Urban Transport in Ho Chi Minh City: The Triumph of Market Forces
By Du Huynh

Introduction
Global warming is a serious issue; thus, it is important to promote low carbon use and cut greenhouse gas (GHG) emissions. An important solution is to focus on sources causing the most problems, such as transportation. According to the World Resources Institute, transportation accounted for 10.8 percent of the global GHG emissions in 2013. Furthermore, transport is the fastest growing source of global emissions.\(^1\) Simply put, the transport sector needs to be decarbonized.\(^2\)

When targeting the optimal use of resources and reducing GHG emissions, the conventional approach has been to encourage public transport and to discourage the use of private transport in urban areas such as cities.\(^3\) Since there are market failures (negative externalities with private transport and positive externalities with public transport), the public sector plays a critical role.\(^4\) Unfortunately, there are also government failures.\(^5\) In many cities around the world, governments have failed to promote public transport and discourage the use of private transport. The traffic conditions in those cities are usually bad, especially in megacities—cities with at least 10 million people. However, the severity of the issue varies across these

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different cities. Some, such as Ho Chi Minh City (HCMC), are not so bad. It is among the few cities in the world skipping the public transport period and relying on private transport without facing a nightmare of traffic congestion.⁶

A conventional approach to the traffic situation in Vietnam’s biggest city would be untenable. The proportion of land for transport infrastructure to the total urbanized land is just around 9 percent (less than half of what would be desired); public transport accounts for less than 5 percent of ridership. However, the traffic congestion is quite moderate compared to other cities. The 2020 Traffic Index by Numbeo—a market analysis organization—ranked HCMC 168th of 228 cities (Lagos, Nigeria is the worst; Basel, Switzerland, at 228, is the best). The moderate situation is due to endless flows of motorcycles. HCMC is a motorcycle city. The number of registered vehicles in 2019 was equivalent to the city’s official population.⁷ The public’s common intuition often blames the two-wheel vehicles for causing the traffic problem, but transport experts point out that the situation would be much worse if travelers were using cars instead.⁸

Since the groundbreaking of the first tramway line for the city in 1891, there have been many efforts to develop the public transport system in HCMC (known as Saigon prior to 1975). Unfortunately, positive outcomes have been quite modest. The ambition to build a public transport system as the backbone of urban transport has failed due to the lack of incentives and failed prioritization. Interestingly, market forces have driven the results, and traffic conditions remain quite bearable. The appearance of Lambros, a type of scooter, for four decades starting in the 1960s helped to ease the pressure of traffic congestion. The proliferation of two-wheel vehicles since the 1990s has made the current transport problem not so serious. However, the scariest trend happening in the city is the shift from two-wheel to four-wheel vehicles. As the street space needed for one car is equivalent to up to eight motorcycles, it would be a disaster for the city if a significant portion of motorcycle riders shifted to cars. At the same time, the recent effort to build a mass transit system is facing challenges. It is hard to find anybody with determination to implement the current plan. The chances of developing a quality public transport system based on the completion of a single mass transit line over one or even two decades are not very optimistic. However, ridesharing may play a role in easing future traffic congestion problems. The question is whether the market mechanism will be the culprit or savior for urban transport in HCMC.

This paper analyzes how market forces have taken the lead in urban transport in HCMC and analyzes the arising challenges. The paper focuses on four issues: (1) the challenges (especially political) of expanding public transport options amid rapid urbanization in Vietnam; (2) the costs and benefits of greater public transport use; (3) the challenge of shifting from two-wheel to four-wheel vehicles; and (4) recommendations for future priorities. The rest of the paper is structured in six sections: the failure of urban planning and unusual urban patterns in HCMC; the triumph of market forces in the capitalist city prior to 1975; the triumph of market forces in the socialist city since 1975; the political economy of urban transport in HCMC; whether a market-led solution will become the culprit or savior for HCMC; and conclusions and recommendations.

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⁷ According to the data from the Ministry of Transport, by June 15, 2019, the city had 8.94 million vehicles, of which there were 8.12 million motorcycles. According to the population census on April 1, 2019, the city had 8.99 million registered people. If the unregistered population is included, the city’s population is far over 10 million—the threshold for a megacity.

⁸ Huynh and Gómez-Ibañez, “Vietnam.”
Failure of Urban Planning and Unusual Urban Patterns in Ho Chi Minh City

Saigon (and HCMC by extension) was established in the late-seventeenth century. However, modern urban planning was only introduced in the middle of the nineteenth century after Vietnam became a French colony. The French designed three master plans from 1858 to 1954. The first plan, for an area of 25 square kilometers accommodating 500,000 people, was introduced in 1862. It became outdated in the early-1900s despite being considered too ambitious. The city's size in 1931 was 51 square kilometers. The second plan was introduced in the late-1800s and considered appropriate as many ideas from it were applied between 1890 and 1945. The third plan, for a population of 1 million by 2000, was designed in 1943, when the city's population was approaching 500,000. The actual population in 2000 was 5.2 million.

A similar situation also happened during the Vietnam War (1954-1975), as many plans were introduced, but none were practical. In 1958, the government revised the 1943 plan, for an area of 675 square kilometers and 3 million people. In 1959, Ngo Viet Thu, a well-known Vietnamese architect developed a scheme entitled “La Conurbation De Saigon Cholon,” which was exhibited in Paris and Rome. The main concept of these plans was the development of an administration center between the agglomerations of Saigon and Cholon. There were also two more plans, one in 1965 and another in 1968. The former was designed for the 2.5 million people of Saigon Metropolitan Area and 1.7 million people of Saigon—the South Vietnam capital. The latter plan was only designed for the 1.7 million people of Saigon. The final work completed before 1975 was Dialectics of Urban Proposal for the Saigon Metropolitan Area by USAID. A 30-year plan for Saigon was proposed in this report. Unfortunately, the urban planning in Saigon of this era barely worked. Saigon became more crowded and less organized. Its population at its peak in April 1975 was about 4.5 million, nearly tripling the projected population in the 1968 plan.

Bearing a difficult legacy, the new government after 1975 made the situation more complicated due to its failed central planning for over a decade. In the deurbanization period after 1975, when national policy forced urban residents to move to rural areas to establish new agriculture-based economic zones, there was basically no urban planning occurring for HCMC. The 5-year plans—a major planning method of the socialist world—was applied. The party resolutions were the main documents guiding the city's governance. Elements of communist thought were applied during this period to detrimental effect. Subsequently, the city's population fell to a low of 3.2 million in 1984, and urban service provisions were severely insufficient.

The city's urban planning started to become a major issue in the late-1980s and has become a primary focus since the early-1990s, being featured in numerous master plans. The planned population up to 2010 in the 1993 plan was capped at 5 million to avoid high population concentration and alleviate security and defense concerns. However, the official population estimate already surpassed 5 million in 1998 and 7.4 million in 2010. If an unofficial estimate of 2.2 million non-registered immigrants in 2007 is correct, the

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9 M.H. Nguyen, Potential for Saigon River Miracle (HCMC: Ho Chi Minh City General Publisher, 2009), available in Vietnamese.
11 Ibid.
12 Ibid.
15 Ibid.
actual population in 2010 was 9.6 million, twice as high as the 1993 plan. The population forecast in the 1996 plan was close to the official statistics, but it was still much lower than the reality. The role of urban planning in HCMC since the early-1990s has been pointed out:

First, urban planning has failed to shape urban development in Ho Chi Minh City. As in many cities in the region in their early development stages, planning has had less influence in shaping urban development than market forces. Second, while urban planning has not been successful in fulfilling its conventional role, it has been successful in serving as a “facilitation device” for the city’s government to: 1) negotiate with the central government to achieve greater fiscal and policy autonomy; 2) seek international donors’ financial and technical assistance; and 3) encourage private businesses to participate in building the city.

Formed through the above planning process, HCMC has a strange and unique urban pattern. The main force shaping urban expansion has been the market. The legacy of French urban planning can be observed in the centers of the two cities, but this was a modest fraction of the total developed area, even in colonial times. More recently, the municipal governments have invested money and effort in planned developments, but these areas are much smaller than the spontaneous, informal developments. Generally, the formal sector accounts for a modest proportion of the total housing supply, and urban housing demand has grown significantly due to the large influx of rural migration. Informal urban settlements can be found across the cities.

Many migrants have purchased or appropriated agricultural land to build houses. Typically, these developments have insufficient infrastructure and little or no land for open or common spaces. Migrants economize on land for roads by laying out lots that are thin and deep with the narrow end abutting a narrow road. Due to their shape, the resulting buildings are commonly called “tube houses.” While informal settlements have afforded low-cost shelter for the poor, their development has also brought about many problems, including traffic congestion, pollution, overcrowding, insecurity, and a shortage of public facilities.

The municipal governments have attempted to upgrade informal areas by providing new infrastructure. However, the high population density and the complications of expropriating land have prevented the creation of well-organized road networks and other facilities. For example, the road system in HCMC in 2007 consisted of 2,800 kilometers of conventional roads and 5,000 kilometers of alleys. Of the conventional roads in the inner districts, a mere 14 percent was wider than 12 meters (i.e., suitable for full-size buses), while 51 percent was 7 to 12 meters wide and suitable only for cars or minibuses. The remaining 35 percent was only wide enough for motorcycles. Overall, around 9 percent of the built-up land is dedicated to transportation.
A city’s transport patterns are interconnected or related to the land-use patterns and economic activities. With failed planning and the informal sector accounting for a significant portion of the economy, it is not a favorable atmosphere for public transport. Therefore, the urban transport in HCMC has been led by market forces.

**Triumph of Market Forces in the Capitalist City Prior to 1975**

Saigon—a capitalist city prior to 1975—was under the rule of France from the late-1850s to the early-1950s and influenced by the United States during the Vietnam War. Building and operating public transport systems were the government’s responsibility. Unfortunately, this approach failed to produce adequate public transport.

**The Failure of Government-led Efforts**

The tramway system—the first official public transportation system—was built in nearly four decades (1891-1928) by the French. In 1936, Compagnie Francise De Tramways (CFTI) started to operate the tramway system commercially. Due to traffic problems and low efficiency, the tramways, however, were demolished and replaced by a bus system which had 77 buses on 9 routes in 1949. The buses were painted in blue and appropriately called “Blue Bus.” Public transport played a modest role during the period of French rule.

In 1957, the Blue Bus was transferred to the Saigon government. The Urban Bus Public Administration (UBPA, or Công quan xe buýt đô thành) was established. The Blue Bus was operated well in the first four years, and the UBPA made profit. At the peak in 1961, 119 buses ran 8.8 million kilometers on 12 routes to serve 68.4 million passengers a year, accounting for 5.4 percent of the city’s ridership. However, problems occurred when the company bought 105 new gasoline-powered vehicles in 1962. Although an additional 85 buses along with 5 new routes were put into operation, ridership remained almost the same (68.5 vs. 68.4 million passengers) while the kilometers ran increased significantly to 12.9 million. The system kept deteriorating until it was dissolved in 1969 following the fiscal collapse in 1968 and a fierce worker demonstration that caused social unrest.

Besides public companies, a private bus company with six buses was established in 1948. These buses were painted yellow, so they were called “Yellow Bus.” At its peak in the period of 1961 to 1963, there were 26 buses running on three routes. However, similar to the UBPA, this company also ran into trouble and became bankrupt in 1969. At its dissolution, there were only 22 buses running to serve 5.6 million passengers, less than a tenth of those running in 1961.

Under public pressure, especially from public servants and army officers, the bus system was reestablished in 1973 through the formation of companies of consortiums of lambro owners who agreed to shift to a regular bus (commonly three to four lambro owners formed a consortium to own a bus). Three companies of consortiums were established in 1973 to operate the bus system, but the role of the conventional public transportation system, with just over 100 vehicles, remained modest because of its low coverage.

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26 Ibid.
27 Bogle, *Dialectics of Urban Proposal for the Saigon Metropolitan Area.*
28 N.T. Tran, “Nghiên cứu hệ thống chuyên chờ công cộng bằng xe buýt đô thị Sài Gòn và phủ cận (Research on the system of public transportation by bus of metropolitan Saigon and surrounding areas),” School of Architecture, Saigon University, 8, 17.
29 Ibid.
30 Ibid.
The Domination of the Market Forces

Prior to 1975, most of the population in Saigon relied on private transport. As James (2018) described, in the 1960s, Saigon was a city of bicycles, and in the 1970s, it was a city of motorcycles. According to data from USAID, in 1971, Saigon had 3.3 million people and 981,428 vehicles, including 62,186 small and heavy trucks, 90,323 automobiles, 160,594 motor-scooters and tri-lambros; and 668,325 motorized bicycles and motorcycles. When conventional public transport was deteriorating in the 1960s, traffic conditions in Saigon were bad until the appearance of the lambro.

Lambros, three- or four-wheeled, individually owned vehicles with a tiny bus body on the back, began to gain popularity in the middle of the twentieth century and have played a key role in HCMC for nearly four decades. Prior to 1960, lambros were only allowed to operate in the periphery. However, due to the deterioration of the conventional bus system, the municipal government reluctantly allowed this type of vehicle to operate in the downtown beginning in 1966. This decision led to the large increase of lambros in Saigon. There were about 10,000 lambros in the city in the late-1960s, carrying about a quarter of the ridership in the downtown and 15 percent of the population in the outer areas.

Regarding operation, although there were self-organized groups of operators and each had to wait to get his serve, lambros operated mainly on demand instead of running on fixed routes like organized buses. A vehicle only departed when it got enough passengers. The lambro played an important role in transporting passengers, and it was quite suitable for the urban structure in HCMC until it was abolished in the early-2000s.

Triumph of Market Forces in the Socialist City

After 1975, Saigon was renamed as Ho Chi Minh City and applied the socialist model. Unfortunately, the transportation situation did not improve.

The Failure of Government-led Efforts

Since 1975, two types of public transportation have been simultaneously operated. The official bus services were nationalized to form two state-owned enterprises (SOEs): Saigon Traveling Bus Company, serving the urban area, and the City Bus Company, serving the suburbs. Lambros were consolidated into cooperatives to continue operating. In 1980, public transportation carried 165.8 million passengers, or about 10 percent of the city’s travel demand, in which buses accounted for 63 percent of ridership and lambros accounted for 33.5 percent. However, the public transportation services in HCMC gradually deteriorated parallel to the declining economic situation due to the failure of the centrally planned economic model.

In 1988, along with the Doi Moi policy to transform from the centrally planned model to market orientation, the government returned these means of transportation to their owners, small private companies, allowing them to operate as transportation cooperatives. The government did not provide support for either SOEs or the cooperatives, so bus services were very limited. Consequently, public transportation ridership decreased rapidly to less than 2.3 percent in 1993.

31 Bogle, Dialectics of Urban Proposal for the Saigon Metropolitan Area.
32 Tran, “Nghiên cứu hệ thống.”
34 Urban Public Transportation in Viet Nam: Improving Regulatory Framework; Japan Bank for International Cooperation, Re-
In 1992, the HCMC Bus Company was dissolved to form five cooperatives, and the Saigon Traveling Bus Company remained as a state-owned company and was renamed the Saigon Passenger Transport Company (Saigon Bus). In 1993, Saigon Star Transport J.V.—a joint venture between Saigon Bus and an Australian investor—was formed. This system, in which all operators except SOEs were financially autonomous, ran until 2002. However, it did not improve during this time period and only accounted for 2.2 percent of the ridership until bold reforms in 2002.

To encourage commuters to shift to public transportation, a bold reform was started in January 2002, including the implementation of a subsidy program for buses. The first step was to establish the Model Bus Scheme. The second step was to increase transport capacity and to replace lambros. Several projects to replace old buses have been implemented, in which the project with 1318 buses for bus routes and the project with 400 buses to serve daily workers and students are the most significant in the 2000s. Since the late-2000s, there has been a plan to replace diesel buses with compressed natural gas (CNG) buses. However, due to high costs, there were only 428 CNG buses by the end of 2018.

There were debates about the size of buses. Some argued that bus size should be similar to lambros to fit in HCMC’s narrow roads. However, others, including the head of the Department of Transport at that time, argued that big buses would make traffic flows worse. This would force passengers to shift to public transport. However, the reality is that big buses on narrow roads are causing trouble and have received strong criticism.

Regarding designing and assigning routes, five exclusive lanes were experimented with for a while and then eliminated due to the low ridership and strong opposition from businesses along these streets who complained about negative impacts on business. This is perhaps one of the biggest obstacles to designing better and more convenient bus routes through reserving exclusive bus lanes.

Table 1. Major Indicators of the Public Transport System in Ho Chi Minh City

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</thead>
<tbody>
<tr>
<td>NUMBER OF BUSES</td>
<td>145</td>
<td>10,500**</td>
<td>3,167**</td>
<td>2,100</td>
<td>3,225</td>
<td>2,988</td>
<td>2,603</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RIDERSHIP (MILLIONS)</td>
<td>68.4</td>
<td>226</td>
<td>165.8</td>
<td>55.6</td>
<td>103.5</td>
<td>342.5</td>
<td>360.3</td>
<td>413.1</td>
<td>306.6</td>
</tr>
<tr>
<td>SHARE OF RIDERSHIP (%)</td>
<td>5.2</td>
<td>20</td>
<td>10</td>
<td>2.3</td>
<td>32.2</td>
<td>5.4</td>
<td>3.35</td>
<td></td>
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<tr>
<td>SUBSIDIES (% OF CITY BUDGET)</td>
<td>0.39</td>
<td>1.79</td>
<td>1.35</td>
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*The numbers in 1961 excluded small numbers of lambros running in the periphery.

** Mainly lambros.

Source: Compiled by author from multiple sources.


35 Ibid.
After the reform, there were positive outcomes as the ridership increased 3.3 times, or 22 percent annually, in six years. However, the government’s effort fell short, with annual ridership growth from 2008 to the peak in 2012 only reaching 6.72 percent. Since the peak, ridership has decreased 4.9 percent annually. In 2019, bus ridership was only around 291 million. To serve a small share of the ridership, the city has had to offer substantial subsidies, accounting for 0.39 percent of the city’s budget expenditure in 2002, 1.79 percent in 2010, and 1.35 percent in 2017.

Since the ridership has not improved much, the municipal government has put in effort to encourage its citizens to take the bus. The City’s Department of Transport has been even more aggressive, requiring its officials to take the bus at least twice a week. However, the results have not been positive. Not many people in the targeted groups switched to the bus. The reaction of public servants was simple: they found ways to get used tickets or pretended to have taken the bus by having friends or relatives drive and drop them close to the office, from where they then walked through the gate as if they had taken the bus.

A positive aspect of the bus system is that although the bus services offered are limited in number, they are reasonably well patronized. The bus load factor in HCMC averaged 39 percent in 2009, which is similar to many cities around the world.\(^3^8\) Increasing the frequency of bus services on existing routes or extending routes to under-served areas is likely to generate an increase in ridership, but the necessary subsidies make this prohibitive.

Besides improving the bus system, there has been an effort to build a mass-transit system in HCMC. The proposed 316-kilometer rail transit system for HCMC (the plans were approved in 2013) is expected to serve 20 to 25 percent of trips by 2020 and 35 to 45 percent by 2030. When complete, these systems will be among the largest mass transit systems in the region, after Shanghai and Beijing.\(^3^9\) However, the feasibility of these rail plans is uncertain as the capital costs far exceed the financial resources of the two cities.\(^4^0\) The actual construction is far behind the proposed schedules, and the lines under construction are experiencing cost overruns of 50 percent or more.\(^4^1\) If the other lines experience the same cost escalation, the total capital cost of these rail systems would be equivalent to half of the annual GDP for HCMC (based on 2014 figures). If the systems are built, the projections are that buses would remain a critical mode of transport, carrying more than 65 percent of public transport trips, while rail would serve less than 10 percent of the total urban trips.\(^4^2\) After numerous delays, it was expected that HCMC’s first line would open by 2020.\(^4^3\) Now, well into 2020, it is unlikely that the first metro line will be put into operation this year.

**The Dominance and Convenience of Two-wheel Vehicles**

In HCMC, the number of registered motorcycles increased from 0.5 million in 1991 to more around 9 million in 2019. The domination of motorcycles, which has not changed much in the last decade, is due to five issues.

First, the costs of owning and operating motorcycles are indeed reasonable for most citizens. The most common motorcycles in Vietnam are the 100cc engine model, costing only $500 to $1,000 (VND 10 to

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\(^{4^0}\) Dapice, Gómez-Ibáñez, and Nguyen, Ho Chi Minh City.


\(^{4^3}\) Huu-Cong, “TP HCM chuẩn bị ‘săm’ tàu vận hành tuyến metro số 1 - VnExpress,” VnExpress, 2015.
At $1,000, this price is affordable for most Vietnamese households, and most own at least one motorcycle.

Regarding operating costs, including amortization of investment cost (fixed cost), by using the HDM-4 Model developed by the World Bank and direct calculation by our estimates, the cost of a motorcycle is around VND 600 (3 cents) per kilometer without parking fees. With a monthly travel distance from 450 to 700 kilometers and VND 60,000 to 100,000 (USD 3-5) for parking, the operating cost of a motorcycle is from VND 330,000 to 520,000 (USD 17-26).

Figure 1. Motorcycles in Ho Chi Minh City

Source: Author

In reality, motorcycle owners in HCMC tend to consider the initial cost of buying the vehicle as a sunk cost; nowadays a motorcycle’s value is less important than a decade ago, when a motorcycle was considered valuable property of a household. Moreover, most motorcycle riders in HCMC do not have to pay for parking for riding to work because parking is usually available at their offices. Therefore, if the fixed cost and parking fees are excluded, the operating cost of a motorcycle is around VND 500 per kilometer, from VND 225,000 to 350,000 (USD 12-18) per month, and from VND 500,000 to 800,000 (USD 25-40) for the average household with 2.3 motorcycles. This cost accounts for 4.5 to 7.1 percent of average household income in HCMC in 2010 or from 8 to 12 percent of average income of households in the fourth quintile—the second lowest income quintile. This ratio is close to the cost for bus, which is 4.8 to 7.3 percent of income. Of the 266 bus passengers surveyed from February 27-28, 2009, at the Ben Thanh Terminal, most (85 percent) said that the ticket price was very reasonable. And this cost proportion is similar to those in many cities around the world.

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44 Dapice, Gómez-Idáñez, and Nguyen, Ho Chi Minh City.
45 As surveyed in HOUSTTRAN 2004, the average number of trips for city citizens is 2.5 and that of motorcycle owners is 3.9. Furthermore, as analyzed above, the average distance for motorcycle trips is 6 km.
46 The average household monthly income in 2010 in HCMC was VND 11,304,000 and that of the fourth quintile was VND 6,372,000 (GSO, 2010).
In comparison, the operating cost of a motorcycle is indeed reasonable for motorcycle owners. The operating cost of a 6-kilometer trip on a regular motorcycle is around VND 3,000. This is the same with the price of a packed ticket for a bus—the type of tickets which bus riders have to buy in advance. In this scenario, one usually chooses to ride motorcycles instead of taking buses as long as a motorcycle is affordable. The evidence is that more people are shifting from regular motorcycle to scooters, which are much more expensive and have bigger engines with higher fuel consumption, or even buying cars with much higher operating cost.

Second, if one usually travels many short trips in the day, it is more attractive to use private vehicles. This is true in Vietnam, since most Vietnamese have more than one task or job, such as taking their children to school or doing part-time jobs as government officials because their official income is insufficient. A large proportion of working people go out until late quite frequently. For these people, public transportation does not work because bus service is only offered until 7 p.m. and motorcycles remain much more convenient.

Third, the flexibility of motorcycles is an advantage. In cases of congestion, it is much easier to pass through when riding motorcycles, while there is almost no way for buses to avoid or traverse heavy traffic. For this reason, riders rarely choose the bus for important trips. For example, students who use the bus frequently choose to ride motorcycles instead of taking a bus on exam days. This is a major problem for buses.

Fourth, the structure of urban areas and spontaneous urban development is a significant obstacle for public transportation and encourages motorcycle use. Narrow and long alleys favor motorcycle use and discourage bus or other means of transportation, especially on flooded alleys during the rainy season. The motorcycle has a symbiosis with the urban structure of private houses, front street houses, and thousands of alleys. Moreover, the situation has become more serious due to the lack of sidewalks, especially because the business activities of most small businesses depend heavily on the sidewalks of streets—a sidewalk economy. This phenomenon is so popular that there have been serious discussions about the city leasing more sidewalks for doing business.

Finally, the weather itself may be favorable for buses, but combined with the structure of the urban environment, it seems to actually discourage taking the bus. There are two seasons—both sun and rain. It is usually very hot and humid in the sunny season, while heavy and sudden rain characterizes the rainy season. Most motorcycle riders get wet with such heavy and sudden rain. Sitting in a bus seems comfortable and convenient. However, the problem lies with walking and waiting. It is more comfortable to sit on a moving motorcycle under the hot and humid climate than to walk and wait, especially when considering the dirty stations, lack of sidewalks, and dirty and narrow alleys, especially in the rainy season.

Given the domination of two-wheel vehicles, the transport patterns and situations in HCMC are quite reasonable. The mobility rates (i.e., the number of daily trips per capita) varies based on household income and vehicle ownership. On average, residents in both cities make around 2.5 daily trips per day (excluding walking). But those in car- and motorcycle-owning households make approximately 4 daily trips. Those who own a bicycle make 3 daily trips, while those who do not own any vehicle make fewer than 2 daily trips. Clearly, higher incomes and vehicle ownership translate into increased mobility.

Reported travel times in HCMC are short, even though distances are similar in cities of comparable size. The average trip length is 5 to 6 kilometers. The average travel time is less than 20 minutes. 48 Nearly two-

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thirds of trips take less than 15 minutes, while fewer than 10 percent take more than a half hour. Most trips by motorcycle are less than 6 kilometers, while trips by bus average 9 to 10 kilometers, a distance similar to those in other developing cities. Travel times and distances do not appear to have changed significantly over the last decade despite sustained population and economic growth.

Table 2. Main Transport Indicators in Ho Chi Minh City

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<tr>
<td>TOTAL POPULATION (MILLIONS)</td>
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<td>8.05</td>
<td>8.99</td>
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<tr>
<td>URBAN POPULATION (MILLIONS)</td>
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<tr>
<td>TOTAL REGISTERED VEHICLES (MILLIONS)</td>
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<td>0.86*</td>
<td>6.85</td>
<td>8.94</td>
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<tr>
<td>JUST MOTORCYCLES</td>
<td>0.67</td>
<td>0.84*</td>
<td>6.27</td>
<td>8.12</td>
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<tr>
<td>TRIP RATE/DAY (WITH WALKING)</td>
<td>3.0</td>
<td>3.0</td>
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<tr>
<td>TRIP RATE/DAY (WITHOUT WALKING)</td>
<td>2.5</td>
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<td></td>
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<tr>
<td>MODAL SHARES (%)</td>
<td>100</td>
<td>100</td>
<td>100</td>
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<tr>
<td>MOTORCYCLES</td>
<td>64</td>
<td>77.9</td>
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<td>BICYCLE</td>
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<td>CAR</td>
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<tr>
<td>OTHER</td>
<td>1</td>
<td>3.8</td>
<td>3.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AVERAGE TRAVEL TIME (MIN)</td>
<td>18</td>
<td>18</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AVERAGE TRIP LENGTH (KM)</td>
<td>&lt;6.0</td>
<td>4.7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TRIP LENGTH BY MOTORCYCLE (KM)</td>
<td>&lt;6.0</td>
<td>5.5</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* The 2014 survey in Ho Chi Minh City included only the route along the first metro line (currently under construction). The other surveys were citywide.

Source: Adapted from JBIC (1999), ALMEC Corporation (2004 & 2007); Hanoi’s People’s Committee (2010); and HCMC University of Transport (2014).

The Political Economy of Urban Transport in Ho Chi Minh City

In the perspective of the whole society, it is necessary to have an efficient public transport system functioning as the backbone of the city’s transport system. Unfortunately, this goal has never been realized due to the nature of public choice. Marcus Olson points out: “Rational, self-interested individuals will not act to achieve their common or group interests.” Because of high bureaucracy and self-interest, public servants are hardly interested in challenging issues outside their routine procedures. It has been very true in HCMC for over a century. There has been effort to build and reform the public transport system. However, this has fallen short, as it is hard to find champions who have real desire to reform the public transport system.

There was a significant effort to reform the public transport system in the late-1950s. After the bus system was transferred under government authority and received intensive investment, the ridership increased significantly. However, the improvement was not significant in the long term, as the root of the problem

50 Du Huynh and Gómez-Ibáñez, “Vietnam.”
52 Stiglitz and Rosengard, *Economics of the Public Sector*. 
was deeper. Objectively, political instability made the operation of the organized buses difficult and uncertain. Bus routes were frequently changed due to security issues. Moreover, the severe congestion associated with rapid growth of the city’s population negatively affected bus ridership. The gradual reduction of routes and bus frequency make the bus become very unreliable, while unregulated lambros, operating on demand, were much more flexible and suitable for narrow and congested streets. The error of importing gasoline-fueled vehicles along with ineffective management led to the UBPA’s bankruptcy.53

The bus system in HCMC deteriorated for more than two decades following 1975. In the first 10 years, the bus system, mainly under the management of the government, did not work well. After returning to private operators after the Doi Moi policy in 1986, along with some effort to reform the bus system, it still continued to work poorly. Lambros still worked well and were self-financed. Developing a reasonable public transport system remained a low priority throughout this period.

A bold reform implemented in 2002 has given some positive results. Ridership doubled after three years and tripled after eight years, while bus capacity was increased about fourfold and the number of routes was increased about 50 percent. However, after significant growth in the ridership, the system now seems saturated. Bus-based public transport in HCMC continues to play a modest role, while the effort to build a mass transit system remains minimal due to a lack of incentive.

The plan on paper started in the 1990s to build the public transport system in HCMC looks ambitious. Actual effort has been disappointing, and the process of building the first metro line has been slow. From the city’s viewpoint, the most important issue is to have the work done regardless of who controls what. Unfortunately, the responsible parties have resorted to a blame game where the municipal government has blamed the central agencies for the slow process of approval and capital disbursement. In return, central government agencies have blamed the municipal government for not taking responsibility and following regulations.54 However, the real problem is incentives. There have been no champions willing to take the lead or responsibility in implementing the plan. The plan lacks three conditions necessary to implement megaprojects, including public entrepreneurs, strong supporting coalitions, and the participation of long-term constituencies.55 The situation in HCMC is that responsible parties think “this issue needs to be addressed by somebody, but not by me.”

Will the Market-led Approach Become the Culprit or the Savior for Ho Chi Minh City?

Prior to 1975, when the government failed to build a conventional public transport system to carry a significant proportion of the commuting demand, the market forces took the lead with the proliferation of the lambros, thanks to the government allowing the lambros to serve the downtown. This helped to ease the pressure of traffic congestion, although it was not functional as a mass transit system.

After 1975, the congestion pressure in HCMC was low, as economic activities slowed down. Since the early-1990s, the city has become more dynamic, and commuting demand has increased significantly. The government has not been able to build a reasonable public transport system. The proliferation of motorcycles has satisfied the needs of the whole society. Accounting for modest street space and with narrow alleys, the motorcycles are well aligned with the patterns of urban and economic activity. As a result, the traffic con-

53 Tran, “Nghiên cứu hệ thống.”
gestion in HCMC has not been significant, despite the transport infrastructure only accounting for a modest proportion of the urban area and the lack of a conventional public transport system operating efficiently.

Currently, private cars are carrying a very small share of trips in HCMC but consume a disproportional amount of road space: up to eight times more road space than motorcycles. The prospect of a rapid increase in private cars is thus a serious transportation challenge facing the city. HCMC has urban structures that are incompatible with the mass adoption of private cars as an urban transport mode. Only a modest proportion of built-up area is dedicated to roads, and population densities are relatively high (400 persons per hectare in inner-city districts). Even a car ownership level of 250 vehicles per 1,000 persons (relatively low by Western standards) would require that vehicular streets occupy 19 percent of the total built-up area. Under these circumstances, there would be immediate gridlock if significant numbers of people shifted from motorcycles to cars. This trend seems clear, as the annual growth of the population from 2000 to 2019 was 2.8 percent and that of the registered vehicles was 9.1 percent.

Table 3. Vehicle Registration and Population in Ho Chi Minh City

<table>
<thead>
<tr>
<th></th>
<th>2000</th>
<th>2019</th>
<th>Aggregate Increase</th>
<th>Annual increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>POPULATION (THOUSANDS)</td>
<td>5,275</td>
<td>8,994</td>
<td>71%</td>
<td>2.8%</td>
</tr>
<tr>
<td>VEHICLE (THOUSANDS)</td>
<td>1,700</td>
<td>8,945</td>
<td>426%</td>
<td>9.1%</td>
</tr>
<tr>
<td>CARS</td>
<td>131</td>
<td>825</td>
<td>530%</td>
<td>10.2%</td>
</tr>
<tr>
<td>MOTORCYCLES</td>
<td>1,569</td>
<td>8,120</td>
<td>418%</td>
<td>9.0%</td>
</tr>
<tr>
<td>VEHICLES/1000 PEOPLE</td>
<td>322</td>
<td>995</td>
<td>209%</td>
<td>6.1%</td>
</tr>
<tr>
<td>CARS</td>
<td>25</td>
<td>92</td>
<td>269%</td>
<td>7.1%</td>
</tr>
<tr>
<td>MOTORCYCLES</td>
<td>297</td>
<td>903</td>
<td>204%</td>
<td>6.0%</td>
</tr>
</tbody>
</table>

Source: The population from annual year books of HCMC’s Department of Statistics and vehicle data from HCMC’s Department of Transport

The trend of shifting from two-wheel vehicles to four-wheel ones seems indispensable. If this trend happened alone, it would be a nightmare for HCMC. However, there is a hope that ridesharing can ease traffic congestion. Ridesharing is a clear trend in HCMC. It increased by 9.2 times over three years, from 20.8 million rides in 2016 to 191.5 million in 2019, reaching 110 percent annual growth. The ridership in 2019 is equivalent to two-thirds of the bus ridership. If the technology of ridesharing improves to optimize travel time and flow and the need of owning private vehicles decreases, there may be hope for HCMC.

Conclusions and Recommendations

Global warming is a serious issue; thus, it is important to promote low carbon use and cut GHG emissions. An important solution is to focus on the sources causing the most problems, of which transportation is the fastest growing source of global emission. Conventionally, the promotion of use of public transport and discouragement of use of private transport are the most important solutions. Unfortunately, in many

57 World Bank, Vietnam Urbanization Review.
59 Wang and Ge, “Everything You Need to Know About the Fastest-Growing Source of Global Emissions: Transport.”
60 Gómez-Ibáñez and Small, “Urban Transportation.”
cities around the world governments fail to achieve this goal, and traffic conditions are usually bad, but this is not always true. HCMC is among a few cities in the world skipping the public transport period and relying on private transport without facing a nightmare of congestion.61

There have been efforts to build the public transport system in Saigon and HCMC since the late-nineteenth century. However, these efforts have never gone as expected. Public transport has just played a modest role. Even in its golden age, public transport accounted only for a fifth of the commuting demand. It is far below the threshold to become the backbone of urban transport in the city. There have been some successes from the efforts to reform the public transport system in the late-1950s and the early-2000s. During these periods, the ridership increased significantly. This means that positive outcomes could be generated when governments leverage efforts at the right time. However, the positive outcomes have not lasted long due to the lack of incentives to build the public transport system in HCMC. There has been an absence of the push and pull factors that could encourage its development. There should have been both policies to encourage the use of public transport and discourage the use of private vehicles. The failure of urban planning is also an important factor for the failure of the public transport system. Urban patterns have been mainly formed from spontaneous development, meaning the road network in HCMC is not favorable for buses; two-wheel vehicles are better fit.62 Recent effort to build a mass-transit system is facing the same problem as in the past. It is hard to find anybody with the desire and determination to implement the current plan. The likelihood of establishing a good public transport system based on the mass-transit line remains unlikely.

Interestingly, market forces have led urban transport in HCMC. In the 1960s, when the government failed to take responsibility, the market jumped in. Lambros helped to ease traffic pressure in the city, although they created other problems such as pollution and congestion.63 Since the early-1990s, the proliferation of motorcycles has helped satisfy commuting demand without generating serious traffic issues. The market has been the champion of urban transport in HCMC. The question is whether the market-led path will be the culprit or savior for urban transport in HCMC’s future. The conventional trend shows that the shift from two-wheel vehicles to four-wheel ones could be a nightmare. It could become a “mega-parking lot” in over a decade. However, the appearance of ridesharing, led by market forces, could be a solution.

Although the situation in HCMC is interesting, we should not rely on market forces to deal with the transport issues. Governments should take the lead. Below are five policy priorities that municipal governments facing similar situations as HCMC should consider.

First, discourage automobile use. In order to avoid transport gridlock, it is crucial to avoid substantial shifts from motorcycles to private automobiles; this should take priority over promoting bus patronage. Containing automobile use can be achieved in several ways. One strategy is pricing. Government should levy a high tariff and a special purchase tax on automobiles. These tariffs and taxes have made car ownership unaffordable for most families, but as the economy grows, the income threshold needed to purchase a car will be reached. Car taxes and registration fees will need to be employed and other measures introduced in order to discourage those who already own a car from driving in the peak periods on congested roads. Cordon pricing in city centers offers some potential. The scheme need not be very complicated to administer, as Singapore demonstrated in 1975. Motorists can be required to display a simple paper license

61 Huynh and Gómez-Ibáñez, “Vietnam.”
63 Bogle, Dialectics of Urban Proposal for the Saigon Metropolitan Area.
on their windscreen as proof that they have paid a special fee to enter the central area during rush hour. However, cordon pricing requires careful planning and may be controversial, especially if implemented after travelers have already switched to cars.

**Second, improve motorcycle travel.** If cities such as HCMC are to continue to rely heavily on motorcycles, they must try to reduce the associated safety and pollution risks. Motorcycles are a major cause of the high number of traffic accident fatalities, particularly on suburban and rural roads where speeds are higher. Much more work is needed to promote safety and reduce emissions. Taiwan’s approach of separating lanes for motorcycles is a good reference.

**Third, coordinate land use and public transport.** To become more sustainable, cities need to adopt land-use policies that encourage the use of public transit (rail and bus). New rail lines provide more obvious and immediate opportunities to coordinate transport and land use by promoting Transit-Oriented Development (TOD) around stations so that more people can live, work, and shop within walking distance of a station. In view of the rapid growth of populations and incomes for many cities, TOD policies are particularly timely. A substantial amount of construction is likely to take place in the next few decades on both greenfield and brownfield land, which is then likely to stay in place for a long time. The opportunity to promote new development near public transportation corridors and stations should not be missed.

**Fourth, develop a reasonable approach for promoting clean energy use.** International organizations usually encourage (and sometimes force) developing cities to promote clean energy use. This approach is reasonable. However, the most challenging issue is high cost. Lessons from the Saigon bus system was collapsed in the 1960s and the difficulties in promoting the CNG buses recently should be learned.

**Fifth, encourage market solutions.** Promoting ridesharing is one solution. However, there should also be policies to discourage the use of private vehicles as mentioned above.

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This report is made possible by the generous support of BP.

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