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Understanding the emerging role of motorcycles in African cities

A political economy perspective

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Sub-Saharan Africa Transport Policy Program

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Introduction

A decline in organized public transport systems has led to rapid growth in non-conventional means of public transport, initially provided by minibuses and shared taxi/vans, and more recently by commercial motorcycles. Unlike cities in South and East Asia, ownership and use of motorized two-wheelers as a personalized vehicle is very small in sub-Saharan cities. However, over the past decade there has been a significant growth in the use of motorcycles as a commercial public transport mode. While offering certain transport advantages in the form of easy maneuverability, ability to travel on poor roads, and demand responsiveness, commercial motorcycle service growth has also led to an increase in road accidents, traffic management problems, pervasive noise and increases in local air pollution and greenhouse gas emissions. Government efforts to regulate the market have had the contrary impact of compounding the problem by distorting market structures. The growth in the use of commercial motorcycles has also dispelled one of the commonly held illusions: fare controls in the public bus market are often justified to support affordability for a vast majority of low income population; however, commercial motorcycles are more expensive than the lowest bus fares, but are increasingly being patronized by the poor due to the inadequacy of bus services.

This paper attempts to evaluate the commercial motorcycle mode used in the three cities of Douala, Lagos, and Kampala, based on their political economy context in order to draw general conclusions of value throughout Africa and the rest of the developing world. The evaluation underscores the linkages between governance failure and weak sector performance and highlights the need to adapt policy instruments to local political and economic context. Central to discussion is the necessity to develop a participation framework driven by open communications across a wide spectrum of stakeholders.

The problem

It is paradoxical that in developing cities where vehicle ownership is low, dependence on public transport is high whereas the financial condition and performance of all forms of government-organized public transport, either state or privately owned, are in decline. This situation has forced people and the market to develop creative solutions to address daily travel needs. A search for these alternatives has led to rapid growth in non-conventional means of public transport, initially provided by minibuses and shared taxi/vans, and more recently by commercial motorcycles. The paratransit modes have become the dominant form of public transport but they also present clear disadvantages from a general public welfare perspective in terms of the negative externalities generated (noise, safety, pollution). Government intervention has often had perverse impacts, compounding the problem by distorting market structures through policies that promote rent seeking that favor the interests of a select, small group.

This paper discusses the growth in the use of commercial motorcycles in cities in sub-Saharan Africa as a manifestation of government's inability to respond to market failure by addressing four issues: 1) **What** makes urban transport a focus of political agendas in developing countries; 2) **What** are the key issues impacting the efficient, effective delivery of urban transport services; 3) **Why** have these issues persisted; and 4) **How** can the issues be addressed going forward. The study utilizes data from three cities in sub-Saharan Africa: Douala, Lagos, and Kampala as cases which are synthesized into concluding recommendations.

The study

Over the past decade there has been a significant growth in the use of motorcycles as a commercial public transport mode in countries in sub-Saharan Africa, Latin America and Asia. While offering certain transport advantages in the form of easy maneuverability, ability to travel on poor roads, and demand responsiveness, commercial motorcycle service growth has also led to an increase in road accidents, traffic management problems, pervasive noise and increases in local air pollution and greenhouse gas emissions. Government efforts to regulate the market have had the contrary impact of compounding the problem by distorting market structures. Current operators have a vested interest in maintaining the status quo and they use their considerable economic and political power to obtain political influence which, in turn, promotes policies to protect the interests of a select few.

Despite the dominant role played by commercial motorcycles in public transport, little is known about their origin, the political economy, service patterns, ridership characteristics, cost structure, environmental and other impacts. The study is based on an evaluation of the commercial motorcycle mode used in the cities of Douala, Lagos, and Kampala in relation to these factors, in order to draw general conclusions of value throughout Africa and the rest of the developing world.

Both quantitative and qualitative analyses were conducted, based on information from field surveys and desk research. Primary data was collected on demand and supply, organizational form and control, licensing and regulation. Questionnaires were designed to obtain information on motorcycle users, non-users, operators, and motorcycle traffic counts. Focus group discussions were held with a number of stakeholder groups—including government agencies, operators, operator associations, commercial banks, users and non users. Reconnaissance surveys were carried out throughout the cities to identify various motorcycle parks and to examine the behavior of operators and users.

What makes urban transport a focus of political agenda?

Africa's cities are growing rapidly—in the range of 4 to 6 percent annually. In 2000, one in three Africans lived in a city; by 2030, it is expected that one in two will do so. The cities are administrative, industrial, and commercial capitals, headquarters of at least 70 percent of the country's commercial banks, insurance companies, industries, more than 50 percent of the national manufacturing activities and account for a commensurate share of skilled manpower.

In spite of the economic and commercial importance of cities, authorities have had difficulty in meeting the basic needs of urban residents, particularly the poor, who are most dependent on public provision of water, electricity, transport, and other services, although, rapid growth impacts all segments of society. The absence of enforced policies on land use and economic development has led to urban sprawl, low density, uncontrolled growth on the extremities of cities. This multiplies the challenges posed by this rapid population growth. Declining population densities have increased the size of needed water, sewer and electricity distribution systems, increased travel distances and pushed up the cost of providing all basic services, including public transport.

The need to coordinate land use and transport planning is widely recognized but rarely achieved, even in the developed world. Because local governments have few financial resources and little political power, this affects the poor disproportionately, often effectively excluding them, irrespective of gender, from work and social services. The ability of women to participate in the labor market is particularly affected by the availability of a safe, secure, affordable public transport system. This problem of quality, performance and affordability cuts across gender and poverty issues, and impacts environmental quality and climate change, all of which are at the core of highly visible policy choices in any government agenda.

Meanwhile, the rising use of private cars has choked roads for all users, endangering the safety of pedestrians and the health of city residents who breathe in vehicles emissions. It has also made all forms of surface public transport slower, less reliable and more expensive to provide.

Due to the sensitivity of the population to transport issues and its impact on day-to-day life, any local incident involving mismanagement of the sector gets widely reported by the press and other media and makes national news. The externalities generated by urban transport, e.g., congestion, road accidents, pollution emissions, crime within the confines of an urban area, are a visible manifestation of the impact of poor government management on the quality of life. The impact is especially made more poignant given the nature of transport demand, which is concentrated both in temporal and spatial terms. In addition, urban transport infrastructure and service provision essentially have the characteristics of a public good, and provide considerable opportunities for private rent seeking, particularly in the form of providing rights to operate a service, offering protection to a particular group to the exclusion of others. Cities are also the center of financial, administrative and media activities, concentrating economic and political power and making them a focus of any political agenda.

In developing cities worldwide, the private sector is the dominant supplier of public transport services and provides employment to a large number of people. In Lagos for example, there are over 100,000 minibuses and 200,000 commercial motorcycles, providing direct employment to over 500,000 people. Assuming one public transport worker per household (with an average household size of 5) then, well over two million people receives their sustenance from the sector (or 15 percent of the total population). This large numerical strength, allows them to cripple the local economy by calling a strike in response to any perceived negative government interference with access to their common market interest. This gives them enormous political power. In turn, the politicians have a significant stake in maintaining the status quo because of the opportunities for their own financial gain (many informal sector vehicles are owned and operated by public officials) and the ability to use their position to distribute patronage (in return for a financial benefit).

What are the key issues?

The key modes for mobility in a city include non-motorized (walk, bicycle) and motorized modes of transport. The motorized modes include vehicles owned and operated by individuals for private use and those available to the public under public or private ownership. In cities of developing countries and particularly those which are the subject of this study (Douala, Kampala and Lagos), public transport is the principal form of motorized mode. The nature and characteristics of public transport has evolved over the years. Prior to the sixties, before independence from former colonial regimes, most cities relied on a usually private, monopoly supplier of large bus service as the backbone of their urban transport system. After the independence, governments as a symbol of break from the former regimes took over the provision of public transport services. Multiple operations were consolidated into a single operation in an attempt to rationalize services and realize what was thought to be economies of scale. At the beginning, the operations were highly regulated and three key parameters, price, service quantity and subsidy were driven by considerations of market failure and improving the distributional impact. Unfortunately, costs did not remain stable and subsidies could not be maintained. The oil shocks of the seventies combined with the creation of increasing numbers of patronage jobs and inefficiency in bus operations increased costs.

Governments were reluctant to increase fares for legitimate social welfare reasons. The argument for subsidies was that they provided mobility and access to a large segment of the population. It was also done to maintain political support. The subsidies took various forms, ranging from direct cash payment to offset operator's deficits, exemptions from tax, or procurement of buses and other infrastructure.

Unfortunately, the impact of subsidies on overall public finance was not well understood. As a result, over the years, governments were increasingly unable to provide needed and implicitly promised subsidies leading to adverse impact on sector performance. As costs

grew and revenues did not, deficits grew and public subsidies did not grow commensurately. Operators had difficulty maintaining, replacing and operating their fleets.

The result was a deterioration in service frequency, capacity, coverage and quality. Most of the publicly owned or subsidized companies eventually failed and went out of business. Many of the bankruptcies occurred during the 1990s, when structural-adjustment policies severely limited the availability of public funds for subsidy.

The crisis of the 1990s and the resulting collapse of the state-owned or subsidized private enterprises led to the emergence of private provider services which take various forms of informal, privately operated public transport in African cities, ranging from the operation of second hand mini- and micro-buses, shared taxis (jitneys), and most recently commercial motorcycles. The number of private operators in African cities has grown dramatically in the last decade, well over 15 percent annually. The transition from a well regulated and organized public transport system to an unregulated system operated by single owner and operators did not result from a conscious decision to deregulate the public transport. Rather, it was an indigenous response to a growing demand and the commercial opportunity provided by the failure of state-owned or subsidized monopoly public transport enterprises.

The origin and growth of motorcycle taxis in each of the three cities can fundamentally be traced to the collapse of bus transport services either directly provided by the state or contracted for, and the deregulation of the market leading to a growth in informal operators. The motorcycle taxis are referred to as *okada*¹ in Lagos, *boda boda*² in Kampala, and *bendskins* (or moto-taxis) in Douala.

¹ Okada is the name of a village in Edo State of Nigeria where one of Nigeria's first known millionaires used his fortune in the early 1980s to establish the first domestic airline. It was known as Okada Airline. Lagos the old administrative capital of Nigeria is notorious for traffic congestion. Commercial motorbikes originated as a solution to search for a way of beating the traffic congestion that often delayed people attempting to reach their offices in time. The bikes actually solved the problem for those who en-

Douala. Until 1995, public transport services were operated by a state-owned bus company, SOTUC (*Société des transports urbains du Cameroun*). The inability to provide needed subsidies and a reluctance to increase fares slowly reduced the financial position of the bus company resulting in worsening of its operating capabilities and the company was closed in mid-90s. The government decided to pursue a long-term policy of liberalization of urban transport, with the intention that operators should be allowed to compete on price, service levels and quality, as well as route structure. In January 2001, the *Société camerounaise de transports urbains* (SOCATUR), a new private company owned by 35 Cameroonian investors, commenced a bus service in Douala. The contract between the company and the national government specified the routes that it would operate and giving SOCATUR a monopoly on those routes for an initial period of five years³. The government also suppressed minibus operations (on all routes except a few fixed routes between the CBD and the periphery operating a few hundred buses) in an attempt to protect SOCATUR's interests. Driven by fixed fares, rising costs and increasing inefficiency, the initial fleet of 109 buses in service was reduced to less than 70 by 2005, resulting in less coverage, particularly in low-income areas.

SOCATUR's failure to provide an effective bus service, combined with the suppression of competing minibus services, has meant that shared taxis and motorcycles (also known as moto-taxis or "Bendskins") now form the basis of the city's public transport system. Table 1 provides information on number of daily trips by mode for poor (lowest quintile) and non-poor. Few observations

gaged them in order to reach their destination in time: "It was like travelling by crow fly as airlines do" or "It was like flying via Okada airline".

² A *boda boda* applies to both motorcycles and bicycles used to carry passengers for financial gains. It derived this name from the Busia district in Uganda where bicycle taxi evolved as a means of travel to and from the Kenyan border.

³ The initial protection was meant to be a transitional phase and it was expected that after 5 years, the operating company would be sufficiently well established to allow for the introduction of a competitive regime.

can be drawn: a) over 75 percent of the total daily trips made by poor people are by walking as compared to about 45 percent by non-poor; b) about 75-80 percent of the motorized trips are by taxi and moto-taxis; c) while the non-poor make almost twice as many trips by moto-taxis as poor in absolute terms, the share of moto-taxis to total motorized trips remains the same at about 30 percent; d) use of motorbikes for personal use is only about 6 percent of the total motorized trips; and e) car use constitutes a much higher share for non-poor (about 20 percent) as compared to poor (less than 5 percent).

Table 1. Number of trips per day, by mode by income class (2003)

	<i>Walk</i>	<i>Personal 2-wheeler</i>	<i>Private vehicle</i>	<i>Taxi</i>	<i>Moto-taxi</i>	<i>Other PT*</i>	<i>Total (trips/day/person)</i>
Poor	3.27	0.07	0.05	0.52	0.40	0.07	4.38
Non-poor	2.25	0.15	0.45	1.06	0.79	0.12	4.82
Average	2.88	0.1	0.20	0.72	0.55	0.09	4.54

*Public transport

Source: SITRASS, 2004

Kampala. In the past, public transport was provided by two private, monopoly bus companies, Uganda Transport Company (UTC) and People's Transport Company (PTC). The companies were nationalized in 1972, and in 1986 the companies were recapitalized with procurement of new buses to improve services. However, fares were fixed and insufficient to recover the full capital and operating costs, and subsidies were not released in a planned way. As a result, viability of buses continued to erode, services declined and the companies eventually collapsed in early 1990s.

The failure of the public provision of transport services led to the emergence of a para-transit system operated by the private sector. The main mode of transport shifted from high capacity buses to minibuses, operated by individual private operators and managed by an association. However, private buses were not able to meet the growing demand and substantial unmet demand remains, particularly in the outlying areas and during off-peak periods. This has led to a growth in non-conventional means of transport, the most dominant being the motorcycle, which today is the most common form of informal public transport system on most secondary roads in the city. The number of commercial motorcycles increased from

about 5,000 in 1995 to over 40,000 in 2007. Classified traffic surveys (see Table 2) along six road links reveal a mode share for commercial motorcycles between 20 percent and 40 percent. An interesting observation is the complementarities between motorcycle and bus travel. That is, the initial and final segments of minibus or share taxi trips are made on motorcycles.

Table 2. Mode share along select road links in Kampala

<i>Road Link</i>	<i>Motor cycle (%)</i>	<i>Pvt cars (%)</i>	<i>Pickup (%)</i>	<i>Bus (%)</i>	<i>Truck (%)</i>	<i>Av daily traffic</i>
Kampala-Mityana	42	20	11	18	9	16,725
Kampala-Hoima	22	27	13	34	4	14,350
Shoprite-Steers	35	30	10	20	4	34,885
Oldpark-Bakuli	20	20	8	42	10	20,858
Kyebando-Kisalosalolo	42	23	15	14	6	3,818
Kisaasi-Kyanja	36	30	11	17	5	7,270

Source: Impact of motorcycle growth in Kampala (Working paper), SSATP, May 2008

Lagos. The use of motorcycles as a public transport began in 1980 by a group of individuals in the Agege local government area. They were initially used to supplement family incomes by working after normal work hours. With a decline in formal public transport system, the operation spread to other areas and became a popular mode by the early 1990s, and almost 10,000 motorcycles were registered for commercial purposes by 1995. Economic recession and high inflation contributed to the increasing popularity of this mode among unemployed, increasing to almost 200,000 by 2007.

In Lagos, a modal split based on traffic counts on a few select corridors is given in Table 3. The high share of motorcycles on some of the links (Ojuelegba, for example) is because it serves as the junction connecting interior parts to bus stops and bus terminals. Most commuters use motorcycle as the access and egress mode to connect peripheral areas to/from bus stops. On the other hand, the very low motorcycle share on the 3rd Mainland Bridge is because this is a major highway and there is a ban on the use of commercial motorcycles along this link.

Table 3. Mode share along select road links in Lagos

<i>Road Link</i>	<i>Motorcycle (%)</i>	<i>Pvt cars * (%)</i>	<i>Pickup (%)</i>	<i>Bus (%)</i>	<i>Truck (%)</i>
Carter Bridge	15	32	2	49	3
Maryland bank Anthony Road	27	43	3	21	7
Ikorodu road	12	45	2	38	3
3 rd Mainland Bridge	2	24	13	39	22
Agege PenCinema	26	49	3	19	4
V.I.Lekki Road	33	44	3	17	3
Mile 2 Lagos Badagry Road	26	22	5	37	10
Iyana Ipaja Road	19	25	6	37	13
Ojuelegba-Itire Road	59	27	1	13	1

* Private cars

Source: Impact of motorcycle growth in Lagos, LAMATA, January 2008

What is common across the three cities? The three cities studied here share some common characteristics, including being in low-income countries with a low car ownership (30-70 vehicles per 1,000 population), resulting in a high dependence on the public transport system. Other characteristics include:

- a rapidly growing urban population (over 5 percent in the three cities) and urban sprawl
- inadequate and deteriorating roadway infrastructure in a fast sprawling urban environment (in Douala, for example, the road network has remained unchanged for the past twenty years despite the doubling of population and area so that its road density has declined; 0.5 percent of peripheral settlements have direct access to a paved road)
- poor facilities for non-motorized transport (walking, bicycling)
- inadequate “formal” public transport system coverage and capacity
- declining “formal” public transport system performance (in Douala, only 70 standard bus operate on nine different routes) overlaps and conflicts among the agencies responsible for planning and implementing transport solutions leading to a legal and institutional vacuum
- massive growth in the use of minibus and taxi and motorcycle services (although in Douala, minibuses are banned and only

550 minibuses operate on about 15 fixed routes between the center and the periphery)

- fares kept at artificially low levels for political reasons
- fractious transport sector with multiple stakeholders
- poor route planning. Changes in land use and employment patterns have led to a decline in orbital movement and an increase in inter-suburban movement. This diversity in travel patterns has become difficult to be satisfied by traditional central city oriented bus routes and has involved multiple interchanges to get to the final destination.

The decline in the organized public transport systems has led to a growth in largely unregulated, informally provided non-conventional public transport, the most dominant being the motorcycles, which is a common form of public transport system on most secondary roads in Kampala, Lagos, and Douala. Across the three cities, the operations share some common characteristics:

- Mostly owner operated (40 percent in Kampala, 65 percent on Lagos and 50 percent in Douala)
- Low capital outlays (a new motorcycle is available for \$700 in Lagos and Douala, and \$1,300 in Kampala)
- Largely self- or informally financed, (over 50 percent of the purchase is financed using own resources, 30 percent from co-operatives or banks and the rest by borrowing money from friends and acquaintances)
- Market entry jobs for drivers deprived of other jobs opportunities: in Douala, moto-taxis drivers are relatively young and educated – 70 percent have had secondary education, 14 percent higher education (same in Lagos), and running a moto-taxi is for most of them a temporary job (for lack of better one) – on average, moto-taxi drivers ply their trade for only 5 years, as working conditions are rather strenuous (their working day lasts on average over 12 hours), remuneration is low and uncertain (in Douala, it is significantly lower than the average personal income)
- Mostly self-regulated with easy entry and exit, and an absence of fare controls

Box 1: Okadas in Lagos

In 2007, the Lagos State Government banned the circulation of commercial motorcycles between 7 pm and 6 am. According to the state police commissioner, the move came in response to a spike in robberies, holdups, homicides, and acts of harassment committed using motorcycles as the getaway vehicle. The punishment for violating the ban includes seizure of the motorcycle and a fine of ₦ 50,000 (\$400). The ban has led to the disappearance of motorcycles from many parts of the city, leaving many commuters with no way to and from work. Transport fares have tripled with the contraction in supply.

The Motorcycle Operators Association of Nigeria is contesting the ban. Because no alternative to motorcycle transport has emerged. Commuters, too, want the government to find a more appropriate solution rather than a ban on its operation. As a result, the ban was later lifted though its operation is restricted to arterial and link roads.

- Comparative advantages for users: availability, ubiquity, access and commercial speed (nearly 3 out of 5 moto-taxi users – 70 percent of commuters and nearly 75 percent of students – in Douala, they single out speed as their main advantage; availability and access are also of essence as moto-taxis are mostly used for short trips (more than half of the trips on moto-taxis are about 2 kilometers long in Douala and on average 4.2 kilometers long); when other modes of public transport are available as in Lagos, moto-taxis are the preferred mode for feeding and distribution service; in Douala, trips on moto-taxis do not require transfers or very few transfers (no transfer 67 percent or one transfer 27 percent); if safety is their comparative shortcoming, they may nevertheless provide more security to passengers than other modes of public transport (in Douala, 1,6 percent of moto-taxis users mention the risk of harassment in shared taxis as a reason for them to prefer moto-taxis; in Kampala, more women use moto-taxis than men, notably for security reasons at night).
- Comparative disadvantages for users: safety (in Douala, most users resent drivers' lack of respect or knowledge of traffic rules), affordability (in Douala, moto-taxis are not the mode of choice for poor people (poor people travel by moto-taxis twice less frequently than non poor, i.e. in the same proportion as for

other modes of public transport). Rich people tend to use moto-taxis twice as frequently as poor people. Affordability therefore remains an issue.

Box 2: Tame those taxis: A well intentioned governor is annoying frustrated commuters. *The Economist* 11 September 2010

A rush-hour commuter in Lagos can take three hours to cover 15 kilometers. A rare beneficiary has been the *okada* rider. On his cheap motorbike taxi, named after a once-admired no-frills domestic airline of the past, he often carries an entire family or a week's grocery... His widely time-saving tactics include riding on the wrong side of the road and ignoring red lights.

But Babatunde Fashola, Lagos's popular governor, is clamping down on the daredevil bikes as part of his push to tame an unruly city. On September 1st, Mr. Fashola banned *okadas* from many of the coastal city's main roads and bridges. He also had forbidden riders to carry more than one passenger at a time. In some of the more chic districts they are no longer allowed to operate after 8 pm.

Many Lagosians moan that, though he has virtually banned the bikes, the governor has failed to provide alternatives. Shittu Kabiru, a 27-year old rider with two children says his daily earnings have already fallen from 2,500 naira (\$16.50) to 1,000 naira. Like many riders, he took up his trade after failing to find other work.

Many poorer Lagosians, facing long journeys from the suburbs, must now use the far slower taxis or unlicensed minibuses. Rich residents who have always used their own cars are also complaining, as the jams become even worse.

Mr. Fashola notes that the untrained drivers cause many accidents.

But many think the campaign against *okadas* is premature. Whether Mr. Fashola can actually enforce his curbs is another matter.

In spite of their growing importance, motorcycles present some clear disadvantages from the perspective of the public interest. The motorcycle growth has developed without adhering to safety prescriptions as contained in the traffic laws of the countries. The distribution of motorcycles has been carried out without ensuring proper operator training and licensing. The high cost of travel by motorcycles and high patronage⁴ makes a mockery of the public

⁴ The motorcycle fare (per kilometer) is about 20 percent higher than the private minibus fares (which are already above the state controlled fare structure for public transport).

policy decision to hold down fares in the spirit of keeping them affordable.

The safety standards have been compromised (in Douala, at least 60 percent of moto-taxi drivers acknowledge carrying unaccompanied young children less than 10 years old and two thirds of moto-taxi passengers have been victim of a road traffic accident). Urban roads and highways have become increasingly unsafe as drivers who are neither cautious nor knowledgeable about traffic rules and regulations compete on the street for customers. Motorcycle growth has, in addition to safety, brought some undesired effects like crime, health and environmental (air and noise) problems.

Why have these issues persisted?

The decline in public transport services coupled with the growth in informal, unregulated taxis and commercial motorcycles can be attributed to a combination of weak institutions, government interventions that actually distort transport markets, the powerful influence of anti-reform stakeholders and infrastructure deficiencies.

Weak and inadequately staffed institutions are unable to develop comprehensive strategic plans and regulate the markets efficiently leading to unplanned growth of service providers filling the vacuum or seeking to maximize private gains at the expense of the broader societal good. Effective delivery of urban transport services requires coordinated attention to urban growth policies and planning, construction and maintenance of sufficient and adequate infrastructure, and regulation of transport services. However, the functions are seldom coordinated at the institutional level. Different ministries and agencies at different levels of government (national, state/province/regional, municipal) are involved. The net effect of widespread confusion in the respective players' planning and regulation roles is poor accountability, lack of coordination, and diffusion of commitment at all levels towards the development and im-

plementation of comprehensive transport strategies. “Institutional weaknesses are the source of many observed failures in urban transport in developing countries.”⁵

The exponential growth in motorcycles taxis in the past decade is not the result of a strategic plan to address the mobility needs but rather an indigenous response to growing, unmet demand and commercial opportunity. Estimates of financial viability suggest that the scale of profit margin is large, money transfers are substantial, mostly unaccounted for and untaxed. There are no fare controls set or enforced by government and fares are charged arbitrarily. Any increase in operating costs (fuel, lubricants, etc.) is passed on to passengers in the form of higher fares plus an often confiscatory profit margin. Limited control is exercised by unions but in the interest of the operators, not the users.

While in principle, all commercial motorcycles must be registered under the Road Traffic Rule and Regulations, operators must possess a driving license and a road worthiness certificate, and also use and provide customers with protective helmets; in practice, a large number of operators are not compliant with the legislation. Over 50 percent of the motorcycles in Lagos are estimated to be operating without a valid license. In Douala, the municipality does not regulate moto-taxis access to urban transport infrastructures and operating licenses are granted by the central government; motorcycles only need to be registered when above 125 cubic centimeters and only 18 percent of moto-taxi drivers acknowledge having a driving license. It is often easier and cheaper to obtain a forged certificate of road worthiness than to pass a test with a vehicle in good condition. Similarly, driver licensing systems are not secure and it is possible to obtain fraudulent documents.

Entrenchment of interests leads to a perpetuation of status quo and presents the most formidable challenge to change. Political alliances are established by incumbent providers and property rights maneuvered to favor a select few. Operators have organized themselves

⁵ Cities on the Move, A World Bank Urban Strategy Review, The World Bank, Washington D.C., 2002.

into labor unions which controls the market through self-regulation. The system has evolved as an industry response to the vacuum left by the failure of the government to provide alternatives and regulate the sector. Unions in each respective case have divided cities into zones and each zone is controlled by a branch of the union. In Kampala, the National Federation for Boda Boda Operators (NAFEBO) was set up in 2000 (after various earlier failed attempts). This federation is national in character but has a dominant influence in Kampala and is divided into 30 branches. In Lagos the Nigerian Auto Bike Commercial Owners and Workers Association (NACOWA) is the dominant union with 57 branches. In Douala, only 7 percent of moto-taxis owners belong to an operators' association – others prefer collective action through neighborhood associations or other kind of organizations. The unions are powerful organizations, with over 70,000 members in Kampala and almost 200,000 in Lagos. Non-members are not allowed to operate, a structure often enforced by violent means. They have also used their economic power and numerical strength to influence policy decisions.

While there is no formal entry control, the unions effectively control the market and deny entry to non-members. Their incomes depend on the number of motorcycles affiliated and act as an incentive to restrict entry by non-members. Each operator has to pay a fee in return for a right to operate and form an identity⁶. They provide protection to their members and represent their interests.

In Lagos, union control is enforced by contracted youths (area boys) who extract payment from the operators, a practice which can resort to violence should this be withheld. These payments pass through a chain of command and used to “manage” the operations by seeking favors from politicians and police.

It has been difficult to control and regulate the market as unions have gained political leverage with an increase in membership. With a membership of 200,000 operators providing direct employment to 500,000, the economic power is translated into political influence

⁶ In Lagos, the fee varies from \$30 to \$176 annually, depending upon location and business demand.

exercised by their ability to disrupt the traffic and buy political favors.

Government interventions have led to distorting the market and developing policies that favor interests of a select few. Government's policy to disengage from provision of public transport has also contributed to the growth of motorcycles. In 1991, the Government of Uganda relaxed regulations restricting import of motorcycles over five years old. Liberalization measures have led to an increase in importation of used vehicles which are often in poor condition, and in recent years, over 90 percent of imported vehicles are used. Most motorcycles are imported from Asia, particularly India and China and can cost less than \$1,000. There is an influx of smuggled motorcycles in areas near the border (Congo side), mostly of Chinese brand, on which no import taxes are paid and as a result are cheaper.

In addition to the liberalization policy, motorcycle growth in Uganda has been facilitated by a government's program of using motorcycle taxis as a development tool to fight poverty and unemployment. This motorcycle taxi promotion is in line with the central government's "*Prosperity for all*" program to address unemployment and mass poverty amongst youths in the country. In 2005, the local government tax on motorcycles was exempted under the President's directive. In addition, the Office of the President initiated a credit scheme and released funds for the Boda Boda Association to purchase motorcycle for its members. However, the money was misappropriated and did not reach the ultimate beneficiaries.

In a similar vein, the Lagos state government (together with other state governments in Nigeria) purchased a large number of motorcycles in 2004 to compensate political loyalists. Thereafter, motorcycles were also distributed to the unemployed as part of the poverty alleviation program. There is also a bulk purchase for organized groups such as the Nigerian Union of Teachers available as hire-purchase to ease their movement to school. In practice, many of the teachers use them on the way to and from school and in non-work hours as taxis. As a result over 65 percent of the motorcycles were introduced after 2004.

In contrast, the growth in motorcycle taxis in Douala was in response to a government's intervention to protect the public transport market by utilizing a price and quantity regulation. In early 2000, the government banned the operation of minibuses in an attempt to protect interests of the newly formed monopoly company operating large buses on fixed routes and schedules. The big bus company was given exclusive rights to operate for a period of five years. However, fare controls and insufficient supply of buses left a large unmet demand in the market. The vacuum created by inability of the large buses to meet the demand and exclusion of minibuses led to the emergence of small shared taxis and moto-taxis in Douala. In the past decade, there has been a spectacular growth in the use of moto-taxis (motorcycle taxis also known locally as "bendskins"). There are over 22,000 moto-taxis currently operating in the city and their number is expected to increase by more than 50 percent in the next 5 years (up to 45 000).

This is an example of the impact of political distortions on sector reform in the interest of short-term benefits. Populist decisions are taken to enhance patronage without regard to long term impact of the decisions taken or the need to entrench the decisions in a strategic thinking to improve sector performance.

Ease of entry, low capital requirement, employment potential, and ability to navigate congested and poor quality roads with relative ease are some of the factors contributing to the growth of commercial motorcycles. Before the 1990s, their operators were unknown in most cities. However, economic depression, factory closings, and mass retrenchments of workers, coupled with declining public transport services, proved fertile soil for the growth of this informal commercial business. The low capital requirement and the absence of any regulatory requirement other than to obtain a vehicle license (which could also be violated as in Lagos where over 50 percent are operating without a valid operating license) have facilitated their growth.

In Lagos, commercial motorcycles provide employment for a large number of people (in a survey, almost 85 percent of people cited unemployment as the reason for getting into this business); majority of operators are young (85 percent belong to the age group 25-

45). Over 70 percent of the motorcycle drivers possess junior or secondary/technical education, and have been operating a motorcycle for over six years.

With high unemployment, no entry requirements and no technical expertise required, the incentives to get into the market are high. This is especially made more attractive because of high returns. In Lagos for example, motorcycle operators earn an average of \$25-\$30 per day. Excluding daily rental (about \$4) and operating expenses (about \$5 including fuel and maintenance), net daily earning is about \$16-\$20.

Convenience, door-to-door service, savings in time, ability to serve low density areas, and flexibility are additional reasons for the growth of motorcycles in these cities. Commercial motorcycles provide accessibility to outlying peripheral areas, typically home to low-income groups, which are inaccessible by four-wheeled vehicles and without any organized large or mini-bus transport service. Most urban movement is road based and roads were laid when the cities had but a single center, and before the rapid growth in personalized forms of motorized transport.

Ability of the motorcycles to adapt to the changing travel demand gives them an addition advantage. Traditionally, public transport supply was developed to serve demand along radial corridors linking the city center to outlying residential areas. However, changing patterns of land use and employment, as reflected in the emergence of multi-nucleated cities have implied a much greater diversity of travel patterns. Motorcycles operate as a personal mode allowing direct connections across orbital routes instead of multiple transfers and longer times by buses to reach destination.

The primary road network radiates from the center city to surrounding areas; orbital or circumferential links are missing. That basic infrastructure is now deficient in several different ways. First, the quantity and quality of the road network is insufficient – overall, the road network constitutes less than 7 percent of the land area in the cities of which less than one-third is paved and not well maintained and where service lanes are absent, and street lighting is minimal. The majority of the roads have one lane in each direction;

where the roads are wider, one lane is often taken up by pedestrians and parked vehicles. Many outlying neighborhoods can be reached only by two-wheeled vehicles. Furthermore, roads are poorly managed, intersections are spaced closely together and ill-designed for turning and finally, commercial activities (such as street vendors) and vehicle parking force pedestrians off the sidewalks into the roadway, reducing the capacity of the roadway and posing safety hazards. The deficiencies in the road network work in favor of popularizing the motorcycles as a dominant mode.

Table 4. Factors influencing growth of motorcycles

<i>Positive</i>		<i>Negative</i>	<i>Push</i>	<i>Pull</i>
Demand	Supply			
Time savings	Easy availability	Congestion	Urban sprawl	Inexpensive
Door-to-door service	Limited street space	Pollution	poor secondary road network	Easy credit
Improve mobility		Accidents	poor road quality	High unemployment
Easy access		Safety/crime	Low density	Low car ownership
Demand responsive		unregulated	Uncontrolled growth	unregulated
Easy maneuverability			Absence of safe, secure, affordable alternatives (especially for women)	
Employment generation/Increase in income				

How can the issues be addressed?

The political economy dimension is often underestimated in developing appropriate solutions to address the challenge of growing congestion. The discussion is often framed as a technical argument, focused on engineering and financing perspectives. However, the linkage between governance failure and weak sector performance is not fully explored. The attempts to manage negative aspects of the growth of motorcycle-taxis in urban sub-Saharan Africa suggest a need to understand the political and economic dimensions and adapt policy instruments suitable to the local context.

The study is based on the premise that transport functions are closely inter-linked with job and housing markets; growth in city population and jobs will result in a rise in transport demand. Low-car ownership and limited road space will result in heavy dependence on public transport in developing cities. Poor delivery of organized formal public transport services results in a growth of informal public transport services; the growing size of informal sector makes it an economic and political force; vested interests are substantial and the political system is subverted to benefit a few.

In absence of a conscious public policy to organize the market and provide well regulated public transport systems, the diseconomies of the informal sector will grow and eventually compromise the very vitality and comparative advantage of a city. Motorcycle taxis could potentially provide a useful service as feeders from low density suburbs to main corridors together with taxis and micro buses; but to fully exploit their potential, they need to be regulated and their operations integrated within the overall sector strategy. This will require an understanding of the sector governance or the institutions responsible for managing and regulating the sector, identify key stakeholders with vested interest in maintaining the status quo and those adversely impacted by the resulting distortions, and develop measures to improve information sharing and accountability. While the standard recipes for improving the sector performance are well documented in theory, the operational utility of those prescriptions need to be understood in the context of vested interests and well established alliances. The growth of commercial motorcycles has

demonstrated their utility from a public transport and private owner financial perspective. Solving larger social welfare issues and reducing their negative externalities requires recognition of the political environment within which they thrive and the need to address all issues in a holistic framework.

Fundamental to this argument is a need to develop a participation framework driven by open communications across a wide spectrum of stakeholders. The communications strategy will build on the strong elements of the current operations while putting an agenda for change in place while developing ownership and managing any resistance. Such an approach will enhance legitimacy, build stakeholder participation, and improve quality of decisions, making them reflect the interests of the public as a whole.

Table 5. Definition of stakeholders

<i>Stakeholder</i>	<i>What is at stake?</i>	<i>Way Forward?</i>
National government	Rent seeking Political alliances	Develop contextual strategy even if "second best" Improve transparency in decision making
State/City government	Rent seeking	Increase accountability Strengthen regulations and implementation capacity
Union	Membership fees Market access Control on entry Other fees	Focus on collective industry issues
Branch/local	Disciplinary functions Payments to central Union	Integrate with other transport modes
Operators	Addressing mobility needs Business protection Identity establishment	Integration in approaches for overall city transport improvement Operational integration
Users	Ease of access Affordability Safety and security	Communications mechanisms to build political support for addressing their concerns
Local banks	High interest Inability to borrow (insufficient guarantees)	Form collectives/cooperatives Legally valid concessions as a form of business security
Non-users	Safety, security	Organized public opinion
Media	Little involvement	Provide a forum for open discussions
Civil Service Organizations (CSOs)	City quality of life Service efficiency Externalities (pollution, noise, congestion, accidents)	Information sharing Participation and communication

Table 6. Transport statistics for the three cities

City	Population	<i>cars</i> ^①	<i>PT vehicles</i> ^②	<i>Motorcycle taxis</i> ^③	<i>Price/Motorcycle</i> ^④	<i>Min bus fare</i> ^⑤	<i>m/cycle fare</i> ^⑤
Kampala	2.0 * (2.1)** (6.5)***	30	7,000 +	43,000	1,200	3	4-5
Lagos	15.0 * (4.2) ** (6.0) ***	80	75-100,000 +	200,000	700	5	7-8
Douala	2.5 * (13.2) ** (6.5) ***	40	550 + 400 ++ 10,000 +++	22,000	700	7	10

Note: * Population is in million

** Density is in 1,000 inhabitants per square kilometer

*** Growth rate is in percent

① Private cars/000 population

② Number of public transport vehicles

③ in 2007

④ Average cost of a new motorcycle in US dollar

⑤ US cents/kilometer

+ Minibus

++ Large buses

+++ Taxis