

PARATRANSIT OPERATIONS IN NAIROBI: Development of their Routes and Termini

PRESTON CHITERE, DOROTHY MCCORMICK*, RISPER ORERO,
WINNIE MITULLAH*** and MARILYN OMMEH******

Institute for Development Studies, University of Nairobi, P O Box 30197-00100 Nairobi,
Kenya, dmccormick@uonbi.ac.ke

Department of Sociology, University of Nairobi, P O Box 30197-00100 Nairobi, Kenya,
pchitere@uonbi.ac.ke

**Institute for Development Studies, University of Nairobi, P O Box 30197-00100 Nairobi,
Kenya , rorero@yahoo.com

***Institute for Development Studies, University of Nairobi, P O Box 30197-00100 Nairobi,
Kenya

**** Institute for Development Studies, University of Nairobi, P O Box 30197-00100
Nairobi, Kenya , saramital@yahoo.com

ABSTRACT

Efficient and effective operations of the paratransit public transport services such as Matatus as businesses in the city of Nairobi depends on availability of adequate termini and routes with sufficient facilities and management services.

This study sought to find out whether the termini and routes in the city enabled efficient operations of matatus.

It was found that there were 34 termini, a few of which were authorized while a large number were located on the streets and lacked basic facilities such as toilets and water. There was congestion of matatus at the termini and on the routes which increased their operating costs.

To ensure efficient operations, the government should ensure transiting from low- to high-occupancy vehicles, concessioning of routes to well established operators and establishment of more termini on the city's outskirts.

1 BACKGROUND

Nairobi is Kenya's capital city and occupies an area of 695 sq kms. Of the country's population of 38, 610, 097 million, 3,138, 369 million reside in Nairobi (Kenya Census, 2009). There being no well-developed railway system, the city is served by Matatus which constitute the paratransit mode of transport both for passengers and goods. Currently, there are nearly 40,000 matatus in Kenya, 15,000 of which are based in Nairobi.

However, success of this paratransit mode depends on existence of well established termini and routes with adequate facilities and effective management. However, for the city of Nairobi, whereas the termini serve large numbers of Public service vehicles (PSVs), most of them are based on streets and lack adequate space and facilities. The routes

leading from the termini are congested and lead to waste of valuable business time and increase costs of operation of this transport mode.

To reduce these problems, the Government of Kenya (GoK) Integrated National Transport Policy (INTP) made several recommendations relating to public road transport (GoK, INTP, 2003). The first one was that the government in conjunction with local authorities would facilitate public-private partnership in the development and management of public transport termini on the edges of the Central Business District (CBD) to help reduce congestion. The second was that routes would be concessioned to corporates to help attain the goal of efficient, affordable, reliable and safe transport. The **concessioning** has not yet started owing partly to the fact that nearly 90 to 95 per cent of matatus are owned and operated by individuals and only in the remaining cases by saccos and corporates. Recently the Transport Licensing Board (TLB) in order to bring sanity to the matatu industry has made it a requirement that no matatu will be licensed without its owner being a member of an organization such as sacco, corporate or association (Daily Nation, 24 Jan, 2011, page 11). Other recommendations were that the government would ensure a shift from low to high occupancy vehicles, construct by-passes and major corridors leading to the city and discourage private cars parking within the CBD through higher parking fees.

In this study, we examine both termini and routes in Nairobi as some of the facilities that are key in effective and efficient management of the paratransit mode of transport in the city. The study is guided by two specific objectives which are to:

1. Examine termini used by paratransit transport in the city, their characteristics and potential for improvement.
2. Examine intra-city routes used by paratransit transport vehicles in the city, their characteristics and potential for improvement.

The study is justified by the country's national policy which seeks to create termini on the outskirts of the city so as to reduce traffic congestion within the CBD and to contract experienced firms to operate on the routes (GoK, INTP, 2003).

2 METHOD OF STUDY

The city of Nairobi has nearly 34 termini out of which 19 are for intra-city matatus although some of them are also plied by vehicles to the outskirts of the city. Effort was made to study nearly all the intra-city termini and 16 of them were selected. Where the termini had a committee, its chairperson or other leaders were identified and where there was no committee, other better informed persons familiar with the termini were identified.

There were nearly 102 intra city routes although there is a lot of overlap owing to the fact that some routes with the same destination originated from different parts of the city.

Two (2) to four (4) routes were purposively sampled out of the 16 selected termini (i.e., 40 routes) based largely on the willingness of route managers/inspectors and other better informed persons working at the routes to provide information needed by the study.

The better informed persons at both the termini and the routes were treated as Key Informants (KIs) and information was gathered from them through personal interviews using Information Sheets.

3 RESULTS OF THE STUDY

3.1 Termini

Termini are the parking places for matatus in the city centre. They appear to fall into two main types: Those that are designated by the Nairobi City Council (NCC) such as Muthurwa, Hakati, Railways, Old Machakos and Globe Round About; and undesignated types which are more numerous and which comprise of parking along streets or lanes or in the city estates.

Currently the city has 34 termini serving both intra-city, outskirts and long distance PSVs.

The termini conform to the colonial model of services that focused on the city centre—the city has no self-contained satellite communities with all facilities and services.

Between 2006 and 2009, major termini: Westlands, Globe, Hakati and Muthurwa and Railways were constructed and opened by the Ministry of Local Government (MoLG) and the Nairobi City Council (NCC). The termini were established to reduce congestion of vehicles within the CBD. Globe Round About served matatus entering the city from Thika, Hakati took care of those which formerly parked within the city on Tom Mboya Street, Railways took care of those entering from Haile Salasie Road. Muthurwa was constructed in 2006 in a section of the Kenya Railway estate neighbouring the NCCBD and was aimed at decongesting the CBD. It was to cater for all matatus entering the city from the eastlands part of the city.

Bus Station termini was improved and is used by different bus companies some of which ply the same routes, for example, City Hoppa and Kenya Bus services (KBS) which go to Kibera, Kawangware, Kenyatta and Riruta.

A number of termini such as Parklands and GSU/Kariobangi serve matatus operating on the outskirts without coming to the city. One satellite terminus at All Sopps serves two routes -Dandora and Rounda.

Characteristics of termini Sampled

Table 1 shows that each of the terminus sampled has a number of routes and that each of the routes has a large number of vehicles. Some of the characteristics presented in Table 1 as well as others are outlined below.

Management of the termini: Asked who managed the termini, half of the KIs noted that it was done by the NCC, 25 percent said that it was done by Saccos and company committee members and by groups/cartels, property owner, route managers/clerks and NCC in collaboration with saccos each mentioned by 6.3 per cent of the KIs.

Location of the termini: Most of the termini are found on the eastern side of the city with Tom Mboya Street as the dividing line. The NCC by-laws forbid matatus from passing through the western side of the Central business district (CBD) and only permit corporately operated mini-buses to do so.

Table 1: Characteristics of the Termini sampled

Termini	Number of Routes	Estimated number of Vehicles Served	Destinations	Type
Old Nation Round About	5	430	Banana, Ruaraka, Pangani, MP Shah, etc.	Intra-city
Muthurwa	9	540	Kayole, Lunga-Lunga, Industrial area, Umoja, Embakasi, etc.	Intra-city
Railways	9	1,865	Kikuyu, Ndonyo, Rongai-Kiserian, Bomas	Intra-city and outskirts
Hakati	8	583	South C, South B, Nairobi West, Langata, High rise, etc	Intra-city
Bus Station	10	260	Kawangware, Ngumo, Kenyatta, Kibera, Riruta, etc	Intra-city
Koja	4	130	Limuru, Ngecha, Njambini	Outskirts
Tom Mboya	6	275	Kikuyu, Regen, Kahawa west, Babadogo, Mlango Kumbwa	Intra-city and Outskirts
Odeon/Latema Road	12	1,227	AgaKhan, Rauka, Pangani, Mathare North, Kinoo, etc.	Intra-city and Outskirts
St Peters/Jeshi/ Uyoma lane	1	90	Ngumo	Intra-city
Old Machakos	6	90	Machakos, Wote, Mtito Andei, Tala, Mbiuni, Kibwezi	Outskirts
Ronald Ngala	5	458	Thika, Ruiru Kenyatta University, Dandora, Huruma, Kariobangi and Umoja	Intra-city and Outskirts
Tusker	4	186	Thika, Ndunyu Saduk, Matu, Igekero	Outskirts
Mfangano Lane	3	80	Regen, Kinoo, Thika, Eldoret, etc.	Intra-city and outskirts
Accra Road	20	1,580	Savanna, Tena, Embakasi, Nakuru, Karatina, etc	Intra-city and outskirts
All Sopps	2	48	Dandora, Rounda	Intra-city
Lithuli Avenue /Sheikh Karume Rd	2	184	Gikomba, Eastleigh	Intra-city

Amenities at the termini: Table 2 shows that whereas there were some amenities such as shops, kiosks, public/commercial toilets, shelters and benches and water at the larger designated termini such as Railways, Muthurwa and Hakati, the amenities were few or totally lacking in the undesignated street termini such as Ronald Ngala and Mfangano lane. In one or two instances there would be zebra crossing.

Table 2: Amenities at the Termini sampled

Termini	Amenities					
	Kiosks/Vendors	Public toilets	Passenger Shelters	Benches	Connections (footbridges/tunnels, etc.)	Water
Railways	20	-One public toilet -3 private mobile toilets	18	36	None	Available
Muthurwa	Adjacent market	5 public/commercial	9	9 per bay	On footbridge	Tap water available
Hakati	Shops, pubs, Supermarket	One public/commercial	16	32	None	Tap water available
Bus Station	Stalls, Kiosks, restaurants	One	6	9	None	Available
Koja Mosque	Retail shops	One public/commercial	None	None	None	None
Old Nation Round About	Kiosks, vendors, shops	One	4	4	None	None
Odeon/Latema Rd	Shops, stalls	One	None	None	None	None
Lithuli Avenue/Sheikh Karume Rd	Shops, stalls	Nearby bars	None	None	None	None
Old Machakos	Restaurants, Electronics, Music stores, Retail shops	One public/commercial	Some	Some	None	Available
St Peters/Jeshi, Uyoma lane	Vendors, Kiosks, Shops	None	None	None	Zebra crossing	None
Tom Mboya, Fire Stn	Vendors, Shops	-None	None	None	None	None
Accra Rd	Shops, stalls	One	None	None	None	None
Gill house	Shops, Vendors	None	None	None	None	None
Ronald Ngala	Shops, Supermarkets, Vendors	None	None	None	Zebra crossing	None
Tusker	Shops, Vendors	One public/commercial	None	None	None	None
Mfangano Lane	Groceries, Kiosks Vendors	None	None	None	None	None
All Sopps	Vendors, stalls	None	None	None	None	None

Physical conditions of the termini: Muthurwa and Railways termini were in poor condition - both the entry and exit had huge potholes and there was general neglect by the NCC (Chitere, 2010). For Muthurwa, entry and exit routes were inadequate and not able to accommodate the large number of PSVs that used them. There was congestion at entry and exit points and this forced some matatus not to use the terminus or to steal into the city centre. Parking bays at the terminus were not large enough to accommodate mini buses. The terminus' position was worsening owing to its having been hurriedly constructed on the eve of the 2007 elections and the fact that half of the park was constructed as a market whose businesses include vendors who were slowly encroaching into the PSV terminus.

Entry and exit to terminus: Asked about ease of entry to the termini, 56.3 per cent of the KIs said it was difficult owing to traffic jam, 25 per cent said it was easy owing to presence of police, 12.5 per cent said it was blocked by hardware and kiosks and 6.3 per cent said it was poor road with potholes. Identical responses were evident regarding exit from the termini—56.3 per cent said it was difficult owing to traffic jam and the remainder said it was easy owing to presence of traffic police.

Groups at termini: Asked about the types of groups found at the termini, half of the KIs mentioned Saccos, 43.7 per cent mentioned management companies such as Tulaga, City Hoppa, Kenya Bus Services and Double-M while the remainder mentioned illegal gangs such as Mungiki.

Problems of the termini: When asked what the problems of the termini were, 31.4 per cent out of 35 mentions pointed out NCC/police harassment, 14.3 per cent mentioned small terminus, 11.4 per cent mentioned traffic jam and an equal per cent mentioned lack of water, 38.6 per cent mentioned lack of public toilets and 5.7 per cent mentioned insecurity. Other mentions were harassment by bus operator, passengers not coming to bus station, potholed entry and exit, uncollected garbage, lack of terminus and indiscipline of drivers and conductors each mentioned by 2.9 per cent of the KI.

3.2 ROUTES

3.2.1 Sources and destinations of routes

Each terminus serves a number of routes (Table 1). For example, Hakati terminus serves 10 routes each with nearly 60 to 100 Public Service Vehicles (PSVs). At the terminus, the NCC has assigned a specific Bay at which its vehicles enter and exit.

PSVs are assigned to the route by the Transport Licensing Board (TLB). Each of the routes has a number of main and intermediate stages some of which have amenities such as shelters and benches for waiting commuters.

Some of the routes have multiple termini in that they target commuters going to the same destination but who originate from different parts of the city. For example, the Kenyatta University (KU) route originates from Globe, Timborua road and Ronald Ngala termini while Babadogo originates from Ronald Ngala and Globe termini.

Whereas in the past some of the routes such as 46 and 23 were used by the KBS to ply from the eastern end (Huruma estate) through the CBD to the western end (Kawangware), currently the routes have been split into two with some PSVs covering the eastern while others cover the western sides of the city. The same is also true of route number 23 and others which have also been split.

Eastleigh route No. 6/9 is circular without a termini in the city.

Estimated number of vehicles: The number of PSVs on any one route is relatively large (Table 3) and implicitly points to the problem of congestion given that most termini are based on the streets most of which are single lane or dual carriage ways. It also implies stiff competition between the PSVs and idle capacity during off-peak hours.

Seating capacity: Nearly 29.0 per cent of the routes are exclusively plied by the 14-seater Nissans while about 25 per cent rely on minibuses with 25-51 seating capacity (Table 3). The mini-buses ply routes leading to the more densely populated areas such as outerings,

Eastleigh, Buruburu, Dandora and Kariobangi North. The remainder are a mix of 14-seaters and mini-buses although Nissans dominate on most of the routes.

Overall while some 5 to 8 years ago, the matatu industry was dominated by the 14-seater Nissans, the situation is changing to high occupancy vehicles and this is in line with the Integrated National Transport Policy (2003) requirement that smaller PSVs be phased out in favour of larger ones.

Operators of the PSVs: Most of the PSVs are operated by employees—drivers and conductors assisted by stage clerks at the termini who may be employed by the owners or be part of a squad of such workers often found at various termini (Table 3). A few owners operate their own PSVs while saccos, associations and companies found on a number of routes operate some of the PSVs. A recent directive by the TLB that no individual owner will be licensed to operate a PSV unless he/she is a registered member of a sacco is likely to facilitate joining of the saccos by the investors.

Table 3: Selected Characteristics of Routes Sampled

Route Number	Destination	Estimated number of PSVs	Seating capacity of the PSVs	Number of PSVs and Type of Operator		
				Owners	Employees	Saccos/Associations/Companies
48	Kileleshwa	90	14			
30	Regen	20	14	1	19	
23	Westlands/Kangemi	190	14	10	180	
11A	Highridge	480	14			
106	Limuru	159	14 and 29-51			
25	Babadogo/lakisama	72	14 and 29-51	16	56	
29/30	Mathare North	65	14 and 25-51	10	55	
42	Dandora	64	14 and 25-51	5	125	
44	Zimmerman	140	14 and 29			
45	Kenyatta University	63	14			
49	Kasarani	61	14	9	52	
4/9	Eastleigh	187	25-29	62	70	
11 Hakati	South B	120	25-29 and 14			Saccos
118	Wangige	175	14 and 25	10	142	
8 Railways	Kibera	110	14 and 25			
4W	Wanyee-Satellite	77	29-51		Yes	
111 Bus Station	Ngong	95	29-51		11	84
102/2	Kikuyu-Ndonyo	400	14	100	100	200
110	Kitengela	611	14 and 25-			Associat

			51			ions
33	Embakasi Village	403	14 and 29	10	392	1
14	Makadara/Nairobi West	153	14	24		29 saccos
15	Kenyatta-Langata	53	14	7	12	32 saccos
24/111	Karen	70	14 and 56	20	22	34 saccos
125/126 Railways	Rongai-Kiserian	610	14 and 29			
100	Kiambu		14	40	101	109 saccos
53	Marurui-Thome	102	14	10	92	
32	Dandora	78	29-51	10	68	
58	Buruburu	60	25-29	1	40	2 saccos
58 Muthurwa	Buruburu-Mutindwa	87	25-33			
26	Kariobangi North	100	14 and 25			
10 Muthurwa	Maringo	40	25			
19/60	Kayole	550	14 and 25-51			All saccos
23	Outering	91	25-51	2	89	
34	Jomo Kenyatta Airport	40	29-51	20		20 companies
35/60	Umoja	50	14	15	35	
	Ruai-Jogoo road	100	14-41			
	Ruai-Kangudo Rd	15	25-29	8	107	
36 Dandora	25-33	80-100				
23	Outering-civil servants	59	25-51	45		14 companies
71	Donholm	71	14, 25-29	1		70 companies
69/73	Industrial area	30	14, 25	30		

Route management: When the 40 Key Informants were asked about who managed their routes, 50 per cent said it was done by route manager/inspector, 17.5 per cent said it was done by the chairman, 12.5 per cent said it was done by cartels/illegal gangs, 7.5 per cent mentioned group/saccos, 5 per cent mentioned management committee/Board and NCC while drivers/conductors and touts were mentioned by 2.5 per cent each.

Responsibilities of route managers: The responsibilities of the route managers were reported by the 40 KIs as including, supervision and maintenance of order in running of operations (47.5%), solving of disputes between drivers, conductors and other parties (27.5%), ensures queuing on first come first served principle at termini (32.5%), collects daily fees of Ksh. 200 (US\$ 2.5) from the PSVs (20%), ensures that clients are served and

are satisfied (15 %). Other responsibilities were: Regulates fares and ensures they are fair (7.5%), ensures no foreign matatus operate on their route (15%), attends meetings with NCC, the government and Matatu Owners Association on behalf of his/her route (12.5%), offers security to matatu operators (5%) and each of the remainder mentioned a responsibility which included, checking on workers, bailing workers when arrested by police or NCC askaris and ensuring adherence to traffic rules.

Steps for joining a route: The answers provided by the KIs to this question were that a PSV owner seeking to join a route will demonstrate that he/she has been authorized by the TLB to operate the vehicle on the route (52.5%), has to apply to management committee/board/sacco of the route (40%), has to pay entry fee to the group/sacco/cartel ranging from Ksh 3,000 (US\$ 38) to 70,000 (US\$ 875) (47.5%), has to agree to comply with route rules and regulations, e.g., pay daily parking charges (45%) and be authorized by NCC (25%).

Usually the TLB is expected to determine transport demand of a route and to allocate vehicles accordingly.

Problems of the routes: Asked about problems they experienced on their routes, majority (60%) of the KIs mentioned harassment by the traffic police/Rhino squad through arbitrary arrests, followed by harassment by NCC askaris (35%), traffic jams including those within termini (30%), limited space at termini/parking bays (20%), poor infrastructure at termini and stages (10%), cartels/illegal gangs (12.5%), high fuel prices (7.5%), loud music/hooting (7.5%), hiking of fares (7.5%). Other problems such as large numbers of touts, low remuneration of workers and lack of enough stages were each mentioned by a few KIs.

Attractions

Matatus on various routes employ different attractions which vary from the one to the other. The attractions that were commonly mentioned by the KIs were : Fare variations at peak and off-peak, rain season and traffic jams (85.0 %), music systems (37.5), Television (27.5 %), touting and telling passengers about fare (7.5 %) and model pimping, comfortable seats and fancy lights each mentioned by 5.0 per cent of the respondents. Other attractions that were each mentioned by 2.5 per cent of the respondents were attractive colour, keeping vehicle clean, dressing well, horn bill, loud music, hardwork and good customer service.

4 CONCLUSIONS

There are many termini and routes in Nairobi. Major termini such as Globe and Muthurwa were constructed based on the recommendations of the Integrated National Transport Policy report. The termini lack adequate facilities and services including effective management, their physical conditions are poor and they lack adequate entry and exit. Those based on streets equally lack basic facilities and services and contribute to congestion of the streets. These and other conditions of both the major and street-based termini do not facilitate effective operations of matatus as business.

Routes are equally many but congested given the large number of matatus and other vehicles plying them. Unlike in the past when important routes stretched from one end of the city to another, the routes have been split and this in effect has increased transport costs for passengers.

The on-going reforms in road transport including construction of main corridors and by-passes, shift from low to high occupancy PSVs as well as the envisaged contracting of corporates to operate specified routes will ensure better use of termini and routes. The recent requirement for all PSVs register with Saccos before being provided an operating license will lead to gradual growth of corporates or saccos that will be contracted to operate specified routes.

The transition from the currently individually operated to corporate operated PSVs may entail some PSVs plying from some end of the city to another and this may reduce the large number of termini currently found in the city.

There is also need for city planning to consider the notion of self-contained satellite centres to help reduce the currently high demand for travel to and from the CBD and beyond.

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