provide bus service in a given route. We cited TransMilenio as an example of how competition for the market works to provide more efficient and orderly transport services in Bogota, Colombia. Competition for the market provides an effective platform for improving bus services through parameters specified in a concession contract to be won under a competitive tender. It also addresses the market failures that are inherent in liberalized bus markets.

The Philippine Government is on its way to test the efficacy of a 'competition for the market' framework through its pipeline of BRT projects. For this new competition framework to be effective and utilized more broadly, the following have to be undertaken:

1. Implement complementary regulatory reforms that will bolster economies of scale and density such as route rationalization and the organization of the bus network into trunk and feeder routes.

2. Strengthen the capacity of institutions in transport planning, procurement, contract monitoring and regulation. The new competition framework will entail greater government involvement and to avoid the risk of regulatory failure that could negate the gains of reforms under this framework, the institutional capacities of the government transport agencies have to be improved and strengthened.
3. Improve existing road infrastructure and invest in new roads.
4. Allot resources to manage the transition particularly in building consensus among stakeholders and assist those that will be adversely affected by the reforms. The lack of proper stakeholder consultation can unduly jeopardize and even prevent the reform process.
5. Amend the Public Service Act. The centuries old Public Service Act has to be amended to reflect the new developments in transportation systems and regulatory frameworks and make it consistent with the introduction of competition policy in services. In this regard, it is useful to support current legislative initiatives to amend the Public Services Act. The amendments proposed by House Representatives Arroyo, Salceda and Yap seek to define clearly what public utilities are and to remove some industries from the list of public utilities[12]. If passed into law, the amendments to the Public Service Act will remove certain industries performing a public service from the list of public utilities, which in effect will address the constitutional restriction on foreign equity participation in public utilities.
6. Apply the competition for the market framework to non-BRT bus networks because it offers the potential of improving more broadly efficiency in bus services.

[12] A precedent to this legislative move is the removal of power generation from the public utilities definition through the enactment of the Electric Power Industry Reform Act of 2001. See Llanto (forthcoming), "Logistics Liberalization in the Philippines," in a volume to be published in 2017 by the Institute of Southeast Asian Studies, Singapore.

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