Title:
The Organization, Issues and the Future Role of the Matatu Industry in Nairobi, Kenya

Author:
Jennifer E. Graeff
Center for Sustainable Urban Development (CSUD) at Columbia University’s Earth Institute
2910 Hogan Hall, Level A
MC 3277
New York, NY 10025
United States of America
jgraeff@ei.columbia.edu

Corresponding Author:
Jennifer Graeff
2910 Hogan Hall, Level A
MC 3277
New York, NY 10025
United States of America
jgraeff@ei.columbia.edu
tel: 1.212.854.9827
fax: 1.212.854.0202

Abstract: This paper is an analysis of the matatu industry and offers a discussion of how its structure and networks may pose obstacles but also opportunities for transport reform in the capital city of Nairobi, located in Kenya. Matatus are the informal paratransit industry in Kenya that provide service to millions of people a day and are essentially the backbone of the transportation system in Nairobi. By facilitating a broader policy dialogue involving key stakeholders in the industry and the inclusion of the matatu industry in the reform process, rather than the exclusion of the industry so often seen in the past, this paper argues that matatus can play an important role in the creation of a more comprehensive transit system for the entire Nairobi Metropolitan Area.

Keywords: paratransit, informal transport, public transport, matatus, Sub-Saharan Africa, Kenya
Glossary

Matatu- Matatu is taken from the Kikuyu term *mang-otore Matatu* which translates into “thirty cents,” which was the standard fare when matatus emerged on the transport scene in the late 1950s. Matatus comprise the informal paratransit industry in Kenya that provides service to millions of people a day and are essentially the backbone of the transportation system in Nairobi. Physically, they are usually second-hand and often run-down minivan taxis that can seat anywhere from 14 to 30 people. Matatus are usually identified by their colorful graffiti, loud music, and more recently, a yellow stripe that runs along the sides of the vehicle indicating its route number and destination.

Mungiki- Kikuyu for multitude, the Mungiki emulated the Mau Mau independence fighters who took part in Kenya’s fight for independence. They penetrated the urban environment in the late 1990s by taking over the more popular routes in the matatu system first, and then the garbage collection, building materials and basic provisions. In 2002, the Mungiki decided to get involved in politics but they supported the losing side of the government. The Mungiki leaders were rounded up and charged with inciting violence. They were officially outlawed in 2002 but continue to levy taxes on electricity, transport and water.

SACCO: This stands for Savings and Credit Cooperative and extends to any type of industry, not exclusively transport. A group must register at the Ministry of Co-operative Development and Marketing to become a recognized SACCO. In the case of matatus, a group will register to become a SACCO by identifying itself mainly with the route where it is operating. Thus many people also refer to the SaccoS as route associations.
1. Introduction
One of the most relevant yet staggering challenges facing cities in both developed and developing nations is meeting increasing demand for transportation services. The lack of a functional public transportation system is problematic as it is through an organized system that city inhabitants are able to structure a daily routine. A well-planned and organized transportation system allows for a mobile city in which inhabitants can fluidly move in a timely manner. When urban transport systems do not adequately function to effectively serve the population, such as in the capital city of Nairobi Kenya, daily life becomes more complicated and ultimately, the true economic potential of the city cannot be realized. A reliable transport system is especially important in developing countries, where many people are poor and easy access to a city, where there is greater economic opportunity, is essential to growth.

In Nairobi, as well as in many cities in the developing world, rapid urbanization, high operational costs crumbling infrastructure, and weak institutions result in depleted public transportation services and service voids. To fill this void, informal and mostly private paratransit services have cropped up as there are often few alternatives. In many of these cities, the informal paratransit industry is generally described as dangerous, profit driven and environmentally unfriendly, while at the same time, necessary for mobility. This is the case in Nairobi, where the paratransit industry is comprised of minibus taxis called matatus.

There is a movement occurring in Sub-Saharan Africa, however, to reform these paratransit systems, most notably in the form of Bus Rapid Transit (BRT). Countries such as Tanzania and South Africa are currently both looking to effectively operate BRT systems. BRT is an attractive option for cities of the developing world as it is a flexible system that is more affordable than other mass transit options. It also seeks to integrate various modes of existing transport systems, many which are informal, into a larger formal system. Despite the attractiveness of the BRT system, the informal transit industry is one stakeholder that is often most resistant to reform. One reason for this resistance is often the lack of engagement and involvement of paratransit industries by authorities leading discussions concerning developing future transit systems. To that end, it is the responsibility of each city to strive to understand the organizational capacity of their informal transit industry and to vigorously include it in planning. For Nairobi, by understanding the specific networks within the matatu industry, strategies for engaging key industry stakeholders and developing a reform that targets and improves the entire matatu industry within the larger transit system can be identified. Recognizing potential pitfalls and engaging with key stakeholders can help foster transport policies, networks and an overall framework that can leverage the matatu industry into being integrated into a larger public transit system.

The informality of these systems belies their complexities and to that end, this paper will seek to explain and analyze the challenges of Nairobi’s matatu industry. To do this, current operation of the industry and how it poses both obstacles as well as opportunities for transforming the overall transit system into a larger, integrated metropolitan transit system, will be addressed. This was done by identifying

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2 Paratransit can be defined as “a service that is not quite full public transit and that has some of the convenience features of private automobile operations. It is often smaller in scale than public transit systems, utilizing smaller vehicles, and it can be legal or illegal as defined by local rules and regulations” (Grava 2003).

3 Taxi strikes in 2009 in South Africa opposing BRT demonstrate the importance of including informal transit in the discussion and transition process. It is worth noting that the matatu industry recently went on strike in Nairobi regarding the presence of cartels and the ill treatment of workers in the industry, leading to an investigation by the government into these claims, suggesting that an opportunity for transport reform may be approaching (Gikandi and Opiyo 2009).
stakeholders in the matatu industry, identifying potential areas of resistance and obstacles and then producing recommendations that can facilitate the beginnings of a smooth process of transportation reform. And while the matatu industry is specific to Nairobi, issues surrounding Nairobi may offer insight and guidance into other cities as there are generic characteristics of paratransit systems operating all over the world.

Attempting to address rapid urbanization through transport reform requires a holistic vision incorporating the entire Nairobi Metropolitan Area (NMA) and its transport networks. This is an opportune time to be thinking about a transportation system for the NMA, in its capacity as the Ministry of Nairobi Metropolitan Development, has recently prepared a vision, Nairobi Metro 2030: A World Class African Metropolis, that shares a vision for the future development of the NMA. A comprehensive transit system connecting satellite cities and Nairobi is essential as the entire metropolitan region is impacted by rapid urbanization. This paper will consider the role of matatus in Nairobi’s future transit system, where traditionally, master plans and comprehensive transport plans have either ignored or neglected to incorporate matatus into a larger transit system.

2. Methods
To better understand the matatu industry and issues voiced by stakeholders, extensive fieldwork was conducted by the author in Nairobi in December 2007, January 2009 and March 2009. Local newspaper articles, academic and research studies and comprehensive city plans as well as private sector transportation studies were also reviewed. The author spent time at matatu ranks around Nairobi, rode in matatus, conducted interviews in matatus and experienced the capabilities, frustrations and realities that could not be appreciated through solely reading texts.

3. Nairobi and its Matatus: An Introduction
Nairobi is the capital of the East African country of Kenya and is one of the areas where urbanization has been consistently high. The fact that Nairobi has served as the country’s administrative since 1907 and is the commercial and economic capital also explains why it has consistently experienced population growth and continues to increase in size and stature. It is arguably the most important city in Eastern Africa, as it is home to international businesses and aid organizations including two United Nation headquarters, United Nations Environmental Programme (UNEP) and UN Habitat. As a result, there has been a steady increase in demand for resources and infrastructure services, which the government has been unable to provide. One of these deficient services is in public transportation. The institutions responsible for providing a public transportation system for the metropolitan area have been unable to effectively respond to the rising public demand, leaving the city of roughly 3.5 million people without a functioning public transportation system. This service gap has made it possible for matatus to quickly answer the unmet need of Nairobi’s increasing population.

It worth noting briefly that there are other transit options in Nairobi. However matatus are the overwhelming choice, for reasons that will be discussed. There are different modes of transport as well as different types of public service vehicles (PSVs). The three main ways residents reach destinations in the NMA are through motorized public transport, non-motorized transport or private car. The modal split as of 2005 found that 49% of residents chose non-motorized transport (walking or bicycles), followed by 42% opting for public transport and 9% of the residents using private transport (KIPPRA 2005). Of those using motorized transit, matatus are the overwhelming favorite.
The evolution of the matatu, from a quick and easy response to unmet travel demand, to the dominant mode of transport in Kenya, began in the late 1950s during the colonial period and increased after Kenya’s independence in 1963 when Africans migrated to Nairobi seeking employment opportunities. Informal settlements that had been created during Kenya’s colonial period, initially intended to physically and socially segregate Africans from Europeans, began to increase in size around the city and in areas with limited public transport service. The people residing in these areas were usually too poor to afford private vehicles. Recognizing the opportunity for financial gain while providing a much-needed service, mini-bus taxis, which were largely owned by middle-income Kenyans, began offering transport services from rural areas and from informal settlements around the city. Due to high demand, the number of matatus increased. They continued to operate illegally in the city until 1973 when then President Jomo Kenyatta issued a decree officially recognizing matatus as a legal mode of public transport. The decree allowed matatus to operate without obtaining licensing (Mutongi 2006). “The main idea was to increase and make the mobility of people more efficient and create more jobs in the informal sector” (Kimani et al 2004). There was also the populist notion that Kenyatta believed matatus were useful to the common man and that the owners (who were often the drivers as well) were examples of hard-working African entrepreneurs dedicated to the development of Kenya. “Matatus, in fact, revealed indigenous economic entrepreneurship at its best” (Mutongi 2006). The matatu industry has played a central role in mobility, politics and economics, solidifying its role and importance in Kenya’s cultural fabric. As Nairobi became dependent upon matatus to transport people to and from various destinations located in the metropolitan area, their numbers increased from 400 in 1973 (Lee-Smith 1989) to an estimated 15,000 matatus in the NMA today (Personal Interview, March 2009).

4. Stakeholders of the Matatu Industry
The matatu industry could be described as organized chaos. However, by understanding its stakeholders and networks, it becomes easier to understand how the matatu industry organizes itself. From this perspective, the industry begins to look less chaotic. A more detailed explanation of the stakeholders is located in the Appendix. Chart 1 below offers a basic description of the stakeholders, their role within the matatu industry and additional information that is necessary for understanding the discussion section. Chart 2 is a flow chart that demonstrates how the stakeholders that comprise the matatu industry interact.

5. Discussion of the Issues in the Matatu Industry based on Stakeholder Input
Lack of Political Will and Political Champions
Most stakeholders believe the reason the matatu industry is disorganized is because of general lack of political will and more specifically, the lack of political champions to advocate for a more a progressive plan for matatus. Thousands of people are operating matatus independently and competing against each other. The relevant ministries and organizations are considered corrupt or weak. Without a functional governmental umbrella organization the whole system has become fractured, allowing cartels to thrive as they offer their own type of organization, albeit exploitive.

Related, the lack of political will to organize the matatu industry is detrimental to the overall image of Nairobi. The city needs a transportation system that provides mobility and fosters economic activity. Although the community has been vocal by writing articles and editorials in daily newspapers and posting responses on blogs regarding the need for a champion, the government continues to ignore public

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4 The following is an abbreviated version of interviews conducted in December 2007 and January and March 2009 that delve into the pertinent issues within the matatu industry.
demand. As mentioned previously, an added possible obstacle to reform is that, allegedly, many politicians are currently absentee owners and profit from matatus. I interviewed a transportation specialist in Nairobi who believes that the most important issue regarding the transport system is the lack of political will to actually fix it. He also believes that transportation is simply not a priority for the government and this is reflected in the lack of a political champion in the field. He said that a former Minister of Transport was invited to attend a meeting to discuss a report outlining transport issues in Nairobi. However, the Minister did not attend because he did not think that the results of the surveys were legitimate (Personal Interview, 2007). This transportation expert stressed that many prominent organizations have done studies and surveys and there are many transport specialists in Nairobi but the government has not utilized them or the studies to the point of policy making. He attributes this to political will; political will must be the priority and right now it is not (Personal Interview, 2007).

Absentee Ownership and Politicians Linked to Matatu Ownership
As a corollary to the lack of political will, another obstacle to reform seems to be the prevalence of absentee ownership and matatu ownership by politicians. While it is true the matatu crews are directly responsible for following the traffic laws and customer care, the owner’s lack of interest in being aware of current traffic laws as well as a lack of interest in providing customer care does re-enforce the fact that many matatu owners are concerned primarily with profit maximization rather than providing an attractive transportation service. These owners who may not be conversant with the laws and regulations, will set unrealistic daily profit marks, forcing the operators to drive recklessly. This is not to say that all absentee owners engage in price fixing, nor does it mean that all active matatu owners are unaware of traffic laws and unconcerned with customer care. However, as observed in one study, absentee matatu owners are “not conversant with traffic laws and customer care…”(Chitere and Kibua, 2004). It is worth noting that during my fieldwork it was suggested that many matatu owners were also involved in politics or held political office. The combination of politicians/absentee matatu owners is one in which conflicting interests arise as many claim that the politicians will not improve the regulations of the matatu industry as the necessary regulations may impact their overall revenue given that they are matatu owners themselves.

Poor Driving Behavior
Poor driving seems to impact all the stakeholders in the matatu industry and is a main reason that the matatu industry has such a poor reputation. Matatu drivers tend to drive recklessly, as their income and job security is dependent upon daily passenger loads yielding the daily profit mark set by the matatu owners. To accomplish this, they break traffic laws, weave in and out of traffic, cut off other vehicles, use sidewalks to bypass traffic jams (putting pedestrians at risk) and speed when possible. This poor driving leads to what Kenyans call “road carnage.”

Security Issues
Security issues due to the presence of cartels, particularly the Mungiki, affect the entire matatu industry. The impact of gangs such as the Mungiki on the matatu industry cannot be emphasized enough. Clashes for control of routes and termini threaten innocent bystanders, commuters, crews and stage workers and the Mungiki’s tight control over the industry, maintained through the threat of violence, creates a dangerous working environment that is difficult and dangerous to navigate. In interviews with a wide range of people, from matatu owners to academic experts, it became clear that many believe that politicians and the Mungiki are working together for illicit financial gains at the expense of the matatu industry. Wrapping up one interview, I asked how high up this corruption goes. “To the top,” was the response, a common sentiment among those interviewed (Personal Interview, December 2007).
There is also a poor relationship between the police and the matatu drivers. This stems from transport policies that are meant to regulate the matatu industry, but according to many in the industry, have only led to harassment of matatu operators. Thus, there is little precedent for the matatu industry and police force to work together to improve the safety on the roads.

There are also security concerns at the matatu staging areas and terminals. The matatu industry is considered an “open” sector and as such, there are many unemployed youth who loiter, creating havens for anti-social activities such as drug use, petty theft, prostitution and violence (Khayesi 1999).

**Job Security**

Job security is a major concern especially for matatu crews and support staff. This concern stems from their casual employment status and verbal employment contracts. Poor job security begets reckless driving and overcrowded matatus as drivers and conductors must meet the daily revenue marks set by the matatu owners or risk being fired. In a brief interview with a matatu driver of five years, he said, “I have to fill up very fast. If there is a problem, I will lose my job” (Personal Interview, January 2009). The situation for the stage workers is similar as they are also employed, either by the matatu owners, the SACCOS or the Mungiki, in an informal manner. There is also the chance that certain termini will be claimed by the Mungiki and workers will be replaced without notice.

Significantly, basic employment policy in Kenya does not cover matatu workers. Specifically, the government’s desire to phase out 14-seat matatus (next section) has owners and crews of these matatus concerned as a majority of matatus in Nairobi are 14-seat matatus. This means that if this policy is actually implemented, a majority of the crews are operating a vehicle that is expected to be phased out in the future.

**True Costs of Owning and Operating 14-seat Matatus**

Purchasing a matatu and recovering initial costs is a concern for prospective owners. This can be initially difficult but the general expectation is that a sizable profit can be realized in a relatively short time period. Prospective owners know new vehicles are produced and available locally, but they are often too expensive to purchase. Owners must consider the basic cost of operations, including expenditures to cover corruption and bribery. Fuel, salaries and insurance are the most expensive costs for owners, so to ensure that costs are recovered, owners set a target for daily profit, thus encouraging matatus crews to overcrowd and speed. In an interview with a matatu owner, he said he originally decided to buy a matatu because he thought it would be profitable. He bought his matatu in 2003 and has struggled to recapture his initial investment and turn a profit. He is now thinking off getting out of the matatu industry for good (Personal Interview, January 2009).

The push to phase out 14-seat matatus is becoming an increasingly important topic. For the matatu owners and drivers, there are two main concerns: the pace at which the 14-seat matatu will be phased out and their ability to upgrade to a higher capacity vehicle, most likely with little compensation or assistance. The phasing out of the 14-seat matatus worries some commuters as well because the 14-seaters tend to fill up faster, allowing for quicker departure times. The smaller sized vehicles also navigate the congestion better than bigger buses.
Police Bribes
Matatu owners and drivers often complain that the police harass them and pull them over even though they have not done anything illegal. To avoid having vehicles pulled the vehicle off the road, the crews pay off the officers (Personal Interview, 2007). The police are often believed to be working with the Mungiki as well. The police receive weekly bribes from the Mungiki on certain routes, which allow the Mungiki to conduct their business with impunity (Mungiki Hit Matatu Trade, Dauti Kahura; The Standard, May 16, 2005). In two major studies done on transportation in the NMA, the Urban Mobility Scoping Study by Transport Research Laboratory as well as a report by Kenya Institute for Public Policy and Research Analysis (KIPPPRA), it was found that a main issue for the operators is police and government harassment. It is also worth noting that in the study done by NMGS BRT Solutions, it was estimated that approximately Ksh.48 billion is lost annually because of the illegal gangs and corrupt law enforcers (NMGS BRT Solutions 2006).

Lack of Data and Transport Knowledge
It is problematic that there is no consistent data available regarding matatus. Either there is no central database or there is extremely limited access to the database that tracks the various characteristics of matatus operating in Nairobi. The best way to obtain this information is through the SACCOs but not all the SACCOs are registered and overall information is scarce. The lack of data makes it difficult to comprehend the complexity of the transport system. Some studies have attempted to do so, but contradictory findings between these studies are common. For example, one study states that one matatu employ up to four people (Kimani et al 2004). However, in some of my interviews, I was told this is a “myth” as a matatu that employs four people will be unable to cover operating costs and generate a profit (Personal Interview, March 2009). From interviews and research, it appears that the number of people it takes to put a matatu on the road will vary but it is important to factor in the support staff that makes operation possible in the first place. This means including stage workers, mechanics and other various types of workers directly or indirectly involved in facilitating a functioning matatu industry.

It was also common for the matatu crews I interviewed to ask me about my own local transportation system and transportation systems in other countries. During one interview, when I told them that people in New York City use a public service that is overseen by a government body they responded, “We don’t have that here” (Personal Interview, January 2009).

Lack of a General Plan and Poor Implementation of Former Plans
There have been numerous master plans and transport studies for Nairobi conducted by various organizations as well as the Government of Kenya over the past fifty years but few if any of the recommendations from these master plans and studies appear to have been seriously considered or implemented. This is not only due to institutional constraints but in many cases may be due to the shortsightedness of the planning attempts themselves. Recently, the Ministry of Nairobi Metropolitan Development unveiled its vision for Nairobi, entitled Nairobi Metro 2030: A World Class African Metropolis, and while it is only a vision of a plan, it is meeting great resistance from surrounding municipalities as it fails to incorporate or consider the needs and concerns of the surrounding municipalities and industries, including matatus. With pictures of and discussions about high speed rail and mass transit options that do not specifically address the future role of matatus in Nairobi’s mass transit system, Nairobi Metro 2030 seems to follow the historic trend of excluding the matatu industry from key discussions regarding the future of Nairobi’s transit system. This lack of vision for the matatu industry has allowed the matatu industry to grow and operate in a way that benefits the provider, rather than the community and city. The lack of vision also further demonstrates the deeper governance issues
plaguing the planning process that has been guiding the overall metropolitan planning efforts in Nairobi during the last four decades.

The Michuki Rules

When the Michuki Rules were gazetted in 2004, to many of the stakeholders, specifically the commuters, it was a positive step for the matatu industry. As a result, many believed that Mr. Michuki, the Minister of Transport of at the time, would be the political champion needed to reform the matatu industry and the Nairobi’s transport system, a feeling also reflected in many of my interviews. Others were opposed to the Michuki Rules, specifically the MWA and the MOA as well as most individual matatu owners and operators. In fact, the owners and drivers were so angry that nationwide matatu strikes were organized, shutting cities down for days. According to the Institute of Policy Analysis and Research, the provisions mandated by the Michuki Rules were quite costly for owners, sparking the outrage.

General Dislike of Industry Behavior:

Commuters, taxi drivers and bus drivers interviewed believe the behavior of the matatu driver creates a dangerous driving environment. Complaints of rude and unprofessional crews, loud music, inappropriate videos playing on televisions installed inside the vehicle and erratic driving persist. The music and videos have become a topic of debate that seems to be divided along generational lines. Many young men and women enjoy the loud music and they may choose some matatus that have powerful speakers over matatus that do not. During a conversation with a man who relies solely on matatus to move around Nairobi, he said he chooses these matatus over others and that the matatus that make the most money are the ones that are designed for younger people. These matatus are decorated with detailed and colorful designs and graphics, and have expensive speaker systems and televisions on board. He says the new 14-seaters are the best matatus to use as they fill up the fastest and will often run 24 hours a day (Personal Interview January, 2009).

Some believe matatus should be abolished completely. There is an alternative viewpoint, however, arguing that the commuter is not an innocent bystander and that matatu crews are unfairly characterized and scrutinized. In one recent article, a matatu operator stated that he believes that matatus have become the scapegoat for everything that is wrong in Nairobi (Mutongi 2006). The absence of a proper regulatory framework and the relaxing of the Michuki Rules have also led the matatu crews and the police to practice collusion (Kimani et all 2004). Industry behavior fosters a negative image of transport in Nairobi and reflects poorly on the Nairobi community in general.

Congestion and the Transport Licensing Board

For the commuters and operators, congestion is a major issue as it takes an unreasonable amount of time to access the city. One study estimated that time spent on travel due to increasing congestion is approximately Ksh 1.89 billion per year (NMGS BRT Solutions 2006). Congestion can directly lead to a variety of problems for both commuters and operators. Prolonged time on the road also raises serious problems regarding health emergencies. Emergency vehicles (fire trucks and ambulances) must battle

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5 Legal Notice 161, which aims to regulate the public service vehicles, was gazetted in 2004. The regulations are referred to as the Michuki Rules after then transport Minister John Michuki. The Michuki Rules made attempts to regulate public service vehicles in various ways including the elimination of standing on city buses, mandating that PSVs be outfitted with speed governors and safety belts and that crews wore uniforms and post identification cards. PSVs were also mandated to have a yellow strip along the side of the vehicle clearly indicating the route the vehicle services.

6 This is interesting as Michuki, in the wider context, is allegedly linked to illegal activities in the Nairobi area.
heavy congestion in order to respond to calls, which directly impact the health and well being of the Nairobi community. People are also exposed to polluted air and toxic vehicular emissions for prolonged periods of time, which have profound health consequences.⁷

Many blame the TLB for the congestion in Nairobi, believing that the TLB continues allocating PSV licenses, simply to ensure revenue for the government. When interviewed in 2007, a city engineer said “the TLB needs to stop giving license to PSV vehicles. The city has reached capacity” (Personal Interview, 2007). As a result, the roads are saturated with public service vehicles. It is important to note that it is the mandate of the TLB to issue licenses. When I interviewed an individual at the TLB, he said the TLB has no power to change policy or make any policy decisions or recommendations. Such policy decisions must come from the Ministry of Transport. He said the TLB is unfairly blamed for the congestion on Nairobi’s roads. This further demonstrates how the fragmented and poor governance of the matatu industry continues to complicate and hinder the operation of an efficient transport system for the NMA.

Aging and Poorly Maintained System
In 2005, KIPPRA conducted interviews regarding the current transportation issues in Nairobi. When asked about the core issues and challenges regarding the transportation sector, “nearly half of respondents interviewed indicated that the poor status of the road infrastructure, especially its construction and maintenance, presents the greatest challenge to urban transport in Nairobi” (KIPPRA 2005). The poor infrastructure increases the need for vehicular maintenance. As not all owners can afford to maintain their vehicles when necessary and considering the vehicles can be quite old, greater levels of toxins are emitted, which increase health problems associated with air pollution. In terms of pollution, the UNEP, states that over 90% of air pollution in developing countries is due to vehicle emissions caused by the high number of older vehicles (www.unep.org/urban_environment/issues/urban_air.asp). The fact that the vehicles are old, on average eight years, adds to the amount of toxins they will emit into the air, which will increase health problems associated with air pollution such as respiratory disease and skin/eye irritations. With the proliferation of all these older vehicles on the roads, the pollution will continue to increase. “The cost to society arising from emissions of old (more than 8 years) vehicles…is likely to be enormous” (Chitere and Kibua 2004).

Limited Representation of Commuters:
The commuter is an under-represented stakeholder in the industry. It was only at the end of one interview that I was even told there was a commuter group. I was able to meet with a representative from the Commuters Welfare Association, for a very brief interview. He told me that the Commuter Welfare Association was created after a riot occurred following a rainstorm in 2003 as matatus drivers raised the prices due to the bad weather. The Commuter Welfare Association registered with the NGO Coordination Council, with the purpose of creating better services for the rider. All of their members are also members of the Kenya Private Sector Alliance and they have meetings at the Ministry of Transport. He said that they must focus on the major issues to the commuter: congestion, accidents, security, fares and comfort.

⁷ In February 2006, CSUD collected pilot data on air concentrations encountered while driving in the Nairobi metropolitan area and compared data collected simultaneously ‘urban background’ found roadway concentrations of PM2.5. A major source of PM2.5, is vehicular emission is associated with pulmonary and cardiovascular diseases and cancer. The World Health Organization standard for PM2.5 is 65 micrograms per Cubic Meter of Air (ug/m3) but in the pilot study results yielded results of 433 ug/m3 of Nairobi roadways, indicating incredible high levels of air pollution in the Nairobi Metropolitan Area (Kinney, P. and van Vliet, E 2005)
The association believes through commuter awareness and rights campaigns, engagement with the MOA and MWA and increased data and surveys on accidents, commuter satisfaction and travel time, and the commuters can increase their role and stake in the matatu industry. However, the representative said that funds are a major hindrance and keeps them from being more active and engaged (Personal Interview, 2007).

6. Recommendations
As seen in the discussion section, there are a variety of issues impacting all stakeholders in the matatu industry that, simultaneously, drive the industry to operate in its current manner. There are two important points to draw from the discussion section. The first is that many of the issues surrounding and within the matatu industry are not intrinsic to the industry itself, but rather arise from the poor governance of the matatu industry and transport system in Nairobi as a whole. In this case, poor governance is exemplified by the breakdown of dialogue, engagement and relationships among the stakeholders and institutions that comprise the industry, resulting in the aforementioned issues plaguing the matatu industry. The second point is that each issue impacts more than one stakeholder in the matatu industry, meaning that thorough dialogues between all stakeholders addressing one particular issue, could result in meaningful changes throughout the matatu industry, therefore impact all stakeholders within the industry.

The following recommendations consider these two points, mainly through highlighting ways to incorporate the matatu industry into a larger multimodal public transit system but not just through structural and technical reforms within the industry itself that address overlapping stakeholder issues, but also through the engagement of all stakeholders, thereby aiming to improve governance of the industry and transport system as a whole. By allowing all stakeholders, through various networks and campaigns, to have input into how their industry should operate to provide a much needed service at a sustainable and equitable level, many of the issues plaguing the matatu industry can be addressed.

Develop a Transportation Vision that Considers Matatus
Having a strong plan or vision that depicts how the city should develop and the role transport will play in serving the city is essential. It is also important to acknowledge the path that has been taken in regards to why Nairobi has developed they way it has, both historically and institutionally, when considering the future. For example, the presence of matatus are an important part of Kenya and Nairobi’s history and they are embedded in the country’s cultural identity. Disregarding this and attempting to build a new transit system without matatus could prove difficult, if not impossible. It is important to understand Nairobi’s path so that existing critical elements for development can be built upon rather than wiped clean in favor of starting from scratch. Engaging all stakeholders in the transport industry and pursing active participation regarding their role in the future transport plan will help to foster a smoother dialogue and reform. In the various plans that have been proposed, matatus are not mentioned or factored into the transport plan. While my research and interviews suggest that BRT could satisfy the city’s transport needs, any future steps regarding a comprehensive transit system should discuss matatus, considering that resistance will be inevitable (taxi resistance in South Africa and matatu strikes in Kenya being prime examples) and that a complete overhaul is unlikely and would certainly not occur overnight. It is therefore important to clarify that the matatus will still play an essential (yet altered) role in the transit industry and that they are not being replaced or phased out. The key to making the system function will be using a formula to create a BRT system that is uniquely and specifically Kenyan. Matatus should be integrated in some way, no matter what the main mode is, whether it is bus or rail.
Educate and Engage Stakeholders
Education campaigns, workshops and seminars that engage and educate the public about local complexity as well as different transport systems and models around the world could help to empower all stakeholders to demand improvement of the matatu industry and transport system. Through enhanced and concentrated community involvement and through community groups and neighborhood associations, communities could help persuade the government to take a more active role in Nairobi’s transport future. For example, as part of an education campaign, commuters and drivers could learn about the education and civic pride campaigns used in Bogotá that introduced a new level of civic pride and organization along the streets of a city that was once described as chaotic and hopeless.

Greater Regulation and Oversight and Improve Records and Data Analysis
A major effort should be focused on data and information gathering in an attempt to finally garner a more concrete understanding of the total number of matatus operating and their seat capacity, as well as the operating route of the matatus on the road. This will help in quantifying how many stakeholders will be impacted by a change in the industry which will in turn help develop meaningful reform. The TLB is currently computerizing its data so there can be more information on certain characteristics of the entire PSV industry, and not just matatus. If possible, the Ministry of Transport could mandate a temporary freeze on new PSV applications for over-serviced routes and 14-seaters, while the TLB is collecting information on the current PSV system. The TLB could continue to consider renewed applications for PSVs, but accurate information is necessary to determine the next steps to be taken and how to transition the existing workforce. The Ministry of Transport could also create policies emphasizing increased responsibility for matatu owners if they wish to legally operate a matatu. Change can begin with the owners through the following recommendations:

- Address issues arising due to absentee ownership and conflict-of-interest ownership (politicians responsible for creating and enforcing policy);
- Owners should become more literate in and aware of transport policies, updates and notices – potentially owners could be tested when re-applying for PSV licenses;
- Owners should not engage in price fixing, but should have a set amount of net income based on calculations that consider operation costs. Related to this, a commission could be set up to set rates based on various factors, as is done in New York City. Determining rates and commissions could be included as part of their PSV application; and
- Owners should be encouraged to join their local Matatu Owners Association (MOA or Matatu Welfare Association (MWA) branch;
- There should also be greater representation by the matatu operators so they have more rights and protection. At the same time, to be able to operate a matatu, operators should be updated and aware of transport policies, updates and notices, just like the matatu owners.

Consideration of Matatu Integration into the Future System
There is no question that any change in the Nairobi transport system will be met with resistance, specifically when those changes directly impact the matatu industry. It is also certain that any transition period to a new system will be difficult for matatu owners and matatu crews. The SACCOs will play an important role in addressing the concerns of these stakeholders and in integrating the matatus into a comprehensive system.
SACCOs to Become Professional Transport Firms
There is an opportunity for SACCOs to play leading roles in the transition process given their critical role in providing some organizational structure to the matatu industry. The SACCOs should promote themselves as professional transport firms acting as key stakeholders in the transition process. They can act as the liaison between the members of their SACCO and the other stakeholders, including the government.

Shift to Higher-Capacity Vehicles
The democratically elected officials of each SACCO should embrace the role of organizing most matatu owners of 14-seat matatus into groups that can purchase higher-capacity vehicles. There is a program offered from General Motor East Africa (GMEA) to finance higher-capacity vehicles and the SACCOs should work with General Motors East Africa directly, possibly through workshops to guide the investors along the way. The SACCOs could also look to the MOA for assistance and advice, as there are examples within the MOA of how to make such a transition. It is worth noting that not all routes may need to make this shift to higher-occupancy vehicles. In areas where it is difficult for bulkier and larger vehicles to navigate, it may be appropriate to have smaller vehicles operate the route. Through these two shifts, the matatus can begin to position themselves so that they can be a strong and organized industry seen as a necessary component to a larger more comprehensive mass transit system that can service the entire metropolitan area, including satellite cities.

Transportation Policy Network within Nairobi, Kenya and Africa
It could benefit the industry and their stakeholders to better utilize the civic associations, specifically the MOA and MWA. These associations have the ability to unify the industry and strengthen the voice of stakeholders within it, which is an important incentive. While the SACCOs are important as well, they find themselves in competition with each other, rather than working collaboratively. This competition helps create a dangerous and stressful work environment. Greater involvement in civic associations could possibly balance this competitive environment.

There could also be some benefit in the creation of unions for many of the stakeholders who are not represented in the matatu industry. While owners are recognized, crew operators and stage workers are not. Although they have a civic association, the commuter is one stakeholder that is sorely under-represented in the transport system, especially regarding the matatu industry. A greater effort should be made to bring the commuter, into the transport equation, rather than ignoring them.

Networking with major cities in Africa also reforming their transport systems may be helpful in Nairobi’s own transport transformation. It could be helpful for the government, civic associations, and other stakeholders to create a dialogue with key individuals and counterparts in Tanzania or in South Africa and learn from their transition process. For matatus owners, as well as other stakeholders, to be able to talk to their counterparts in other countries where transition is occurring could be helpful in facilitating a smooth transition in Nairobi.

7. Conclusion
As Nairobi has continued to grow, both in size and in importance as a city, the lack of mass transit options has opened the door to a paratransit industry, comprised of matatus, which dominate the transport system. Poor governance, in the form of weak policies and policy enforcement and lack of political leadership has
created an environment where the matatu industry has been able to establish its own internal operating procedures. This paper has attempted to provide an analysis of these operating procedures and to identify obstacles as well as opportunities to create an integrated transit system for the Nairobi Metropolitan Area. A way to achieve this goal is through the overall improvement of governance within the matatu industry and transport system in Nairobi as a whole and by recognizing that the many issues in the matatu industry are not impacting just one stakeholder, but multiple stakeholders. The recommendations support these claims and attempt to incorporate the matatu industry into a larger multimodal public transit system through various means that ultimately will improve governance of the industry and the transport system as a whole, while also addressing specific issues impacting multiple stakeholders.

A transportation vision and system that incorporates matatus and considers the networks built into the matatu industry can help facilitate a smooth reform process. Through education campaigns, increased oversight and data collection, and greater networking, the creation of a comprehensive transport system for Nairobi can come into fruition. This is especially critical if the city aspires to effectively address the multitude of issues caused by and associated with rapid urbanization. To do this, it is necessary to understand the various networks and industries that comprise the current transit system. Understanding the network that encapsulates the matatu industry by creating a dialogue that can allow the industry to play a continued role in the transit sector is an important step in creating a metropolitan transport system that integrates rather than alienates the matatu industry.

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Appendix

Description of Stakeholders in Matatu Industry

Matatu Owners
With the high demand for transport in the Nairobi Metropolitan Area, the matatu industry presents an opportunity for financial gain. The industry attracts lower- to middle-class individuals, as well as affluent community members (Khaeysi 1999). Many of the owners are educated in the fields of banking, accountancy and teaching and have hands-on experience working in the matatu industry, but there are also many absentee owners who are less informed about current laws and regulations pertaining to matatus, such as the Michuki Rules. As observed in one study, absentee matatu owners are often “not conversant with traffic laws and customer care…” (Chitere and Kibua 2004). While it is true the matatu crews are directly responsible for following the traffic laws and customer care, it is important that all matatu owners are aware of current traffic laws and legal notices. Failure to acknowledge such laws and consider the importance customer care reinforces the perception that many matatu owners are concerned more with profit maximization than providing an attractive transportation service. It is worth noting that during many of my interviews, it was implied that many matatu owners were also involved in politics or held political office. The combination of politicians/absentee matatu owners is one that raises questions about conflicting interests, as many claim that politicians who are themselves stakeholders within the industry will not improve the regulations of the matatu industry, as increased regulation may impact their revenues.

Matatu Operators
The matatu operators are comprised of drivers and conductors. Some drivers also own their own vehicles, but this is not as common. To become a public service vehicle driver, Kenyan law requires the driver to be 24 years old, have a PSV specific drivers license, and obtain a certificate of good conduct issued by the Police Department indicating no criminal record. There are no official requirements to become a conductor.

Each matatu requires a crew of two: one driver and one conductor. The driver navigates the route between terminals and the conductor focuses on collecting passengers, announcing the route and collecting fares. While daily fares vary on route and weather, which directly impact the wage, overall, the operators do not make a great deal of money, even though the owners do. The operators do not receive benefits, and basic employment policy in Kenya does not cover matatu workers (Chitere 2004). However, it has been documented that some matatu employers do provide some benefits.

The Commuters and the Community
Those who cannot afford to purchase a private vehicle or cannot reach their destination by foot use matatus. People take matatus to and from work and to and from school. Given that so many commuters use matatus, the behavior of matatu drivers and the risk associated with riding in a matatu impacts everyone in the community. Passengers are exposed to a plethora of interconnected problems. A study by Katumanga and Cliffe (2005) found that in Nairobi, a “quarter of the 10,000 matatus can be expected to be held up in any one year” (Katumanga and Cliffe 2005). Exposure to violence due to gangs like the Mungiki also impact commuter’s lives. When the Mungiki decide to make a political point, it will often be made through matatu strikes, which will basically shut down the entire metropolitan area.

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8 Matatus are considered public service vehicles by the Government of Kenya despite being privately owned.
The interior of a matatu has been described as “a close environment, a place of vulnerability; it is public, crowded and devoid of private space…passengers are ‘captive passengers’ ” (Mungai and Samper 2006). While there are no available or accessible statistics for the number of people robbed, harassed and abused, the numerous personal accounts and the consistency of stories in the local newspapers suggest that these are not uncommon occurrences when riding in an over-crowded matatu. Some matatus have televisions in them that play inappropriate and offensive videos, which can make passengers uncomfortable (Personal Interview, 2007). With passengers under such duress for long periods of time in the morning, only to face the same situation in the evening, unnecessary stress is placed on the commuters.

The entire community that comprises the Nairobi Metropolitan Area is part of the community that is directly impacted by the matatu industry. This community includes people who live, work, or go to school in the area as well as those who visit Nairobi for business or pleasure. One of Kenya’s main industries is tourism. Nairobi is the starting point for many safaris, which provides the city a steady stream of visitors, which could translate into economic opportunity for hotels, shops, markets, and restaurants. As a result, the hectic and intimidating matatu industry plays an important role in the basic mobility of the greater Nairobi community.

Regulators
There are various authorities and regulators responsible for creating frameworks, guidelines and parameters for the matatu industry as well as the transport industry. This division among institutions increases confusion among all stakeholders and poses a major challenge to regulating transportation in the NMA. Ministries as well as non-government organizations help formulate and implement policy. On the national level, responsibility is divided among many government institutions, including the Ministry of Transport, The Ministry of Local Government and the Kenya Roads Board. On the municipal level, the Nairobi City Council (NCC) responsible for providing public transportation services but works with private companies to help provide transport services that it cannot provide itself (KIPPRA 2005). Operating within the Ministry of Transport and Communication is the Transport Licensing Board (TLB). The TLB is responsible for allocating licenses and routes to all public service vehicles and is one of the most important agencies for the matatu industry as it legally dictates if and where the matatu can operate.

Working with the government agencies are various non-governmental agencies and lobbyist groups. The Matatu Welfare Association (MWA) and the Matatu Owners Association (MOA) are the primary groups for the matatu industry, focusing on representing the interests of the owners. They both represent the interests of matatu owners and give the owners a forum in which to discuss relevant issues that affect them within the matatu and transport industry (Personal Interview, 2007). They also act as the liaison between the owners and the government. The SACCOs are an important regulator in the matatu industry as it is important for most owners to join a SACCO, mostly for protection from the Mungiki. The SACCOs also provide organization to the industry and a forum for discussion of issues in the matatu industry. SACCOs, which are the same as route associations, are directly linked to the operating route. For example, the Thika Road SACCO operates along Thika Road. It is unclear how many SACCOs there are in the NMA or how many members belong to each SACCO. What is clear is that the SACCOs are considerably more powerful than other matatu regulators such as the MOA or MWA, for a variety of

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9 It has been noted that the MWA and the MOA often have an adversarial relationship, despite representing the same interests. There was also a discussion of the two groups merging in 2007, but the talks to proceed with this initiative have been discontinued.
reasons. A main reason is that MWA and the MOA have an adversarial relationship, despite representing the same interests. There was also a discussion of the two groups merging in 2007 but the talks to proceed with this initiative have been discontinued. In the end, this has weakened their power within the matatu industry. Matatu owners also do not see the immediate benefit of joining the MWA or MOA, especially considering that the SACCOs have been historically better organized and better financed (Chitere and Kibua 2004)

Despite not being a legally recognized organization, the Mungiki is a main player in the regulation of many public services, especially the matatu industry. In my interviews, the Mungiki has been portrayed as a cartel in the transport industry. The Mungiki have taken over many transportation routes and termini, often using violence, and then force those who operate these routes and termini to pay for “protection”, from the Mungiki. A study by Katumanga and Cliffe (2005) claims that by 2001, the Mungiki had taken over various routes while the TLB “sat on the fence and failed to support the Matatu Welfare Association’s demand that they keep out. The Government in most cases remained a bystander as these pro-opposition groups fought for supremacy, the police seemingly unable to contain their activities” (Katumanga and Cliffe 2005). Fighting between the Mungiki and other stakeholders in the matatu industry has created an extremely violent environment where failure to comply with the demands can result in violent and physical assaults and even loss of life. The government’s difficulty in addressing the threat of the Mungiki has led to a proliferation of violence at the hands of the Mungiki, although it is worth noting that the government has issued some warnings to the Mungiki regarding their illegal and violent behavior.

Matatu Support Industry
While the matatu owners and the crew have the most direct role within the matatu industry, in order to remain operational, the matatu industry has an extensive support system. Businesses working with the matatu industry include insurance firms, motor vehicle body builders, vehicle assemblers, vehicle importers, garages, petrol stations, driving schools and commercial banks/money lenders (Khayesi 1999), mechanics and spare parts dealers (Chitere 2004). The stage workers also play an important role in the matatu industry. The stage workers are hired by the matatu owners and the SACCOs to work at the matatu ranks by directing commuters to the proper matatu. They help add some organization to the ranks as the stage workers usher commuters to their matatus (Personal Interview, 2007)