



# Towards a Sustainable Transportation Environment: The Case of “Pedicabs” and Cycling in the Philippines

**Brian C. Gozun**

*National Graduate Institute for Policy Studies, Japan*

[bgozun@gmail.com](mailto:bgozun@gmail.com)

**Marie Danielle V. Guillen**

*University of Tsukuba, Japan*

[danielle.guillen@gmail.com](mailto:danielle.guillen@gmail.com)

## ABSTRACT:

Various studies have confirmed the numerous advantages of non-motorized transportation (NMT) especially on the environment and personal well-being of the commuter. Unfortunately its transportation modal share has always been negligible in the Philippines. Recently, the rapid rise in the price of oil and an overwhelming increase in environmental awareness have resurrected the interests of commuters, policymakers and transport planners on the use and promotion of NMT. This study analyzes the Philippine case by reviewing its overall NMT-related transport policies at the national and local levels and by investigating the use of pedicabs and bicycles in the country. The results reveal various sporadic initiatives in the promotion, use and regulation of NMT. Issues such as the lack of both hard and soft infrastructure (physical facilities and policies, respectively) serve as major impediments in the growth and development of NMT in the country. The challenge is to encourage different stakeholders in promoting NMT.

## RESUME:

Diverses études ont confirmé les nombreux avantages du transport non-motorisé (TNM), en particulier sur l'environnement et le bon fonctionnement de la navette. Malheureusement la part des transports en commun a toujours été négligeable aux Philippines. Récemment, l'élévation rapide du prix du pétrole et une augmentation de la sensibilisation à l'environnement ont ressuscité les intérêts des usagers de transports en commun, des autorités politiques et des décideurs des transports sur l'utilisation et la promotion du TNM. Cette étude analyse le cas des Philippines par l'examen de l'ensemble de ses politiques liées au TNM au niveau national et local, et par le recensement de l'utilisation des bicyclettes et pedicabs dans le pays. Les résultats révèlent de diverses initiatives sporadiques dans la promotion, l'utilisation et la réglementation du TNM. Des questions telles que le manque d'infrastructures à la fois dures et molles (installations physiques et décisions politiques, respectivement) sont les principaux obstacles à la croissance et le développement du TNM dans le pays. Le défi est d'encourager les différentes parties prenantes dans la promotion du TNM.



## 1. Introduction

Rapid industrialization is seen as a sign of increasingly dynamic economies. However, this growth is usually accompanied by problems of traffic congestion and air pollution. This case is often viewed in isolation from sustainable development and from other human settlement issues. However, recently, a developmental approach towards the concept of “sustainable transportation” is being advocated by development agencies, transport planners and academics. This is a strategy that focuses on the importance of non-motorized transport, achieving strategies on self-sustaining economic growth, use of mass public transport and the integration to urban development efforts.

Sustainable transportation is comprehensively defined by Peria (1997) and this entails: (1) expansion of levels of service; (2) diversification of transportation modes; (3) a balanced land use plan; (4) more efficient use of energy and low-polluting technologies; (5) reduction of health and safety risks; (6) reduction of negative environmental impacts; (7) concept of social equity; and, (7) citizen participation. Clearly NMT permeates through all these factors which would lead towards a sustainable transportation environment.

Many developing countries around the world, particularly in urban centers, are experiencing problems related to transport – from congestion to environmental degradation – and the Philippines is no exception. Heavy traffic has become a “normal” occurrence for people and this has definitely lead to higher opportunity costs related to the movement of people, goods and services. The physical environment has greatly deteriorated given the huge amount of vehicles on the roads in spite of soaring fuel prices. Such transportation scenario in the Philippines lends credence to the application of sustainable transport schemes that can alleviate transportation-related problems in the country.

The goal of this study is to evaluate the status of NMT in the Philippines and apply timely and practical sustainable transportation mechanisms in order to alleviate the worsening transportation condition of the country. The study is divided into three major sections which include an overview of NMT use in the Philippines (issues on the use of pedicabs and bicycles); and challenges of NMT use and promotion in the Philippines. The last section will elaborate on the concept of transportation sustainability vis-à-vis NMT use and promotion in the Philippines.

## 2. NMT in the Philippines: The Case of Pedicabs and Bicycles

In spite of the positive benefits of NMT, the Philippines still lack a comprehensive national policy that supports the use of NMT. In fact, the Philippines do not even have a national land use and transportation policy to speak of. Even the country’s “Air quality and Improvement Program” does not have an NMT component. As said earlier, the Philippines especially its megacities have been experiencing traffic congestion and



environmental degradation. Through the use and promotion of NMT these problems can be mitigated. An interesting feature of the Philippines is that a number of short trips through cars and jeepneys are less than two kilometers in length and such short trips definitely contribute to the additional traffic volume in an already overburdened road network (Promoting 2005). This distance of less than two kilometers is the most conducive for NMT modes such as walking and cycling but NMT, sadly, has never really taken off in the country due to a variety of issues ranging from the lack of “hard” infrastructure (for example the lack of bicycle lanes and facilities) to the absence of “soft” infrastructure (for example the lack of actual policies which will support the use of NMT modes). In this section of the paper, two major NMT modes in the Philippines will be discussed. These are the “pedicabs” or bicycles with attached side-cabs and bicycles. Issues on their use (or lack of use) will be analyzed in order to come up with recommendations to improve the use of NMT towards a more sustainable transportation scenario in the Philippines.

## 2.1. Cycling in the Philippines

The benefits of bicycle transportation range from the creation of mobility for commuters to the overall improvement of the environment and the commuters’ health. Of course, cycling contributes to the sustainability of the urban development. However, given cycling’s numerous advantages, only 2% of trips in the National Capital Region are made by bicycles and most of these trips are in less congested areas of the big cities (Promoting 2005).

In order to find out the main reasons why bicycle has never really been a significant transportation mode choice, a study by Gozun (1999) focused on the role of personal attitudes and community values that that could affect the potential use of cycling in the non-cycling community of the University of the Philippines (UP) in Diliman, Quezon City, Philippines. The study of attitudes and perception is important in the overall transportation planning process where the first step usually takes into account the perceptions of the commuters in the possibility of adding a new transportation mode. Moreover, the study focuses on UP Diliman’s student population in the belief that college students have a higher rate of cycling compared to the general population (Baltes 1996). College students are more likely to cycle for a number of reasons: low incomes, limited campus parking, predominance of short trips to classes and nearby activities, and compatibility with cycling’s casualness and sporty image. However, in UP, the main barriers stated are the unavailability of bicycles, inability to use bicycles, security issues and a perceived hostile environment. A major issue among the respondents is that there is no “image” of bicycle as a useful transportation mode. In fact, even respondents who find cycling as a good recreational sport do not think of cycling as a viable transportation mode. There is a common misconception that lingers where cycling is not considered a commute mode. Another interesting fact is that there is also a seeming gap between potential users and supporters of a cycling policy. The study revealed that not all supporters of a cycling policy are potential users of bicycle facilities. Although



supporting cycling is beneficial, there is still a need to transform these supporters into actual users in order to instill a tradition of cycling for utilitarian purposes.

The University of the Philippines Diliman is located in a sprawling 493-hectare lot with academic zones and residential zones and in it is a good place to cycle given its flat terrain and abundance of trees. The study also revealed that respondents are willing to use bicycle facilities if ever built in the campus. Given this premise, a student organization called UP Mountaineers has initiated a project called “Padyak” (*padyak* is the Philippine word for “to pedal”). This project was spearheaded by the alumni of this organization where they rent out bicycles to promote cycling, environmental protection and a healthy lifestyle. Although the project is in its infancy stage (it only has 16 bicycles at present), the response of the students has been overwhelming given the long waiting list. The organization is now actively encouraging the university administrators to build and maintain bicycle racks in order to guard from the possibility of theft which is a high concern of students.

Of all the municipalities and cities in the Philippines, the most commendable is Marikina which is located one hour east of Manila. In fact, Marikina City has been adjudged as the “Healthy City” for promoting bicycle use and building a 30-kilometer exclusive bicycle lane which is a first in the country. The program has been a success for they are now building the next 30 kilometer stretch of the bicycle lane. One of the factors that have contributed to the success of the program is the city council’s forward-looking land use and transportation plans which include an integrated bikeways system. The presence of a bikeway office that conducts bicycle safety education campaigns has been very beneficial in promoting cycling use. Moreover the presence of bicycle patrol volunteers that roam around the city and report untoward incidents to the police. There are also interest-free bicycle loan programs for low-income city employees as well as annual summer cycling events and competitions that promote the use of cycling.

## 2.2. Pedicabs in the Philippines

Public non-motorized transportation (NMT) in the form of pedicabs or bicycles with attached side-cab is commonly found in most cities and towns of the Philippines. This type of pedal-driven, public transport service employs a large number of people living below the low-income bracket. It has become popular in some areas that its popularity can rival that of the Philippine Utility Jeepneys (PUJs) , especially for those requiring a change in travel mode along the way to complete their trip. It provides a convenient means of transport from the main highway to tributaries such as *barangay* (the smallest political-geographical unit of the Philippines) roads leading to prominent subdivisions or local markets.



However, in some parts of the Philippines, pedicab operation is considered an informal transport. Historically, in 1990, the Metro Manila Council Ordinance<sup>1</sup> banned pedicabs from operating along highways and major thoroughfares within Metro Manila due to traffic congestion. One of the reasons provided is that, it does not fit the standard classification for public transport, and hence, does not really fall under any form of regulations from the government's Land Transportation Office (LTO). The agency is technically only in control of vehicles with motors. In 1991, it was reported that a total of 5,500 pedicabs (representing 5.2%) of total public transportation vehicles operating in Metro Manila based on "measured capacity" or the number of people requiring the service (Dyland and Kuranami, 1994). Unfortunately, no updated recorded statistics on the total number of pedicab units nationwide has been done. Moreover, the use of pedicabs is often viewed as a symbol of economic "backwardness", but advocates of NMT think otherwise. Pedicab operations can be observed as providing an innovative means of earning a living as well as demonstrating that the transport sector can be done in an economical and environmentally sustainable way (Repogle, M., 1998)

In order to understand the role of pedicab operation from the supply-side or owner-driver's perspective a study by Guillen (2000) showed that there are more pedicabs in highly urbanized areas such as Manila than in urbanizing localities like Los Banos, Laguna, a town located 63 km southeast of Manila and is accessible via South Luzon Expressway. In Manila, pedicabs are usually found in city roads that lead to commercial or business districts (e.g. shopping Malls like Tutuban Mall or Robinson's Mall) and they are mostly characterized by the presence of associations, an informal but well organized association of pedicab operators and drivers which were formed in order to settle issues of terminals, queuing systems and fare rates. This became a lobbying voice for certain policies to be enacted in the city of Manila and the entry of pedicab became a formal NMT public transportation sector. Unfortunately, the review of ordinances enacted showed that there were no clear provisions on infrastructure development for this mode of transportation. The ordinances only have specifications on the route that pedicab drivers could use. Survey among pedicab drivers showed that they follow local government policies specifically, the zone where they are allowed to operate. An important component of the study is that pedicab driving continues to provide a source of employment and livelihood as drivers earn the minimum wage necessary to support their families for basic needs.

### **3. Towards a Sustainable NMT Policy in the Philippines**

An NMT policy should have two major goals to which include the development of a coordinated plan for bicycle facilities and pedicabs and the ability to improve air quality standards and congestion management related issues through sustainable transportation measures. The first goal aims to improve the NMT scenario by making cycling and use of pedicabs accessible, safe and convenient for all commuters. Corollary, to increase the

---

<sup>1</sup> Now known as Metro Manila Development Authority (MMDA) which exist in order to administer the affairs of Metro Manila and effectively deliver metro-wider services.



bicycle and pedicab mode-split, educating and informing the public about NMT mode options should come hand-in-hand. Of course, it is not possible (as seen in the large number of modal choices) to shift all these trips to non-motorized modes especially for those living very far from their destination of choices but an NMT policy which includes statements which address cycling and pedicab use in terms of transportation network linkages,; congestion management and trip reduction; energy conservation and environmental quality.

Several factors have caused a revival of interest in cycling and pedicab use as a transportation mode at present. Firstly, urban areas have been experiencing congestion which is brought about by urban sprawl. Secondly, environmental degradation has been a major issue since the passage of such bills as the “Clean Air Act.” Thirdly, there is a seeming lack of resources for building new roads. Attention is now focused on the efficient and effective of existing roadways which are some of the concepts involved in sustainable transportation. Lastly, the soaring price of oil makes cycling a cheaper alternative for commuters who do not have to travel several kilometers to make it to their destinations.

To maximize transport system efficiency, equity and environmental quality, an integrated NMT policy should include (this section will also include walking as another NMT mode choice aside from cycling and the use of pedicabs):

1) Improvement and Development of Infrastructure. An improvement of pedestrian (such as walkways) and cycling (such as bicycle racks) facilities will pave the way for an increased level of non-motorized transportation. Bicycle and pedestrian pathways and amenities must be provided. These entail programs that will need lighting and maintenance of walkways, street friendly engineering (e.g. street crossing signals), bicycle racks, lockers and showers, and transit stops and stations. Access to transit involves benches at transit stops, as well as equipment for bicycles. Also, commute programs can also provide loan programs or rental facilities for students who do not have bicycles as in the case of UP and Marikina. The incorporation of bicycle and pedestrian friendly designs in land use plans and site design requirements in zoning ordinances and regulatory measures will benefit future infrastructure development.

2) Promotion of Cycling Use through Information and Education Campaigns. An extensive information and education campaign will raise the awareness of commuters on the benefits to be obtained from cycling as well as the rights of cyclists and pedestrians.

Bicycle education should include:

- The establishment of a bicycle education course in physical education classes. This will teach commuters how to ride a bicycle as well as encourage people to cycle going to school, to work and other trip purposes (such as recreation, shopping, going to church, etc.);
- the production and dissemination of brochures that will specify bicycle laws, safety and rights; and



- the provision of signs at strategic locations along bikeways that will advise motorists to share the roadways with cyclists.

A non-motorized transportation system is not the only solution to the growing problem of urban transport congestion and environmental destruction. However, a non-motorized transportation system is a potential element in addressing these current problems.

The benefits of cycling are numerous. From being a practical and economic means of transportation; to an efficient inter-modal linkage that complements existing public transit systems; to low capital and maintenance costs of bicycle facilities; to a reduction in air and noise pollution; and, to a conservation of energy resources; cycling outweighs its perceived negative aspects. The study has also considered some barriers to a non-motorized policy in the Philippines. Some of these barriers, which should be overcome, are the unavailability of bicycles, the inability to use bicycles, vehicle theft, and hostile street environments. Overcoming these barriers involve changes in transport investment patterns, infrastructure design standards, street space allocation, credit and rental facilities, regulatory policies, education, and marketing.

On the other hand, it is also important to look at the benefits of “pedicabs” as an employment generation opportunity. The presence of feeder modes such as tricycles characterizes most residential areas in the Philippines. Survey showed that it is used for short-distance travel (3 kilometers or less), given the unemployment issues in the Philippines, the role of pedicab operations in this aspect should be considered especially in residential areas. Other benefits in comparison with tricycle are the same with the benefits of cycling: air and noise free. Providing national guidelines for local government units in drafting and implementing local policies concerning this mode will be beneficial to the community as well as to the unemployed and poor sector of the society.

## References

Baltes, M.R. (1996). Factors Influencing Non-discretionary Work Trips by Bicycle Determined from 1990 US Census Metropolitan Statistical Area Data. **Transportation Research Record 1538**, Transportation Research Board, National Research Council, Washington D.C., pp. 96-105.

Gozun, Brian C. (1999). Attitudinal factors toward cycling as a commute mode for school trips. Unpublished MA thesis. University of the Philippines, Diliman, Quezon City.

Guillen, Marie Danielle (2000). A Study of Non-Motorized Public Transportation in Urban and Urbanizing Areas: The Case of Pedicab Operations in the City of Manila and in the Municipality of Los Banos, Laguna. Unpublished MA thesis. University of the Philippines, Diliman, Quezon City.



Retour au  
sommaire



Back  
to menu

Manila Bulletin (2005). Marikina leads the way. August 28.

Peria, E. (1997). Legislative reform for sustainable transport. Paper presented during the Greening Urban Transport Forum held at the Ateneo de Manila University, Quezon City, December 11-12.

Promoting NMT in 2005.

<http://www.healthbridge.ca/assets/images/pdf/Ecocities/year1.NMT.Phils.pdf>

Replogle, M. (1992). Bicycles and Rickshaws in Asian cities: Issues and Strategies. **Transportation Research Record 1372**, Transportation Research Board, National Research Council, Washington D.C., pp. 76-84.

School of Urban and Regional Planning (1996). Development Options for the UP Diliman Campus. School of Urban and Regional Planning, University of the Philippines, Diliman, Quezon City.

UP Padyak Project. Available: <http://www.padyak.org>