

PUBLIC ROAD TRANSPORT SERVICES IN THE CITY OF NAIROBI, KENYA: A CASE STUDY OF THE POTENTIAL FOR THEIR CONVERSION INTO A HYBRID TRANSPORT MODE

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ABSTRACT

Public service transport in the city of Nairobi is operated by a few bus companies and the paratransit matatus. Because of the many problems associated with the paratransit mode, especially a high rate of road crashes, the draft Integrated National Transport Policy recommended the need: "To concession routes to SACCOs and bus companies capable of operating them efficiently and in affordable and safe manner".

This paper examines transport services with emphasis on those provided by PSVs on Thika Road. Information was gathered from key informants who included, directors of the Matatu Owners Association and Kenya Bus Services, route managers and crew.

It was found that some form of hybrid mode of transport already exists in the form of paratransit matatus and larger buses operated by bus companies with potential for being strengthened into an effective hybrid mode comprising BRT and some paratransit PSVs.

1 BACKGROUND

The hybrid system of public road transport comprises complementary operations of Bus Rapid Transport (BRT) and the paratransit modes. Such hybrid services have existed in the city of Nairobi between bus companies and paratransit matatus. BRT which refers to a formal mode of transport operated by established firm(s) using large buses and trams on dedicated bus lanes, offboard fare payments and limited number of stops has not yet been introduced in City of Nairobi. Paratransit is an informal mode which uses midi-buses and vans managed by individuals and various types of groups such as Savings and Credit Societies (SACCOs) and route associations.

The draft Integrated National Transport Policy (RoK, INTP) formulated in 2003 recognized the fact that public road transport services were dominated by the paratransit mode, matatu, with a large number of smaller (14 seater) occupancy vehicles. It, among other things, required a shift from the smaller to high occupancy vehicles which were more economical and able to reduce congestion and the problem of reckless driving that

worsened road safety in the city. The policy also required redesigning the urban traffic flows to create infrastructure for the exclusive use of public transport vehicles and concessioning or contracting of routes to established firms on a competitive basis (RoKINTP, 2003). These requirements are to be implemented by the National Transport and Safety Authority (NTSA) whose bill is awaiting enactment by Parliament.

In 2008, the Kenya government commissioned a study to assess the potential for introduction of the Bus Rapid Transport (BRT) mode in the city of Nairobi (UATP, 2008). The study made proposals for introduction of the mode but have not yet been adopted. The Ministry of Nairobi Metropolitan has also formulated its vision but has not yet come up with clear proposals for introduction of the BRT system.

However, Graeff (n.d.) in her recent study, recommended the need for starting of the BRT system to help meet the city's growing demand for transport services, but cautioned that the system needed to be carefully thought out owing to its likely resistance by the paratransit operators.

Nairobi is the capital city of Kenya and in effect houses government ministries and diplomatic offices. It is also a commercial, industrial, tourist and communications centre of the Eastern African region and hosts many international agencies serving the region and several United Nations bodies.

The city's population which was 350,000 inhabitants in 1963 rose to 0.83 m, 1.3 m, 2.2, 3.2 m and 3.8 m in 1979, 1989, 1999, 2005 and 2009, respectively (Kenya Population Census, CBS).

The city is served by two main types of transport operators which are buses and matatus. The origins of buses is traced to the Kenya Bus Services which was established in the city in 1934 and granted a monopoly of public transport service by the City Council in 1966. The company was the sole operator of bus transport and used high capacity vehicles which included double deckers (Manundu, Kapila and Lamba, 1982). In 2003, the company launched a premium midi-bus called Metro Shuttle which served high and medium income areas in Nairobi.

The company developed and coded its routes which cut across the city and served low and medium income estates where Africans lived (McCormick, et al, 20 11).

Between 2003 to 2006, KBS faced financial difficulties which made it difficult for it to meet costs of compliance with the new legal requirements which included banning of standing passengers in bigger buses.

The problems led to evolution of KBS into a franchising and management company namely Kenya Bus Services Management (KBSM) established in June 2006 to take over the operations of KBS. In July, 2006, the first batch of franchisees buses were operated in the new KBSM franchising arrangement. By 2008, KBSM was operating 285 buses from 175 investors with nearly 1,050 staff transporting 2.9 million passengers a month (UATP, 2008).

In 1986, the government started operating the Nyayo Bus Services Corporation, a parastatal to provide public transport in Nairobi. The parastatal was operated by the National Youth Service aimed at creating jobs for youth trainees and phasing out matatus. The corporation charged lower fares than the KBS because of using labour of the National Youth Service trainees and relying on subsidized fuel. Similarly, the corporation could easily import spare parts for the buses at a time when there were a lot of foreign exchange restrictions. Despite these advantages, the corporation was wound up in 1992 owing to mismanagement.

Since 2002 other private bus companies such as City Hopper and Double-M have entered the market.

The second type of vehicles are matatus and are the most common form of transport and are vans and mini-buses with seating capacity of up to 25 passengers. They use the same routes as the bus companies, but their fares and stages are not fixed (UATP, 2008).

Matatus started operating in Nairobi in late 1950s as illegal commercial entities alongside the larger transport operator, KBS. They were officially recognized in 1973 and by 2008 they numbered about 15,000 and accounted for 75 per cent of the public transport modal split and operated on 125 routes within the city (TLB, PersComm., 2011).

This study examines potential for developing a hybrid system based on co-existence of both the large companies up-graded into BRT and the paratransit mode, matatus with emphasis on one of the city's largest corridors, Thika Road.

The road is a 43 kms stretch from the city of Nairobi to Thika town and to other towns in the northern and north eastern parts of Kenya (RoK, MoRPW, 2007). The road which is of economic interest to Eastern Africa countries is part of the Trans-African highway running from Cape Town to Cairo. In 2007, the Government of Kenya with assistance from development partners set out to improve the Nairobi-Thika Road by constructing and upgrading it to 8 main and 4 side lanes.

A feasibility study and engineering design was commissioned by the Kenya Government in 2007(RoK, MoRPW, 2007) and its construction started in 2009.

Major commercial centres found along the road are Kasarani, Githurai, Ruiru and Juja. Within the city, the road has been extended to Uhuru highway.

1.2 Objectives of this study

Main objective: To assess potential for strengthening the existing bus and paratransit operations into an effective hybrid public road transport service in the city of Nairobi.

Specific Objectives:

- a. To examine characteristics of the main corridor, Thika road, its sub-corridors and feeder roads in terms of routes, number of PSVs, Savings and Credit Cooperative Societies (SACCOs) and companies operating on the corridor.
- b. To find out the characteristics of the operators and crew, routes, number of vehicles owned and whether operated on individual or pool basis and the SACCOs and companies to which they are affiliated.
- c. To find out the level of awareness of the concessioning policy, what it means, its advantages and problems and criteria for effecting it.
- d. To find out the extent to which Thika Road has capacity to support the hybrid transport system.

1.3 Rationale for the study

The study is justified by the rapid growth in the population of the city of Nairobi coupled with its rapid expansion in the form of new estates and commercial centres. It is further justified by global trends relating to unrestricted working and business hours. Both call for strengthening of the city's public transport services to facilitate movement of people from one part to the other.

2 CONCEPTUAL FRAMEWORK

PSVs are commercial enterprises operated either by individual or group investors. Moulick, Basu and Patel (1978) define an entrepreneur as one who takes initiative in husbanding resources and is concerned with expansion and growth of his/her enterprise by being innovative and taking risks. This definition implies that investors in PSVs are entrepreneurs and that their better organization would, among other things, ensure effective services through hire of better qualified workers, training of the workers and keeping them updated about changing conditions of their work, providing attractive and competitive remuneration packages and striving to make profits in their operations.

3 METHODS OF STUDY

Eight routes operating on the main Thika corridor and sub-corridors were identified. About 1 to 2 key informants who were either a driver or conductor were purposively selected from each of the routes (total 14). Eight (8) other informants were purposively chosen and included 2 Matatu Owners Association directors, one KBS director, and officials from the Transport Licensing Board (TLB), Ministry of Transport (MoT) and Nairobi City Council (NCC). A total of 22 informants were selected and interviewed using an interview guide. Information was collected on the characteristics of the corridors and sub-corridors as well as characteristics of the respondents and their awareness and views on BRT using an interview guide.

4.0 RESULTS OF THE STUDY

4.1 Characteristics of Corridors and Sub-Corridors with Emphasis on Thika Road

The first objective of this study was: To examine the characteristics of the main corridor, Thika road, its sub-corridors and feeder roads in terms of their routes, saccos and companies and number of PSVs.

Corridors and sub-corridors: Seven main corridors lead to and from the city of Nairobi's central Business District which are Mombasa Road, Waiyaki Way, Thika Road, Langata Road, Ngong Road, Jogoo Road and Banana Road (RoK, MoRPW, 2007) (Table 1).

Each of these corridors is joined by several sub-corridors. For example, Thika Road is served by Muthaiga-Kiambu, General Service Unit (GSU)-Kariobangi, Roysambu-Warren, Roysambu-Kahawa West and Githurai to Kimbo. There are also routes based on the outskirts which feed into the main corridor such as Kahawa Sukari to Mwhiko, Garden estate to Thome and GSU to Kariobangi Round about.

In addition Thika Road is plied by a large number of long distance fleets to towns on the northern part of the city including Murang'a, Nyeri, Embu, Nyahururu, Mwingi, Garissa and Isiolo.

Routes: Nine routes operating on the main Thika road corridor and adjoining sub-corridors were identified. While some such as Thika-Nairobi, Ruiru-Nairobi and KahawaWest-Nairobi are much older having been started in the 1970s and 1980s, others such as Kenyatta University (KU)-Nairobi and Ngumba-Nairobi (Route No. 43) are much recent having been started in the late 1990s while others such as Thome and 17BMwiki-Nairobi being even newer having been started in 2002 and 2008, respectively.

Route Management: Nearly all the routes report being managed by committees chosen from among association vehicle owner members. Again the older routes such as 237 started their committees much earlier.

Associations: These are usually named by the destinations of the routes and are more on busier routes with more vehicle fleets and commuters. Most of the SACCOs/companies were started in 2011 following a directive by the TLB that such associations and companies be started. However, a number of those on older routes such as Chania Travellers on Route 237 were started much earlier.

Asked what benefits, the associations provided to their members, 5 of the Key Informants (KIs) mentioned loans, 2 mentioned bonus/profits from pooled fleets while another 2 reported termini parking. Other benefits were, financial assistance for members facing court cases, restricts non-members from entering the route, helps in cases of police harassment, provides insurance cover and provides city council parking tickets each mentioned by one respondent.

The problems reported by the Key Informants from the SACCOs/Companies were: High competition which affected fares (operators seek to out-do each other in their operations) mentioned by 5 respondents and disagreements among sacco members, harassment by city council, lack of permanent termini, embezzlement of members' deposits and favouritism in giving loans were each mentioned by one respondent.

PSV Vehicles: The 14 seater Nissan vans dominate most of the routes although there is a growing number of midi-buses (25-43 seaters) as shown in Table 1. The number of midi-buses was much lower some 10 years back and may have started increasing following the draft Integrated National Transport Policy (INTP) requirement for shifting from low to high occupancy vehicles.

The total number of vehicles on each route is high, for example, Kahawa West with 533, Baba Dogo with 300 and Mwiki with 217.

Termini: There being no designated Bus park this large number of vehicles mean congestion since all of them terminate in the CBD. Consequently Globe Round-about Bus Park was developed in 2007 as terminus for most of these vehicles that were entering the city from its northern part (UATP, 2008). Those entering the city from the eastern part through Racecourse Road had no designated termini and therefore relied on street parking.

4.2 Characteristics of the Key Informants

Our second objective was to find out the characteristics of the operators and crew, routes they operate on, number of vehicles they own, the SACCOs and companies they were affiliated to or worked for and whether they operated on individual or pooled basis.

Table 2 shows the routes respondents operate/work on. In terms of their characteristics, most of them were middle aged and had worked in or owned vehicles for more than 10 years. The vehicles they worked in or owned were in a majority of cases small 14 seaters. Those affiliated to SACCOs tended to operate as individuals while those in companies tended to pool operations.

Problems mentioned by the three categories of respondents were: Traffic police and city council harassment, high cost of maintenance and operations, harassment by cartels and traffic jams. In addition, drivers and conductors also mentioned being abused by passengers and poor roads.

4.3 Level of Awareness of the Concessioning Policy, its Advantages and Criteria to be Used

The third objective was: "To find out the level of awareness of the KIs about the concessioning policy, what it meant, its advantages and problems and criteria for effecting it". A concession is the grant of exclusive privileges (such as to be the only seller of a good or service) by a government authority or by the owner of a property (such as an airport, amusement park, hotel) to a grantee. Also called a concessionaire, the grantee carries out a commercial undertaking and pays a rent or a certain percentage of the sales or earnings to the grantor (www.businessdictionary.com).

Awareness of the concessioning policy: Asked if they had heard of the policy about concessioning of routes to private operators, all of the respondents answered in the affirmative. When further asked to indicate what the concessioning policy was all about, only 8 of the respondents (5 managers and 3 conductors) responded correctly that the government would contract SACCOs/companies to operate specified routes. Majority of the respondents, especially drivers thought that the policy was about requiring all operators to join and operate in SACCOs and companies.

Advantages of the policy: Of the 8 respondents who were aware of the concessioning policy, most (7) mentioned removal of cartels and corruption, while improved income to investors and restoration of order and discipline were each mentioned by 3 of the respondents. Other advantages such as comfort of commuters, reduction of carnage, better management by big companies, getting rid of matatu madness, predictable fares, clean environment and time saving were each mentioned by one KI.

Problems of the policy: The respondents were further asked what problems (if any) the concessioning policy would bring? Of the problems mentioned, loss of jobs (4) and monopoly by the contracted SACCOs and companies (3) were the most mentioned. Other problems mentioned were, many investors will be kicked out or forced to join larger contracted SACCOs/companies, mistreatment or exploitation by the big contracted SACCOs/companies, encourage monopoly, cartels which are registering as SACCOs might be awarded tenders owing to corruption, increase in cost of business and overspeeding leading to accidents and fatalities.

Overall, the number of responses in favour of the concessioning system were far higher than those against it.

Criteria to be used in selecting SACCOs/companies: Asked what criteria needed to be used in the concessioning to ensure success of the hybrid system, the 8 respondents mentioned performance of SACCOs/companies as the main criterion. The SACCOs/companies were to be assessed based on the number of vehicles (at least 30) which would be relatively new, possession of garage/depot for servicing the vehicles, customer charter, training of workers, insurance cover, financiers and maintenance of vehicles. Other criteria were: Need for establishment of an inclusive committee/authority to vet applicants (3); holding of stakeholders' meeting to sensitize them about the policy; use of intelligence/Criminal Investigation Department (CID) to vet applicants, secret ballot; SACCOs with constitution; first come first served and giving of priority to those operating on a route being tendered each of which was mentioned by one KI.

One informant (M3) put it:

“Institutional framework has to be put in place. There is need for establishment of a transport commission and within it create a roads transport authority and a metropolitan authority to regulate public transport in cities...Also create county and regional authorities. The authorities must be supported by vehicle standards, driving schools and vehicle licensing agencies and a transport institute”.

The informant (M3) further noted that:

“There will be need to create different levels of operators (e.g., three) based on specified criteria. Those slotted in the first level would qualify for tendering services on the main corridor. Those in the second category would qualify for sub-corridors while those in the third would qualify for feeder roads”.

The institutional framework is the NTSA which will also have branches in the counties.

4.4 Road infrastructure

Thika Road is being expanded and up-graded to twelve lanes which will readily accommodate the BRT system. Similar expansion of other corridors is planned or underway.

5. CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

Historically, the City of Nairobi's public road transport was operated by a monopoly company, the KBS with larger buses some of which were double-deckers. From late 1950s and especially from the mid- 1970s when matatu operations were legalized, a hybrid system came into being and continues to-date. The main challenge has been the disorderliness of the paratransit mode which has led to ills such as reckless driving and associated road crashes, injuries and fatalities. There is, however, potential for the existing hybrid arrangement to be strengthened and made more efficient through introduction of the BRT system on the main corridor and sub-corridors thereby leaving the paratransit mode to operate on feeder roads.

5.2 Recommendations

a. A form of hybrid system operates in the city of Nairobi in the form of a few large bus companies that co-exist with the paratransit matatu. The Bus as well as the paratransit services will need to be gradually up-graded to the level found in cities where such hybrid systems exist.

b. The National Transport and Safety Authority (NTSA) will need to carry out awareness creation about concessioning policy prior to its adoption owing to widespread lack of understanding by managers, owners and workers such as drivers.

c. The NTSA will also need to be mandated to develop clear criteria for vetting applicants who would be graded according to their strength and required to tender for different levels of corridors.

d. The NTSA will also need to ensure up-grading of the road infrastructure to a level expected for BRT system. For example, Thika Highway which is currently being up-graded to 12 lanes with designated stops will readily accommodate the BRT system.

e. The routes that were developed and coded by KBS still exist and have been increased considerably over the years owing to starting of new estates and increase in the PSVs. The routes are used both by the bus companies and the paratransit and will continue to be used by the improved hybrid system.

f. Most SACCOs and some of the companies are new having been formed in 2011 following a government directive that only operators who are affiliated to such organizations were to be provided an operating license. Except for the older and well-established companies and SACCOs, most of the new ones may not qualify to be contracted to operate corridors and sub-corridors. The criteria developed by the NTSA would need to be used to categorize and vet applicants for various routes.

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Annex 1

Table 1: Routes based on Thika Road, their Origins, Sources, Termini and Number of Vehicles

Route	Year started	Source	Termini	No. of PSVs			Saccos/Companies
				14 seaters	Midi- and large Buses	Total	
237	Early 1970s	Lithuli Avenue, CBD	Thika Town	417	37	454	-Chania Travellers -Thika Falls -Timeline
145	Early 1970s	Munyu Road, CBD	Ruiru Town	80	44	124	-Runa Nagiru -Rukine -Loffa Travels -Banana Hills Sacco
43	1997	Central Bus Station	Ngumba	42	--	42	
17B	2002	Central Bus Station	Mwiki	103	114	217	
25	1991	Timborua Road, CBD	Baba Dogo	300	33	333	
53	2008	Fire Station lane, CBD	Thome-marurui	35	1	36	
44	Early 1980s	Mondlane street, CBD	Kahawa west	500	33	533	
45	1998	Tom Mboya Street	Kenyatta University (KU)	96	1	97	

*Other Routes terminating at the Thika corridor were: GSU-Kahawa West, GSU-Juja-Ruiru-Thika, GSU-Kariobangi Round-about and kahawasukari-Mwihoko

Annex 2

Table 2: Characteristics of the Respondents

Managers/ Owners	Characteristics							
	Route	Age	Gender	Occupation	Length of Time owned/ Work in matatu	No. of Matatus owned	Name of Company/ Sacco	Nature of operations
M1		65	M	Manager/ Owner	13	7 (33-37 seater)	-MOA compliant -105 sacco	-Pool -Individual
M2		38	M	Manager/ Owner	10	-4 (14 seater) -7 (33-37 seater)	-Jesma -MOA Compliant	-Individual -Pool
M3	45	58	M	Manager/ Owner	15	8 (51 seater)	Stirlinggrad Co	Pool
M4	55	M	M	Manager/ Owner	27	3 (26-51)	KBS	Pool
M5	237	41	M	Route manager	?	9 (51 seater)	- ChaniaTravellers sacco	Individual
M6	237	29	M	Route Manager	11	5 (25-43 seater)	BHMS Sacco	Individual
M7	237	31	M	Route Manager	7	9 (25-43 seater) 5 (51 seater)	Loffasacco	Individual
M8	237	39	M	Owner/ Driver	12	2 (14 seater)	ChaniaTravellers	Individual