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Analysis of Boda-Boda Operations

Paratransit Modernization and Street Usage Study

Final Report



Credit: Melaine Freeman, Christian Science Monitor

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Executive Summary

The Greater Kampala Metropolitan Area (GKMA) area witnessed a considerable growth of boda-boda services in recent years in response to unmet demand by other paratransit modes and due to their comparative advantage in terms of speed, maneuverability and flexibility. Operating a boda-boda is also an easy way to get employment, even if only as a start for new arrivals to the GKMA.

At present, we estimate one-third of public transport trips in the GKMA to be boda-boda trips, while the minibus taxis dominate the remaining two-thirds of passenger trips. Traditional 'stage' services operate out of 976 stages, among which 583 have been or will be gazetted. New 'e-hailing' services are increasingly operated by tech-enabled companies.

Boda-Boda trips predominantly reach the final destination of the passenger and rarely transport the passenger to another mode of transport such as a taxi. Trips are generally not complementary to microbus taxi trips, but rather a direct competition: Boda-Boda flexibility, their ability to take the passengers to their final destination and beat congestion make it an attractive proposition for those who can afford them.

The analysis reveals there to be:

- ☐ An oversupply of Boda-Boda service providers, who populate the ubiquitously distributed stages.
- ☐ No clear interdependence between boda-boda services and microbus taxi services.

Boda Boda services are unlikely to eventually act as feeders to the proposed BRT.

Recommendations to improve the sector are proposed: (1) Managing entry through regulation; (2) spatially re-distributing service provision to manage current oversupply; and (3) collaborating with incumbent stage operators and e-hailers to improve service provision.



1. Introduction

This report forms a part of the paratransit and street usage study financed by AFD. While the original scope of this study was limited to minibus taxis, it was decided to broaden it to include motorcycle-taxis, known as “boda-bodas” in Uganda. In a context of increasing congestion and limited public transport options, boda-bodas play an increasingly important role in the urban mobility system. However, due to their highly informal nature and atomistic organisation, it is difficult to acquire reliable data on the services that they provide. As a result, there is a wide knowledge gap regarding the operational characteristics of this mode of transport. This work stream aims to fill this gap by collecting and analysing original data to better understand the role played by boda-bodas in GKMA’s transport system.

The Greater Kampala Metropolitan Area (GKMA) area witnessed a considerable growth of boda-boda services in recent years in response to unmet demand by other paratransit modes and due to their comparative advantage in terms of speed, maneuverability and flexibility. Operating a boda-boda is also an easy way to get employment, even if only as a start for new arrivals to the GKMA.

An attempt at formalizing the paratransit industry ought to be based on a thorough understanding of the current operational state of the paratransit network and its integration within wider reforms. This includes an understanding of the boda-bodas, and their impact on the minibus taxis and potential future Mass-Rapid Transit systems such as the planned Bus Rapid Transit (BRT) corridors.

This final report presents the results of the data collection and analysis exercises carried out as part of this workstream.

Purpose of the project

1.1

The analysis of the role, potential passenger demand, and capacity of all existing public transport modes is at the foundation of proper planning for a BRT system. Demand estimates are crucial for financial and passenger mode shift projections, which help determine the viability of the planned BRT.

The boda-bodas are a fast-emerging and indispensable sector in the public transport industry in the GKMA. This workstream aims to provide:

- System-level, spatial and temporal statistics on boda-boda operations in the GKMA and precisely along the BRT corridor.
- An assessment of passenger demand for boda-boda services along the BRT corridor.
- Qualitative insights to provide an in-depth understanding of the industry and boda-boda operations.

1.2

Scope of the project

The **spatial scope** of the Data Collection is the GKMA. The GKMA is within 20 km radius of the City Center. A detailed definition of the urban extent to be surveyed can be found in Appendix C Figure 5: Definition of Boundaries of the GKMA.

The **temporal conventions** used throughout this study are:

□ The morning peak period (MPP) is the time interval from 6:00 a.m. - 9:00 a.m.	OffP_1	5:00 a.m.	6:00 a.m.
	MPP	6:00 a.m.	9:00 a.m.
□ The evening peak period (EPP) is the time interval from 4:00 p.m. - 7:00 p.m.	OffP_2	9:00 a.m.	4:00 p.m.
	EPP	4:00 p.m.	7:00 p.m.
□ The off-peak period consists of three intervals: 5:00 a.m. – 6:00 a.m.	OffP_3	7:00 p.m.	11:00 p.m.

Table 1 Peak periods

2. Data Points

Boda-Boda Stages

2.1

KCCA has recently conducted a data collection campaign in March and April 2020 consisting of a comprehensive mapping of boda-boda stages in Kampala, excluding the future “boda-boda free zone”. A total of 976 stages were identified, among which 583 have been or will be gazetted. The mapping includes the capacity (number of vehicles) of each stage.

It is important to note however, that the mapping exercise excludes the boda-boda free zone and any stages outside of Kampala’s boundary. Thus, comparing this data against the BRT routes will be a partial exercise, seeing that the BRT extends a bit outside of Kampala’s boundary in the southern and north eastern routes (Zana & Kireka).

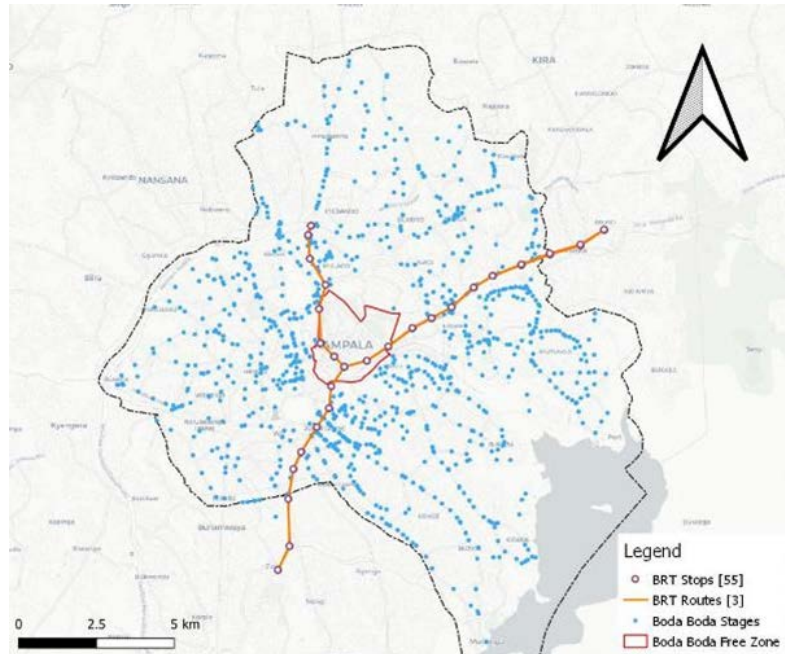


Figure 1 Boda-boda stages in Kampala and proposed BRT routes, source: KCCA

2.2

Focus Group Discussions

The purpose of this exercise was to gain field reconnaissance, introduce the study and obtain system-level information from boda-boda riders.

A total of five focus group discussions were conducted with the assistance of GLI in five different locations in contact with the BRT pilot corridor, as shown below.

Table 2 Focus Group Discussions

FGD	Number of participants	Location	Date
1	5	Central division - Kampala District	5/3/2020
2	4	Bombo Corridor - Kawempe division – Kampala District	5/3/2020
3	5	Jinja Corridor – Nakawa division – Kampala District	5/3/2020
4	5	Jinja Corridor – Kira Subcounty – Wakiso District	6/3/2020
5	5	Entebbe Corridor – Makindye Ssabagabo Subcounty – Wakiso District	6/3/2020
24 Total			

Each Focus Group Discussion (FGD) was comprised of 4-5 stage leaders participating and lasted for about one hour. The main themes discussed were (1) general demographic questions regarding the riders participating; (2) system-level information on the current state of the boda-boda industry, especially concerning the e-hailing boda-boda companies and the taxis; (3) operational choices of the riders' trips and finally; (4) the riders' perception and awareness of the BRT system (see Appendix A. Focus Group Discussion Template).

The reader is invited to take a look at the Focus Group Discussion Report written by the Consultant for a detailed account of the discussed themes found in Appendix 5.1. Some takeaways from the report include but are not limited to the following points:

- Although stage capacity can reach 80-85 members, the dynamic nature of boda-boda services and the flexibility given to the members explain that only a small number of members are present at any time of the day at the stage.
- A lack of centralization of the boda-boda industry is reported to be the reason for the penetration of the e-hailing companies, which are shifting the dynamics of the industry, by allowing the riders to operate without belonging to a stage and with a smaller fare than usual.
- A boda-boda rider need not be exclusively a stage member or a member of an e-hailing company but may operate on both modes in different times throughout the day as he sees fit.
- Respondents reported an average of 20 daily trips but mentioned that this number depends on the daily income (some riders may complete a mere 2 trips a day if these trips include carrying cargo or luggage outside the city center).
- Boda-Boda trips predominantly reach the final destination of the passenger and rarely transport the passenger to another mode of transport such as a taxi. A socioeconomic factor can interfere in the sense that the passengers who are requesting to be taken to taxi stages are poorer and (much fewer) than the others reaching their final destination.
- The majority of daily trips are trips originating from the stages as the stage is a marked reference point for both the riders and the passengers, providing security and consistency of service.
- Boda-boda riders do not perceive their services as complementing the taxi services but rather describe them as outcompeting them, especially in the middle of congestion in peak periods, due to their flexibility and their ability to take the passengers to their final destination.
- Most riders mentioned the poor road infrastructure making the implementation of the BRT difficult. They think, if implemented, it will create further congestion which will generate passenger demand for boda-bodas.

2.3

Corridor Counts

Via Manual Counts

The Consultant strategically selected ten critical points to conduct corridor counts along Jinja road, Entebbe road and Kampala road:

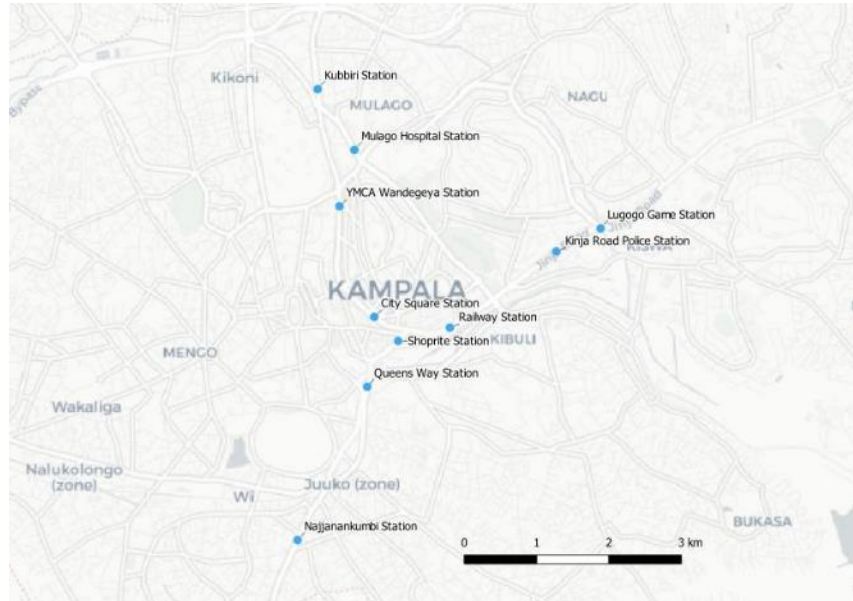


Figure 2 Section counts locations

The corridor counts are used to estimate the size of the boda-boda fleet and the daily passenger demand along the Pilot BRT corridor. The number of manual 1-hour corridor counts per time period is listed below:

Table 3 Manual Corridor Counts

Time period	1-hour counts
MPP	20
EPP	16
Off-peak	43
Total:	79

Based on the average of vehicle counts across distinct time periods and across the total of 79 section counts, modal shares in the stated time period are estimated as follows:

- ☐ MPP: For each bus passenger, there are 7 taxi passengers and 3 boda-boda passengers.
- ☐ EPP: For each bus passenger, there are 11 taxi passengers and 6 boda-boda passengers.
- ☐ Across the day: For each bus passenger, there are 10 taxi passengers and 6 boda-boda passengers.

Roughly, there are the same number of daily taxi trips across the peaks while the MPP sees more bus trips and less boda-boda trips than during the EPP.

A **crude modal share** (for buses, boda-bodas and taxis only excluding private vehicles) based on the estimated total of passenger trips is: 33% boda-boda trips, 61% taxi trips and 6% bus trips.

Via Video Feeds

Corridor counts were also obtained in different locations using the integrated Artificial Intelligence (AI) powered traffic analysis tool designed by the Consultant along with the high-quality video feeds supplied by KCCA’s Directorate of Engineering. We received 229 videos with just under 60 hours of footage across six geographical areas (Bwaise, Fairway, Kabira II, KatiKatti, Kira Rd, Naguru).

Hourly boda-boda counts are calculated from the general counts and displayed below in three different locations:

Table 4 Hourly boda-boda counts across three different locations using video feeds

Location:	Bwaise	Kira Road	Naguru
MPP	962	1275	841
EPP	-	1344	1029
Off-peak	-	1575	946

The Consultant notes again that EPP boda-boda counts are larger than the MPP counts, as observed in the manual counts and later on in the report in the **SafeBoda** data. The numbers in the previous table are consistent with the numbers in the manual boda-boda counts.

Appendix 5.4 shows snapshots of the tool identifying and tracking motorcycles in the three designated locations from the KCCA video feeds.

E-Hailing Services

2.4

E-hailing boda-boda services are on the rise in Kampala. Companies like **SafeBoda**, Bolt, Uber and others have been integrating existing boda-boda drivers into their fleet. **SafeBoda** visibly has the highest market share among these companies.

Through their mobile app and sophisticated backend operations, **SafeBoda** have a valuable trove of archived data from users and drivers, presenting a unique opportunity to understand this transportation mode on a network scale. **SafeBoda** has shared a subset of this dataset with the consultant for the purpose of this study.

Overview

The received dataset is divided into two samples (A & B).

Table 5 SafeBoda data specifications

Attribute	Sample A	Sample B
Days	between 17/02/2020 and 01/03/2020	17/02/2020, 18/02/2020, 19/02/2020, 25/02/2020, 26/02/2020, 27/02/2020
Granularity	Whole period	Peak level (Morning, Off-peak, Evening)
Dataset Level	<input type="checkbox"/> Total number of trips <input type="checkbox"/> Number of unique drivers <input type="checkbox"/> Total Distance	
Trip Level	<input type="checkbox"/> Average distance <input type="checkbox"/> Average duration <input type="checkbox"/> Average speed <input type="checkbox"/> Average cost	
Origin-Destination Matrix	Parish-Level	

Sample A contains weekdays, weekends and spans across 2 weeks, it can thus be more useful in generating insights from dataset-level aggregates. Sample B is more granular and can help show travel patterns on the network level between different parishes and compare these patterns for different peak periods.





Notes & Known Limitations

There are some limitations to note regarding the use of SafeBoda data as a proxy for the rest of the boda-bodas:

1. SafeBoda trips are “planned” trips, unlike the ad-hoc nature of regular boda-bodas.

2. SafeBoda offers relatively cheaper trips than regular boda-bodas; that is why people tend to take them for longer trips.
3. As per the FGD with the boda-boda drivers, many SafeBoda drivers share stages with regular boda-bodas. But also many of them roam around and can change their point of origin more dynamically because they can get requests via their app whereas regular boda-bodas have to be in direct contact with their customer, mostly at stages.
4. SafeBoda users need to book their ride using a smartphone, which may be correlated to a different socio-demographic profile from the rest of boda-boda users.

Insights from the SafeBoda data:

-  The number of trips during the two peak periods (MPP, EPP) constitutes approximately a third of the total number of trips, during weekdays. Hence, the trips during the off-peak are double in number those during the peaks, in a typical weekday. The Consultant highlights that the average number of boda-bodas counted on a given corridor during the peaks is about 30% leaving the remaining 70% to the off-peak counted boda-bodas.
-  The average number of trips per day per driver is 18 which is consistent with the FGD answers indicating 15-20 daily trips on average per stage boda-boda driver.
-  The total number of trips per hour in the MPP is 2682 while during the EPP, there are 5731 trips on average per hour.
-  The number of daily trips during the EPP is double the number of MPP daily trips. This could be because a lot of customers rely on collective (taxi or bus) transport modes during their daily commute while the night commute might be more of a last-minute measure, hence, a boda-boda would then be more adequate. It is also the case **for stage boda-bodas that the EPP counts are more than the MPP ones. This confirms that boda-bodas are relatively more active in the evening than during the morning peak.**

3. Data Analysis

Rapid Demand Assessment

The demand on a BRT corridor is usually measured by combining corridor counts with occupancy rates; the latter measure the rate of the transport mode carrying passengers along the total fleet. Occupancy rates/surveys are usually however essential mostly for vehicles with medium-large capacity, which is not the case for motorcycles. Thus, it suffices to get a crude estimate of the BRT corridor’s boda-boda demand based on the corridor counts carefully chosen.

3.1

The Pilot BRT corridor is a Y-shaped corridor that runs from Kalerwe/Bwaise to Kireka with an arm in the south reaching Zana as shown in the next figure.

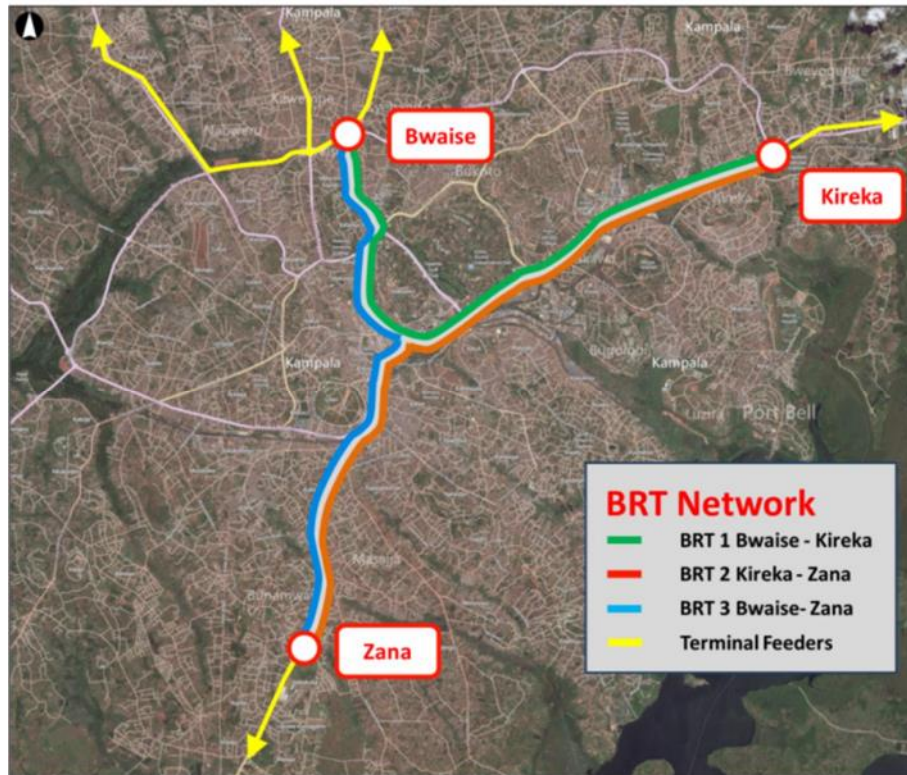


Figure 3 BRT Pilot Corridor¹

The manual corridor counts were conducted at 10 locations which coincide with BRT stops. The following figures will demonstrate the hourly boda-boda flow in different BRT lines and segments.

Each pair of BRT stops is joined by a line segment of thickness proportional to an average of all registered hourly boda-boda counts in the designated corridor and direction.

Figure 4 shows the BRT line 1 from the direction of Kireka to Bwaise.

¹ ROM Transport Engineering, ARUP and AH Consulting (2014). *Bus Rapid Transit for Greater Kampala - Final Report*. Reports 6A and 6B - Executive Summary.



Figure 4 Hourly boda-boda flow in the BRT 1 line in the direction of Kireka to Bwaise.

It is thus clear that the boda-boda flow increases significantly (almost doubles) at Jinja Road Police Station to again decrease at Railway Station and doubles again all the way from Shoprite Station up to Kubbiri Station on the left-most branch of this corridor.

The following figure shows the boda-boda flow on the BRT line 2 from the direction of Zana to Kireka.

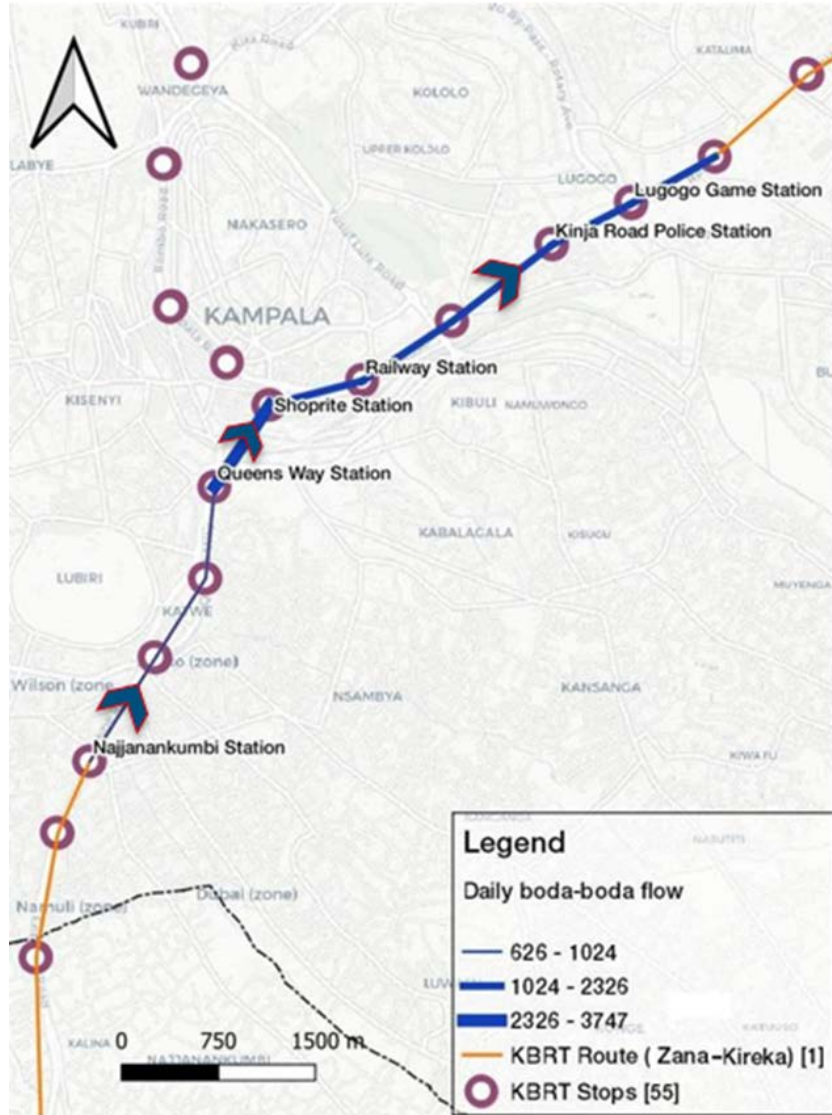


Figure 5 Hourly boda-boda flow in the BRT 2 line in the direction of Zana to Kireka.

Contrasting this figure with the previous one we see that the boda-boda flow from the Shoprite Station to Railway Station is almost double the flow in the same segment in the other direction from Railway Station to Shoprite Station.

Similarly, from Jinja Road to Lugogo Game station exhibits double the boda-boda flow in the opposite direction (illustrated in Figure 5).

The corridor with the heaviest boda-boda flow in the Zana-Kireka direction in the one between Queens Way to Shoprite Station.

Finally, the following map shows the boda-boda flow on the BRT line 3 from the direction of Bwaise to Zana.



Figure 6 Hourly boda-boda flow in the BRT 3 line in the direction of Bwaise to Zana

Contrasting this figure with Figure 6 we see that the southern branch of the BRT corridor extending to Zana exhibits at least 2/3 of the boda-boda flow in the southern direction from Shoprite to Zana, as one would expect. YMCA Wandegeya Station sees a significant increase on the boda-boda flow, which decreases as the CBD is approached and further decreases till Zana is reached.

Identification of Interchange stages with BRT

3.2

While the BRT is a mass transit mode that will carry many people across selected corridors and stops only at designated stops, boda-bodas can complement the BRT by acting as a feeder service or as a last-mile connectivity mode of transport, picking up passengers from around the designated BRT stations.

Methodology

Boda-boda stages that are within a walking distance of 150 meters from each BRT stop are identified and compared in terms of their service areas, assuming an average for the boda-boda trip to be 3 kilometers. We merge service areas of stages based on the BRT stop they belong to. These “collective service areas” serve as an index of the accessibility offered by the potential integration of the boda-bodas within the BRT system.

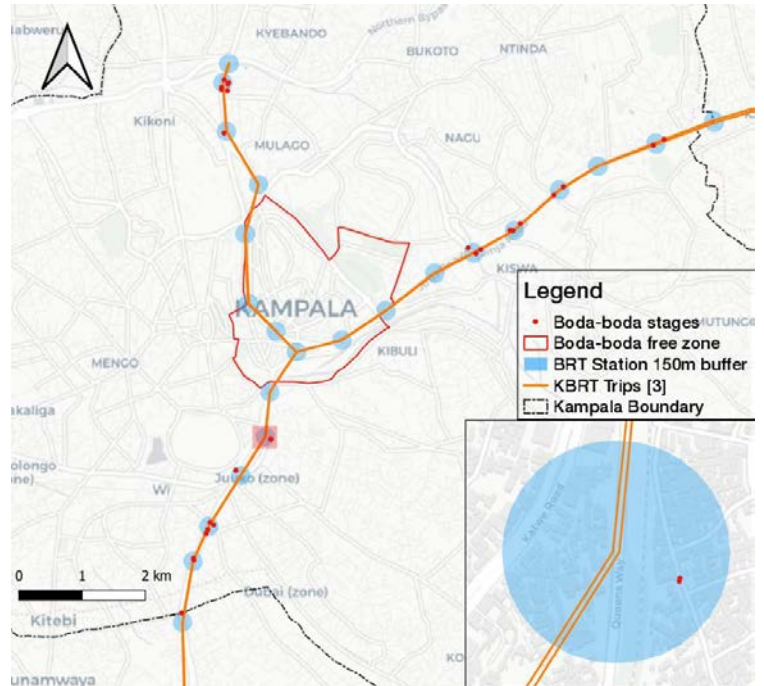


Figure 7 Boda-boda stages within walking distance from BRT stops

Some stages are within the 150 meters buffer but not accessible by walking because of obstacles in the urban fabric as in the case of Queensway station, these are excluded from the analysis.

BRT Service Areas

By looking at the collective service areas of the stages surrounding each BRT stop, and by estimating each service area, it is clear that the southern (Zana) corridor is the one with the largest service areas. In fact, the top three largest service areas belong to BRT stops on the Zana corridor, namely Najjanankumbi, Freedom City & Stella Stations.

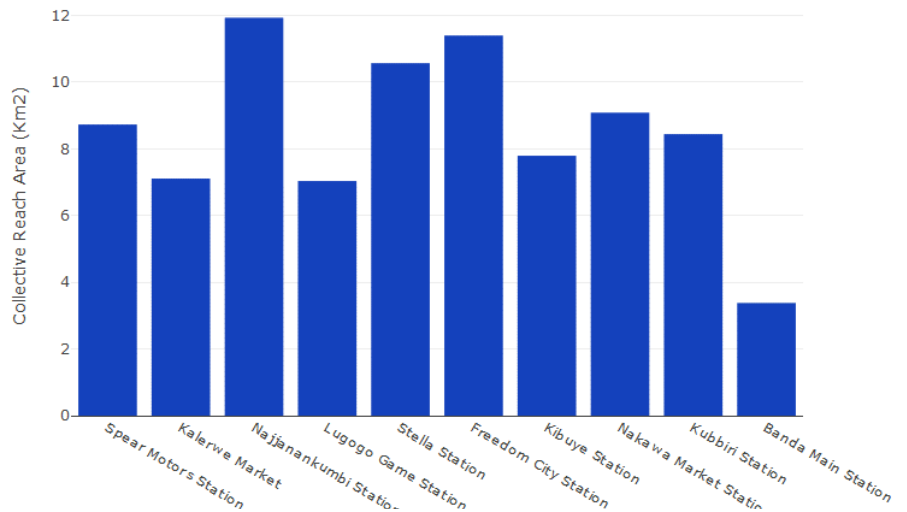


Figure 8 Service Areas for Stages surrounding BRT stations

These three stations are consecutive and all three falls in an area with a high density of two-way streets, whereas the BRT stations are relatively limited by one-way roads and less density of roads.

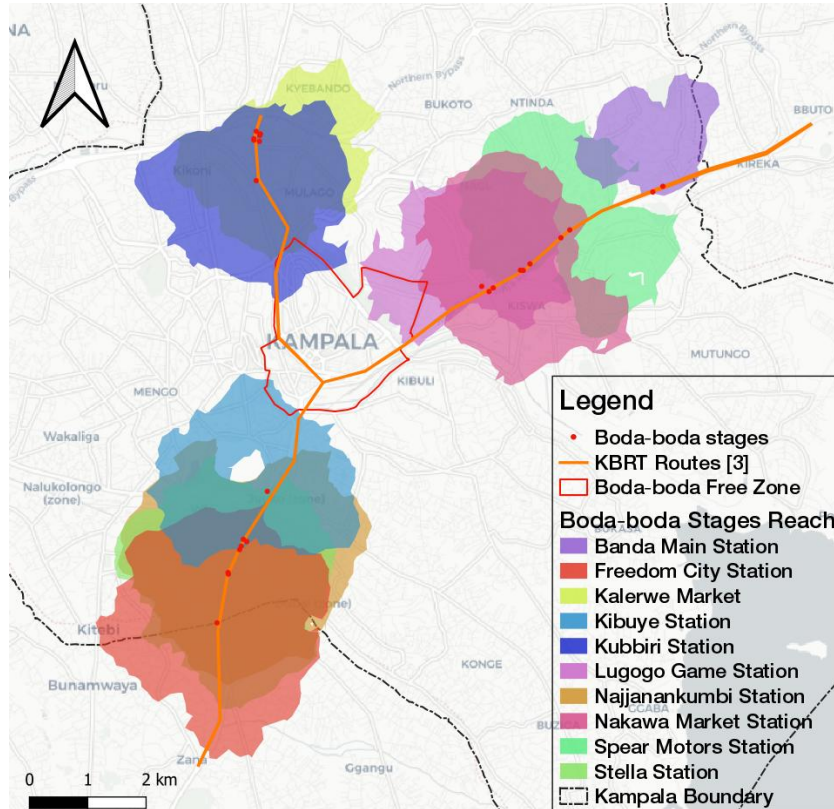


Figure 9 Service Areas for Stages surrounding BRT stations

The collection of the service areas mapped in the previous figure shows a collective extended service area for the BRT along with the boda-bodas. In a scenario in which these boda-boda stages remain in their current locations after the implementation of the BRT, these shaded areas are those of a potential customer base, to be studied further for more accurate BRT demand projections.

Interchange Stages Capacity

In order to get a sense of the readiness of the boda-boda stages to complement BRT stops, the consultant contrasts the capacity of stages, which are walking distance (150m away) from a BRT stop, with the highest capacity boda-boda stages (marked in blue) across the whole boda-boda network of stages. Among the highest capacity boda-boda stages, Kalerwe Market stop is the only one which is walking distance from a BRT stop.

Out of a total of 28 BRT stops, there are 8 stops which are walking distance from a boda-boda stage.

Hence, at the moment most boda-boda interchange stages are of small to medium capacity, which indicates undersupply. However, with the implementation of the BRT, these stages will witness an increased passenger demand, which is likely to require an increase in capacity or in the creation of new stages nearby.

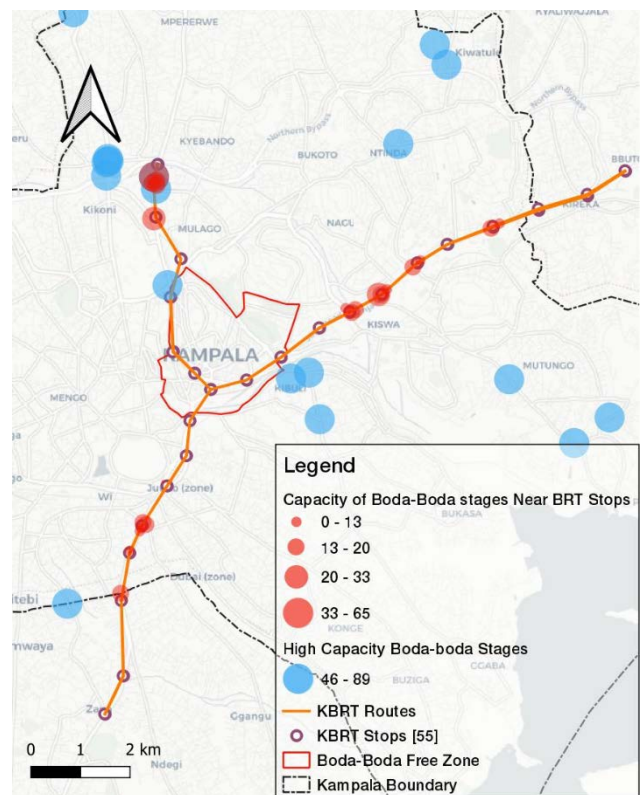


Figure 10 The capacity of the boda-boda stages near BRT stops

Interchange stages with taxi network

3.3

Inter-modality between taxis, buses and boda-bodas is examined by overlaying demand data from onboard surveys for taxi and bus routes against boda-boda stages location to see which stages are located in areas with high demand.

Boda-boda stages placement is more dynamic and flexible than other modes of transport; dynamic in that they instantly respond and adapt to changing demand patterns, and flexible in that the boda-boda as a vehicle doesn't occupy much space. This exercise aims to confirm the hypothesis of a direct relationship between paratransit network demand and boda-boda stage placement.

To measure demand around each boda-boda stage, a "demand factor" is computed to eliminate bias by calculating the total sum of boarding and alighting numbers from pick-up or drop-off points falling within 50 meters of each boda-boda stage and dividing that number by the number of onboard surveys these boarding and alighting points came from.

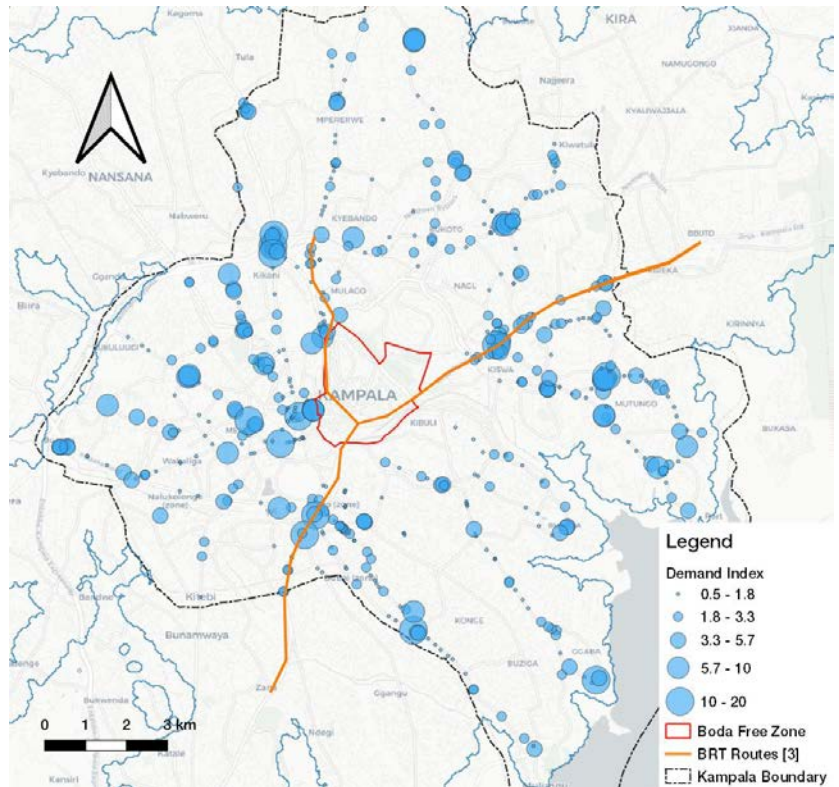


Figure 11 Taxi demand nearby boda-boda stages

Observations

Boda-boda stages exist in almost every street in Kampala, save a few residential roads. What becomes clear from overlaying taxi demand with boda-boda stages is that areas with high taxi demand contain clusters of individual boda-boda stages, while low demand areas have singular boda-boda stages placed within walking distance of one another but not necessarily clustered.

This shows how – almost always – more separate boda-boda stages tend to exist in a small area where there is high taxi demand, drawing attention to two possibilities:

- ☐ Taxi and bus passengers use boda-bodas as a last-mile travel mode after alighting from taxis.
- ☐ Both Taxi and boda-boda stage placements are based on high commercial and pedestrian activity and both modes are responding to separate segments of passengers (passengers who are going long distances or in need of a cheaper means of transport, and ones that are in a hurry or can afford paying for a faster longer distance travel).

Network Efficiency

In an optimal transit network scenario, supply is proportional to demand in a way that ensures both operator’s fleet utilization and passenger satisfaction. So far, boda-boda stages placement, the supply, has been based on demand but also on other factors such as public or private restrictions, stage leadership and territorial control.

3.4

The consultant uses trips pick-up location data from 2 consecutive weeks, namely sample “A”, supplied by SafeBoda as a proxy for regular boda-bodas as well. The number of registered boda-bodas at each regular stage gathered by KCCA is used as a proxy for supply. Finally, the number of daily trips originating from each parish is compared to the sum of boda-boda stage capacities within the same parish to see how efficiently boda-boda stages are located. The numeric results **merely serve as an index** based on relativity between Safeboda’s demand data and regular boda-boda stages supply data, not to be taken literally.

Known limitations to this exercise are:

- ❓ SafeBoda drivers do not necessarily pick up passengers from regular boda-boda stages
- ❓ Boda-boda stage capacity data was not collected for stages that fell inside the boda-boda free zone, while the highest demand from SafeBoda data during the sample’s period was there
- ❓ Not all registered drivers are present at a given stage at the same time

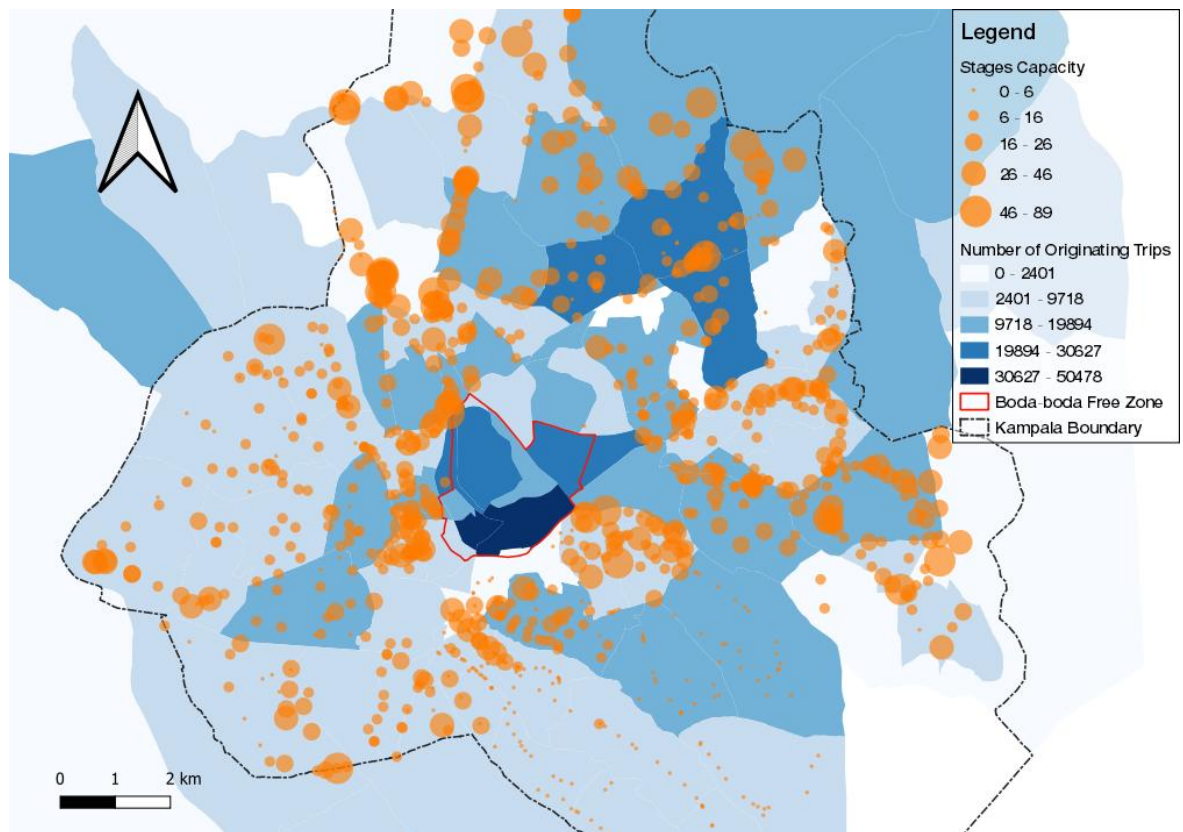


Figure 12 Average daily trips from parishes and Stages capacity in Kampala

Naturally, the nearest parish to the city center that had boda-boda stage data collected (Nakasero II) is the one with the highest number of trips; the numbers of daily trips themselves are to be taken as an indicator rather than exact figures of daily trip due to the limitations mentioned.

“Makarere Univeristy” is underserved naturally because it’s a university campus with a high number of students and boda-boda stages cannot be placed inside. “Kololo I” parish is also underserved for similar reasons; the area is mostly embassies and hotels and no boda-bodas stages are allowed to remain there.

In the south, Kabalagala, Bukasa & Lukuli are genuinely underserved. Also, Kamwokya II in the north is an underserved residential area close to the center of the city.

The remaining parishes seem to suffer from oversupply. Given that not all neighborhoods will have equal ratio of people using smartphone apps, only the most severe cases of overserving can be considered, these include the following parishes:

- ☐ Mutungo
- ☐ Luzira
- ☐ Mbuya I
- ☐ Kasubi
- ☐ Busega
- ☐ Nateete
- ☐ Kyebando

The number of drivers operating with SafeBoda during the two weeks of sample “A” was **8981 drivers**. Once every boda-boda driver registers for operation with the government, this number can be compared to total number of registered boda-boda operators to get a level of certainty about this mode’s efficiency indicators.

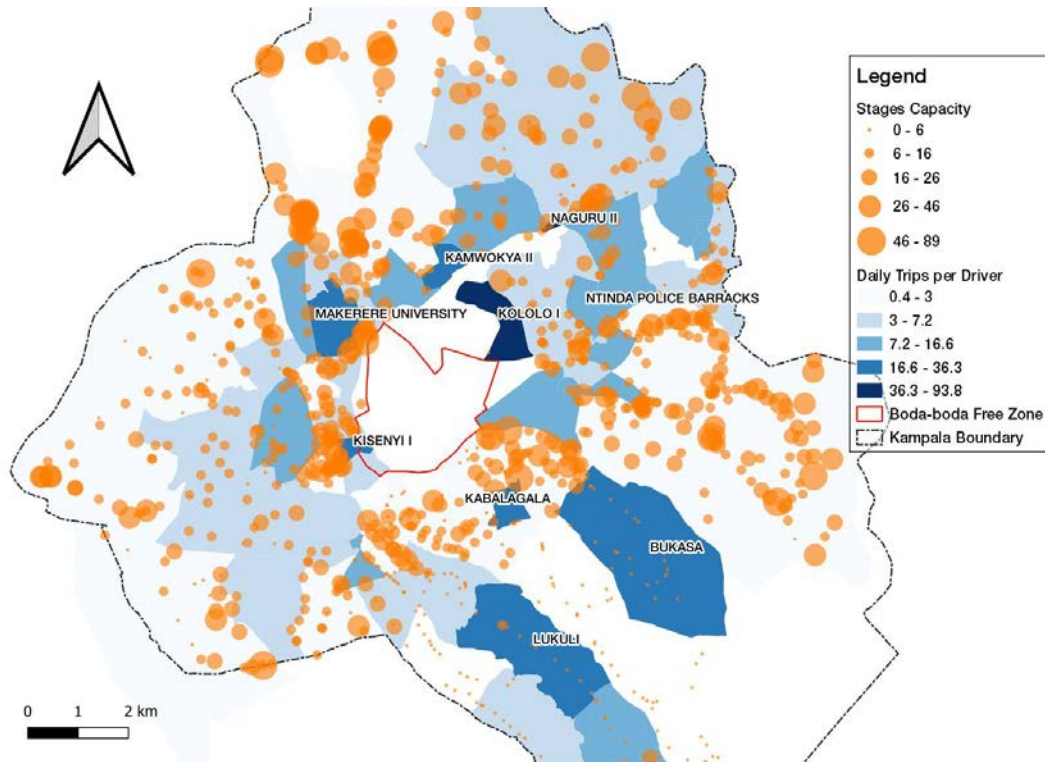


Figure 13 Average of daily trips per boda-boda driver

Travel Patterns

Looking at where passengers usually take boda-bodas from and where they go, on the scale of the city provides insights on the travel patterns attached to this transit mode.

3.5 Using origin-destination data from Safeboda as a proxy for the regular boda-bodas, and taking into account the limitations, the consultant used travel data from 7 weekdays, namely Sample “B”, to observe travel patterns.

The top 10 heaviest origin-destination pairs were picked for both morning and evening peak periods. Figures Figure 144 & Figure 155 shows the difference in patterns between the two periods.

In the morning, there are three main destination parishes (Ntinda, Nakasero II & Civic Centre) all of which are mostly commercial areas. These parishes are already known to have a lot of job generator locations and commercial activity.

What is important to look at is the origin parishes, from which passengers take a “planned” boda-boda trip to work. Whether these parishes are where the passengers live or a drop-off point from a taxi or a bus is unclear, but from looking at how far away they are from the city center, **this is not a last-mile scenario.**

The evening is not a perfect reverse scenario of the morning, save for Ntinda which, for the most part, is the reverse of its morning pattern.

Most evening trips are coming out of Civic Centre to nearby parishes, that is why in this case inter-modality is highly likely. When time is no longer an urgency, a passenger can take a boda-boda for a short distance to the nearest taxi stage that has a route going further away to his final destination.

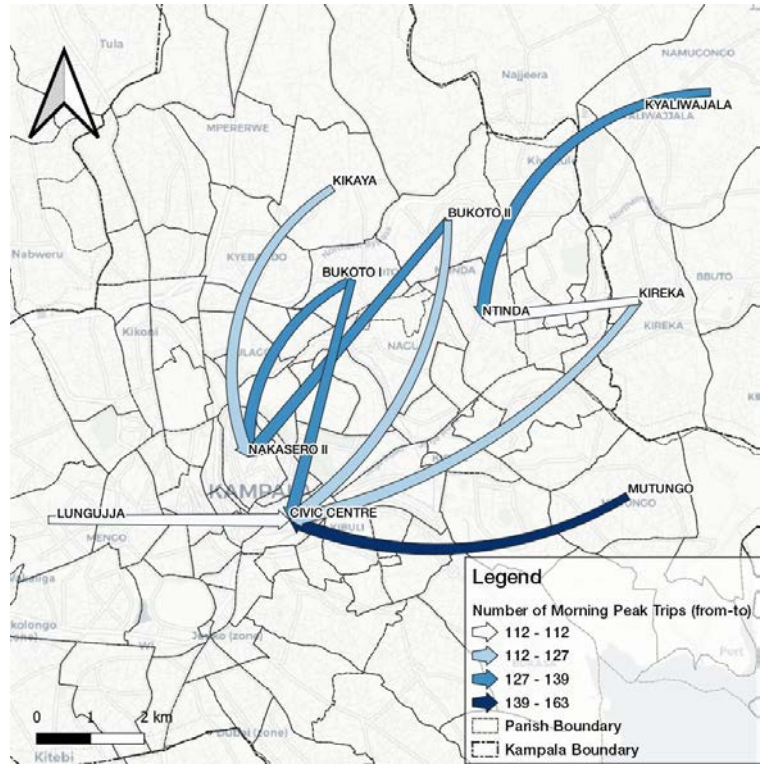


Figure 14 Heaviest Morning Peak OD Pairs

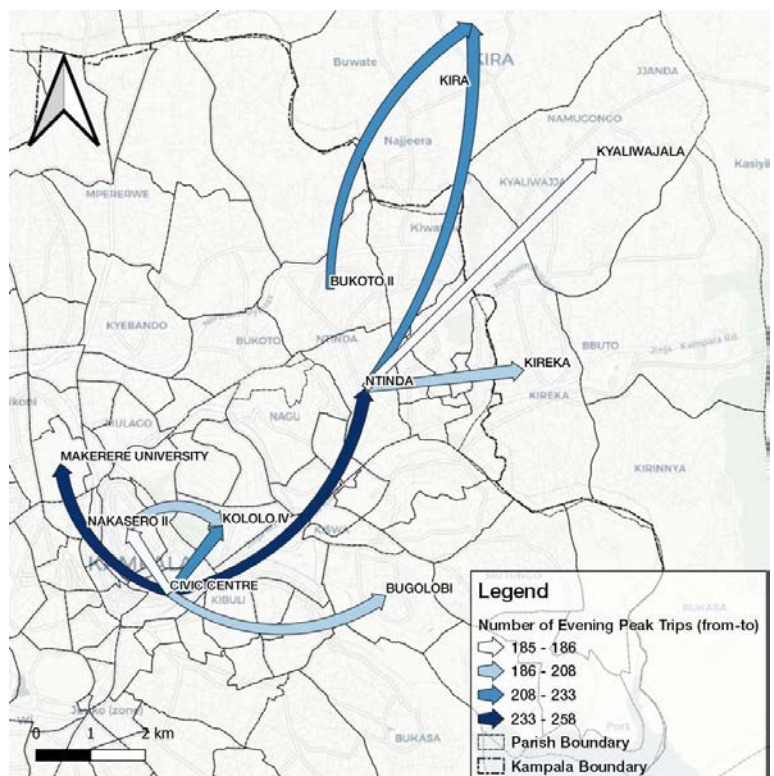


Figure 15 Heaviest Evening Peak OD Pairs

4. Conclusion

We present first the insights derived from the data collected and aggregated through different sources, and then we infer key lessons on Boda-Boda operations learnt from the data analysis. We further compare the Boda-Boda Industry with the Taxi industry and consider the future implications on system integration between different modes of transport, in light of the proposed BRT.

Lessons Learnt from the Boda Boda Operations

We estimate one-third of public transport trips in the GKMA to be boda-boda trips, while the minibus taxis dominate the remaining two-thirds of passenger trips.

4.1

The majority of the BRT stations are within walking distance from at least one existing boda-boda stage, sometimes more. BRT Stations within the boda-boda free zone do not have such nearby stages.

Boda-Boda stages close to the proposed BRT stops - which correspond to large microbus taxi stops at present - tend to be small or medium in size.

In fact, we could not observe a straightforward complementarity between the Boda Boda stage network, and the microbus taxi network. Boda-boda stages that lie in close proximity to high taxi passenger activity (i.e. high number of boardings and alightings) are often found in clusters; such stages are a direct result of taxi operations. However, we observed a considerable number of boda-boda stages with little to no taxi passenger activity nearby. These independent stages often exist within walking distance from one another. This leads to two potential conclusions:

- An oversupply of Boda-Boda service providers, who populate the ubiquitously distributed stages.
- No clear interdependence between boda-boda services and microbus taxi services.

The held Focus Group Discussions reported negligible number of daily trips to actually feeding the taxi network, confirming the second finding.

Boda-boda services - both stage or e-hailing services - demonstrate heightened activity in the evening peak compared to the morning peak. This is not the case with minibus taxis, where taxi ridership is similar in both peaks.

4.2

We thus concluded that is not likely that Boda Boda services will eventually act as feeders to the proposed BRT.

Implications for improving the Boda Boda Industry

We identified three potential avenues to improve the Boda Boda Industry, specifically:

- The Boda Boda industry lacks a unified leadership. There are many associations, and many more are getting created as drivers pursue leadership positions through creating their own associations. Such industry fragmentation is perceived as an emerging problem by the Boda Boda riders.

Addressing the industry fragmentation through regulating entry to the industry would be welcomed, and curb oversupply.

- The oversupply of the Boda Boda industry is not evenly distributed across the GKMA, suggesting that a geographic re-distribution could be effective. As the service area is small, such a redistribution could take place on the parish or county level.

A spatial re-organisation might alleviate inefficiencies posed by the current oversupply.

- Finally, there is unique opportunity to utilize technology and the information from the industry leaders modernise the sector. Private e-hailing companies provided valuable insights for this study, and indicated a long-term willingness to continue doing so. Stage riders and leaders feel the pressure of the existing oversupply and inefficiencies, and expressed a willingness to adapt to change in a win-win scenario.

E-hailers and incumbent operators could provide the data to support the spatial organization, and work closely with regulators to improve the Boda Boda industry .

5. Appendix

Boda-boda Focus Group Discussion Report

5.1.1 Boda-Boda services as gap-fillers:

The participants of each FGD were asked the following general questions as a warm-up measure.

5.1 Opening question: *“Boda-Boda services are often described as filling a gap in the transportation industry in Kampala. What gap do you think it fills?”*

A respondent from Central division suggests that the gap is a temporal one and Boda-Boda services transport passengers on time, as needed. Another leader from the same division says that where the taxis and bus services stop, the Boda-Boda services pick up from there. The Boda-Bodas are able to reach the passengers’ exact final destination whether it be their homes or work. Additionally, they provide other services other modes of transport fail to provide such as transporting goods and information as requested by appointed customers. These additional services will be detailed further on in this report.

Introductory questions: *“How do the Boda-Boda services differ from the services provided by other informal modes of transport?”*

The main reported advantages of Boda-Bodas is that they are time-conscious and they reach exact destinations of their passengers. The passengers reaching their destination on time is the main edge that gets the customers to pay an even higher fee than other modes of transport in the city.

The respondents from Kawempe division and Kira municipality suggested that as the taxis bring in congestion in the city, the Boda-Bodas’ role is to ease and alleviate that congestion.

The taxis need to wait for the passengers to fill up and often stop to let passengers board and alight, which are not a concern for Boda-Bodas. The Boda-Bodas respond to the needs of a single passenger.

One respondent from Nakawa division mentioned that there are passages too narrow that only Boda-Bodas can access and that customers want to reach. This was mentioned again by a Kiira municipality participant who confirms that a passenger with luggage will be taken directly to his exact destination without having to carry his heavy luggage around.

5.1.2 Roles of a Boda-Boda rider:

The following list is the reported roles that our participants have taken since their involvement in the Boda-Boda industry:

- Transporting passengers.
- Delivering goods and cargo to markets and confidential materials to places.
- Taking children to schools in times with serious traffic.
- Transporting goods from Kikuubo to the traders in city center who requested this service (and likely paid with online money).
- Advertisement for lodge and guest house businesses (the riders are approached by lodge owners as often, customers come to Boda-Bodas asking for the whereabouts of a safe guesthouse).
- Commercial marketing of products such as produce, as the Boda-Bodas reach all narrow passages including residential areas.
- Food delivery for restaurants and item delivery (one respondent in Kira municipality worked for LG and would deliver TVs to homes), such as for JUMIA food, for instance (even tires if a car has a flat tire).
- Transporting patients to hospitals in case of emergencies.

- Hire in order to carry sensitive information (a member of Makindye-Ssabagabo subcounty even mentioned he was hired by a man to make sure his wife is present at her home).

Multiple riders also suggested an involvement of the Boda-Bodas in the security network of the city. They believe that not only do they know of their passengers' whereabouts and daily movements, they also take an active role, when necessary, in preventing security compromising incidents. The Central division respondents reported even helping the police with the needed information to arrest criminals involved in the Fairway hotel bombing and the Nansana robbery of 2019².

5.1.3 General/Demographic:

a. Years of experience in the Boda-Boda industry:

The average years of experience of all the participants is 10.4 years, ranging from a year to 23 years of experience in the industry. From a total of 24 participants, 3 of them had below 5 years of experience, 10 had between 5 and 10 years, 6 from them had between 11 and 15 years while only 4 had more than 15 years of experience in the industry. Here is a more detailed breakdown:

Location	Years of experience of FGD participants (mean)	Years of experience of FGD participants (range)
Central Division	11.6	9-14
Kawempe Division	7	4-10
Nakawa Division	9	1-23
Kira Municipality	14.4	9-20
Makindye-Ssabagabo Municipality	10	7-17

b. Average number of members per stage:

The reported numbers of members at the stage ranged from 12 to 85 members, per stage.

Location	Members per stage (mean)	Members per stage (range)
Central Division	37.4	20-65
Kawempe Division	24	12-40
Nakawa Division	21.2	12-44
Kira Municipality	39.6	18-62
Makindye-Ssabagabo Municipality	44.1	18-85

The stage with 85 members was in Makindye-Ssabagabo municipality. When the stage leader of that stage was asked on how they manage to occupy the same physical space at the stage, the respondent mentioned that there are no shifts, but some prefer to work through earlier hours of the day while others may start working after the former riders finish. Moreover, the dynamic nature of the customers prevents a large number of the

² https://www.newvision.co.ug/new_vision/news/1501152/shot-dead-nansana-hardware-robbery

riders from staying idle at the stage for long. Thus, only a small number of members will be present at any time of the day at the stage, unless there is a meeting.

c. Association membership:

Respondents were asked if they belonged to an association and if that were the case, to list the benefits they get from them.

Participants from Kawempe division seemed to emphasize that, although they used to be part of them, associations are no longer relevant nowadays. SACCOs are however of great economic help to them as they offer them loans for motorcycles. KAMBE (Kampala Metropolitan Boda-Boda Entrepreneurs) is both an association and a SACCO now.

Most of the participants in Central division (and the all of ones from Kira municipality) belonged to KAMBE SACCO while a few mentioned other SACCOs such as BUKAMU and LAMUKA, which was founded by one of the leaders in the FGD. The main benefits from the SACCOs especially KAMBE is the loans they get for their motorcycles, houses and learning how to save from their income. The amount of money they are allowed to borrow depends on the shares they have in the SACCO often.

Nakawa stage leaders who participated generally did not belong to associations. The general distrust in associations has been portrayed through a Nakawa stage leader's response:

"I gave up on associations. Because I have been in this industry for so long we started with KOBOKA, NET PEACE, then BODA-BODA 2010 Association, we made KAMBA, there is KAMBE, also CENTURERY. I have been in like 10 associations for the period I have been in the Boda-Boda industry but now I don't belong to any. There was also a cooperative but what I realized in all those associations the leaders were all self-seeking, only thinking about their own personal gains, instead of the riders'."

As for the Makindye-Ssabagabo participants, they all belonged to the Makindye-Ssabagabo Boda-Boda Cyclist Association. However, they mentioned that when it comes to SACCOs, they are numerous and stages may even have their own independent SACCO.

d. Association vs SACCO:

The relationship between the formation of the two types of organization becomes clear from a stage leader participant from Central division who says: *"Sacco comes after an association, if there is no association you can't form a Sacco. When people come together as an association then they form a Sacco."*

The main distinction is often emphasized to be that an association is an administrative body whereas the SACCO is an economic one, catering for the financial needs of the riders.

Nakawa stage leaders mentioned the formation of a self-help group, in which they save around 5,000 shillings per week each Saturday and cater to the riders' needs weekly.

Question: *"What do you consider a Boda-Boda stage?"*

One stage leader from Kawempe division described the making of a stage as follows: a group of 10 to 15 riders come together, decide on a place and leader, who in turn goes to KCCA to gazette the stage, give it a name and it becomes an official stage.

Moreover, the Central division respondents emphasized the importance of a location in determining a stage. The location need be of course a focal point for passenger demand such as a stop where taxis drop passengers. A stage is referred to as a reference point where the riders of that stage may be traced back to.

Informally, there is general consensus from the respondents that a stage is a group of at least 5 riders who start riding from a marked location, which eventually becomes standard and identifiable and known to passengers. As mentioned by a few participants, the establishment of leadership and a set of rules is paramount for the establishment of a stage, in order to be able to hold the riders accountable.

e. Role of a stage leader:

Stage leaders fulfill a variety of roles with their stage members' interests and the proper functioning of their stage at heart. These roles include but are not limited to:

- **Conflict resolution** between stage members and passengers with riders.
- Instilling discipline in members of their stage and **enforcing rules** such as not being drunk on duty or not badmouthing or stealing from passengers.
- **Training** them to manage their resources and finances in SACCOs.
- Circulation of relevant **information** to members such as when there are opportunities to get a loan for a motorcycle, a house or to join a SACCO.
- A responsibility to maintain and manage the **social image** of Boda-Boda riders against rumors such as rape allegations of female passengers, as mentioned by a leader in Central division. This is done through individual coaching of the members at their stage and an emphasis on behavioral change if needed.
- **Defending their riders** when they come in contact with traffic police or city traffic marshals and are arrested or fined.
- **Guaranteeing members** of the stage to get loans from a SACCO through a required signature from the SACCO.

Some leaders mentioned to have found themselves dealing with familial issues of the riders when their family members or wives come to complain to them.

f. Summary of key issues related to stage members mentioned by participants:

The participants were all asked to report the most common challenges they face on their stage from their stage members. The issues reported are as follows.

- Failure from riders at the stage to **pay the owners** of the motorcycles they use or to pay back loans from SACCOs.
- Complaints from landlords renting houses to stage members for **failure to pay rent**.
- Stage members who present themselves at the stage without their motorcycle (likely taken away by the owner) which results in them being idle and not working that day.
- Opposition to **stage leadership**.
- **Theft of motorcycles**.
- Lack of **hygiene** in some of the riders, which drives passengers away.
- Harassment, arrests from **law enforcement** officers such as the LDU (Local Defense Unit), traffic police and KCCA.
- Dealing with members who **fall sick or pass away** through informing their families, gathering necessary funds and arranging burial if needed.

g. Fare system:

There is a general consensus that there are no specific fares and an element of negotiation with the passenger is always involved. However, still, fares tend to be uniform, especially for trips within the same division and riders have a common unwritten agreement on ranges based on distance. For instance, a participant from Kawempe division mentioned that if you were to ask your fellow riders how much they charge for a trip to Namasuba, they will say in the range of 7,000 – 10,000 shillings.

5.1.4 System-level Information:

Stage Boda-Boda services vs e-hailing and street-hailing services:

Participants were asked the following question:

Question “To what extent do you agree with the following statement: ‘the rise of e-hailing Boda-Boda services such as SafeBoda or Bolt threaten the stage Boda service operations’ ”?

The respondents from Kawempe division mentioned that they are not threatened by these e-hailing services as the stage Bodas and the e-hailing Bodas have a different customer base or clientele. In addition to this point, one respondent mentioned it was common for some of his customers to call him request to be taken to specific places. Another participant said that the reason these services are not threatening is the overwhelming number of customers; there is no shortage.

However, another stage leader from Central division raised a concern regarding these e-hailing Boda-Boda riders who park at their stage and take their customers for a cheaper price than the typical stage price.

The Nakawa respondents (and Kiira municipality) were heavily threatened by the e-hailing services, as they mentioned they are destabilizing their operations and business. SafeBoda charges less for the same trips and does not require riders to be members of stages, which increases the number of new-comers in the industry who operate as *lubyanza* and who are not experienced in the industry (they compensate for this with the low fares).

As mentioned by one stage leader from Kiira municipality, the sense of togetherness a stage establishes between its members is dismantled when some of them decide to join the apps and dismiss authority from leaders. These apps disorganize the stage Boda-Boda operations.

Some of the respondents in Kiira municipality explained why these apps are tempting for Boda-Boda riders. One stage leader who has previously worked for Taxify mentioned that when the company was first established, they used to give a commission for each trip you take that almost doubles the price: if the app charges 2,000 shillings, you can get an additional 2,000 shillings for that trip. However, when the initial phase ended, the company stopped this policy and the stage leader left the app. Another mentioned point is that these companies offer phones on loan, which are highly attractive for the riders. Often, these companies attract riders who do not have a stage or who are interested in the smartphones and hence, when they finish paying off the phones, they leave them and go back to their respective stages.

The Makindye-Ssabagabo respondents reported that these companies are quite the issue for them:

“It is threatening because it is one of the reasons why there are so many Boda-Bodas in town. Because originally, Boda-Bodas originated on stages, we knew their numbers and knew how to fight the other aimless lubyanza riders. But now you cannot fight him because he calls himself Jakara, SafeBoda. He parks at your stage saying he is waiting for his customer and he is waiting for your own customer! “.

If the Boda-Boda industry were more organized and centralized, the respondents said these companies would not be able to penetrate and destabilize their operations. They mentioned that the riders using Apps consider these Apps as their stage; they may switch them off and do not have supervisors then.

Coexistence in the Boda-Boda industry:

Participants were asked the following question as a follow-up from the previous topic:

Question: “Are Boda-Boda riders from these e-hailing service providers allowed to either wait at the stage or be a member of your stage? “

Kawempe stage leaders mentioned that there was no problem if the rider was originally a stage member. In fact, a lot of the stage members joined SafeBoda as SafeBoda was offering riders the opportunity to own their motorcycle and to pay for it in instalments with an initial deposit of 500,000 Shillings. One of the four members at this focus group discussion is a stage leader who decided to join SafeBoda and who also has other administrative roles in the KAMBE SACCO.

Moreover, a rider who is not a member and who is picking up a customer off an app will not be bothered by the stage boda riders. However, the stage riders do not allow riders who pick a customer from the stage without using the app. At this point, this rider is called lubyanza.

From the point of view of the stage rider who is also on the SafeBoda app, as the stage leader mentioned above suggests, the SafeBoda trips they complete complement the stage trips; services at the stage have peak hours, the off-peak period becomes then ideal for SafeBoda trips as their app readily shows customers while the stage not so much.

Another leader from Central division was also complaining about the lubyanza riders, saying they hijack their stages, enforce new rules, are not welcome and take their customers for less money than the stage charges (for 2,000 shillings, say, instead of 3,000 shillings).

A particular response from a stage leader in Central division underlined a certain animosity with these e-hailing apps causing a threatening cultural change:

“They are not allowed. You know God created us differently, there are some of the SafeBoda riders who are our stage members but decide to join SafeBoda, so, they disappear from the stage by themselves. So, you can’t chase away a member from your stage because he has joined SafeBoda but due to the fact that they got in the habit of roaming around they disappear from the stage. Even some of our members who want to join SafeBoda come to us and we write for them recommendation letters but the moment they join SafeBoda they don’t appreciate having a stage anymore, so they leave the stage. To me I am not affected in any way by the SafeBoda app.”

5.1.5 Operational-level Information:

Average number of daily trips:

The Kawempe division respondents agree on an average of 20 trips a day completed. Among them, a respondent who completes office work for a SACCO mentions an average of 8-15 trips a day. Another one mentioned that his daily trips could range from 15 to even 100 on very lucky days.

The Kiira municipality participants agree on a range of 20-30 daily trips, among them, 5-10 of these trips reach town or the city center. One respondent even reported that among a total of 30 daily trips, 5 of them are his routine customers whom he takes on a daily basis to their work in the MPP.

The Makindye-Ssabagabo municipality respondents seem to make on average 20 trips a day with a minimal number of 3-5 to the city center. This was explained further by one participant:

“from my experience, a day can even end without taking any passenger to Kampala. Besides, most Boda-Bodas fear crossing to Kampala because the city center has strict regulations on Boda-Boda you can take one passenger at 6,000 shillings and you accidentally land into a traffic officer who penalizes you with a fine of 20,000 or 30,000 shillings so this is why some Boda-Boda riders this side are hesitant to come to Kampala.”

From the same municipality, a stage leader mentions that he can do 3 trips a day as a lot of services include taking luggage or cargo to the city center and can pay around 25,000 shillings. Thus, once the rider finishes the selected number of services he has been assigned, he will have made enough money for the day and then goes back home around 2:00 pm, say.

Boda-Boda trips to taxi or bus stages:

The respondents were asked how many of their daily trips transport passengers to taxi and bus stages. There was a general consensus on the fact that this proportion of the trips is very minimal (Kawempe participants, for instance, reported a rough estimate of 10% or less of their daily trips). This was due to the fact that most customers are in a hurry and request to be taken to their final destination directly.

One respondent from Makindye-Ssabagabo municipality mentioned that those who cannot afford the Boda-Boda trips are often the ones who take a Boda-Boda to taxi stages. However, another respondent from Central division from Shoprite stage reports taking 5-10 passengers out of 20 daily trips to Usafi taxi park after the relocation in November, 2019 of the taxis going south to Entebbe from Old Taxi Park to Usafi Park³.

One stage leader from Kira subcounty highlights the predominance of trips from taxi stages over the trips that reach them:

“You can work for even a week without taking a passenger to a taxi stage. Yet, every day you can get at least 5 passengers who get out of the taxi and want a boda-boda to take them further. Most of the people we take to the taxi are those that are going to the village and he tells you to take him to a certain stage because that is where the taxis to his village are found.”

Boda-Boda trips from taxi or bus stages:

The respondents were asked to report the number of trips or passengers they take from taxi or bus stages. Kawempe respondents suggested that a lot of their trips are from taxi stages especially in the EPP in which customers coming back from work with a taxi take a boda to reach their homes. This was also common for the Nakawa riders who mentioned taking passengers in the MPP to board taxis, too. In the Off-peak period, they tend to target the suburbs and residential areas for trips towards the main road. An estimate for the Nakawa participants was given for an average total of trips of 40-50 trips, 30 of them transport passengers from taxi stages to their residences, falling in the 50-75% range.

Moreover, the Central division respondents mentioned they do not keep track of these figures and customers are not exactly clear on their specific location often. As for the Kiira municipality respondents, they seemed to agree that they take a large number of passengers in the EPP especially from the taxi stages to their final destinations. They mentioned this is not the case however, for the MPP as taxis do not bring a lot of customers in at the stages then. They are likely to get customers who board off a taxi to avoid congestion, though.

One respondent from Makindye-Ssabagabo municipality says that it entirely depends on the stage location. For him, as his stage is close to a taxi stage, most of the customers who use taxis will also use a Boda-Boda to reach their homes. There are those however who will board off a taxi and head home walking as they cannot afford a Boda-Boda at this point.

Trips originating from the stage rather than from the street:

Respondents were asked to estimate the proportion of their daily trips which originate from their stage rather than from the street. Kawempe respondents estimated that 75% of their trips are from the stage. Similarly, Central division (and Nakawa division, kiira municipality) respondents believe that most of their trips are from the stage, while one of them gave concrete figures lying in the range of 50-75%. They mentioned that trips from stages give confidence to the passengers and are more secure than the lubyanza trips.

The participants from Makindye-Ssabagabo municipality mentioned that it may depend on the location of the stage. If the stage is well-located next to a busy taxi stage for instance, most customers are from stages and they charge them a higher fare. While the members of the stages which are not well-located may need to roam around to get customers and charge less in order to be able to head to the city center to get more customers there.

There is still an emphasis that the bulk of passengers come from the stage, which distinguishes the stage riders from the lubyanza ones.

The stage as a reference point for the riders:

Respondents were asked the following question:

Question: *“Do riders always go back to their stage if they do not find a customer? Or could they target crowded areas instead?”*

Most participants agreed that they come back to the stage always. One rider from Kawempe division explains that the trips taken from stages are more expensive than the street-hailing or lubyanza trips as the riders mostly

³ <https://www.independent.co.ug/war-over-taxi-relocation-to-usafi/>

take their customers from the stage and do not have to roam around to find customers. If on their way back from a trip, they pick up another customer on the way, there is obviously no issue. But the general consensus is to go back and be available at the stage for customers to seek trips from that reference point.

One of the respondents in Central division details his morning peak routine as follows:

“Personally I reside in Nansana but I can reach the stage at like 9:00 am. But that doesn’t mean that I left home at that time, I leave home at 5:00 am in the morning but I first consider the time. So, where I reside most people will be coming to town in the morning so I first bring those who are coming to town that way I will be falling into the category of the Lubyanza though I don’t go to other people’s stages. So, those who want to reach town in time stop me and I bring them to town so by the time it clocks 9:00 am I would have made 10,000 shillings or more.”

Operating without a passenger:

The participants were asked to estimate how much time they operate without a passenger in their day. Most participants agreed on a waiting time of less than 10 minutes in the peaks and 1-2 hours in the Off-peak. More specifically, Kawempe respondents seemed to agree on a 20-30 minute waiting time between services in both peaks while in the off-peak, a 2 hour wait on average is to be expected.

One respondent from Central division mentioned 2-10 minutes in peaks and 2 hours off-peak is likely too. For respondents from Nakawa division and Kiira municipality, an average of 5 minutes in the peaks and in the off-peak, around 20 – 30 minutes.

While the participants from Makindye-Ssabagabo municipality stated it is common to wait 1 to 2 hours in the off-peak period while during the peaks less than 10 minutes.

Spatial advantage of the Boda-Boda services and accessibility:

The respondents were asked the following question:

Question: *“To what extent do you perceive the services you provide from the stage you lead as “feeders” to routes which are inaccessible or unattractive to minibus taxis?”*

The riders at Kawempe division and Kiira municipality do not perceive this to be a considerable advantage over taxis and they emphasize that Boda-Bodas are advantageous and preferred by customers mostly because of the time they save and the faster services. It is thus, for them a question of time and not accessibility.

A respondent from Nakawa division mentions that due to construction going on in the city center, some roads have become narrower. Trips they take from Nakawa to the city center put them at risk of getting arrested as they are no longer completely familiar with the new road network, unlike another rider who operates from a stage near the city center.

One respondent from Kiira municipality mentions that if a customer is sick and wants to be taken to the hospital (say, a mother with her sick child), the taxi will only drop them at the main road and will not be able to reach the hospital entrance nor will any taxi trips be available late at night.

Competition with taxis:

The participants were asked the following questions:

Question: *“To what extent do you perceive the services you provide from the stage you lead as competing to minibus taxi and bus services?”*

Again, Kawempe and Nakawa stage leaders who were participating are not at all threatened by taxis as they see that when taxi services are not up to par (say, during peak periods in the middle of congestion), Boda-Boda services become very advantageous. Some mention that it is common occurrence to take customers who board off a taxi and board on a Boda-Boda to escape traffic and go on with their journey to reach their final destination quicker.

Central division leaders also seem to believe that Boda-Boda services outcompete other services, especially when it comes to offering specific services they provide such as the lodges and guesthouse business, which is unique knowledge to the Boda-Boda riders.

The Kiira municipality leaders mentioned that Boda-Boda services also outcompete taxi services due to the enormous edge of being able to take the customer to the location of the customer's convenience and not to the driver's convenience on the road. They also mention their flexible working hours which makes Boda-Boda services available late at night (in case of emergencies or other) while the taxi services do not operate then.

Time and flexibility is what distinguishes the Boda-Boda services from the taxi services, according to the Makindye Ssabagabo respondents. However, long journeys are more of the taxis and buses' specialty.

Planned trips vs spontaneous?

The Kawempe division respondents suggest that most of their passengers plan their trips ahead especially in the MPP when they are heading to work from home. It is a routine for them and some of them call the riders to pick them up.

Leaders from Makindye-Ssabagabo subcounty mention that their customers know of how crowded Kampala is and hence, plan in advance their Boda-Boda trips in peaks in order to reach on time, despite having to pay a higher fee. However, some of them insist that most of their passengers do not plan in advance and take a Boda-Boda as a last resort. Those who plan in advance from their homes tend to give them phone calls to pick them up.

One stage leader from Makindye-Ssabagabo mentions he can even go for a week without going to the stage as he has his routine customers and he knows their time schedules and movement patterns.

5.1.6 BRT awareness and perception:

BRT awareness:

The participants were asked if they have previously heard of the BRT before:

Question: *“Have you heard about the Bus Rapid Transit – BRT? If Yes, where did you hear about it from? And do you think the BRT is a good idea? “*

The participants in Central, Kawempe, Nakawa divisions and Kiira municipality have not heard of the BRT before. After viewing a video of the implementation of the BRT in Tanzania, they raised a few concerns regarding the nature of roads in Kampala which would make such implementation of the BRT difficult in the city.

Only one respondent from Makindye Ssabagabo municipality has heard of it saying:

“I heard about it over the radio but I have not understood it so well. What I heard was that they wanted those taxi drivers who have driving licenses and other related qualifications to take them so that they can be integrated in the BRT system.”

Reaction of the Boda-Boda industry:

According to a few of the Kawempe respondents, If not implemented properly, and as the road infrastructure in Kampala is challenging, the BRT might create more congestion, which in turn translates into passenger demand for the Boda-Bodas. This latter point is what prompted the Kiira municipality participants to mention their looking forward to the BRT implementation and that they will, funnily enough, even be praying for it.

The only other mentioned issue with the drivers is if this implementation comes hand in hand with the banning of Boda-Bodas in the indicated corridor. Otherwise, as with the taxi and the bus network, the Boda-Boda riders are not threatened by the new bus system and will continue to work alongside it, if permitted. As mentioned by a Nawaka stage leader, the BRT will not reach the exact residence areas of passengers which will allow Boda-Bodas to transport them from their homes to these buses, when implemented.

One respondent from Kawempe emphasizes that Boda-Bodas still hold an advantage over the BRT for the variety of services they provide which will remain relevant:

“my point is the buses will have stations and will be on time, they can't wait for you. if you find it gone then it has left you. If you have luggage, it won't have time to wait for you. So, if a passenger buys his goods it will still be the Boda-Boda that will be able to carry them from the shop where you have bought them to where you are taking them. So those with their goods from Kikuubo will always opt for a Boda-Boda.”

The concern reiterated with the Central division participants is being chased away from the BRT zone by authorities. Otherwise, the riders underline the adaptive dynamic nature of Boda-Boda operations as one mentions:

“...but when we see that the buses drop people in certain places, that is where we will go and stage to take those people to their destinations and if there won't be an option, we can go to Kikuubo and carry the luggage for customers to the buses.”

Finally, a participant from Makindye-Ssabagabo municipality, after viewing the video of the BRT in Tanzania, raised a few concerns, despite showing a cooperative attitude:

“we don't have any problem with the bus but our question is where are they going to pass without necessarily affecting other people like pedestrians? Having observed the video, I saw that the passenger were not affected but when you look at our current Entebbe road, you find that there is nowhere dedicated for pedestrians to pass or bicycle riders to use. I would strongly recommend that our government first improve the existing road network then embark on BRT transport system. There is nobody who is going to object the BRT systems because we are not worried but the issue is with the current infrastructure.”

Boda-boda Focus Group Discussion Template

5.2 Opening question Boda-boda services are often described as filling a gap in the transportation industry in Kampala. What gap do you think it fills?

Introductory questions How do the Boda-boda services differ from the services provided by other informal modes of transport? What roles have you taken on as a Boda-boda driver since you started working in the industry (besides transporting passengers)?

General/Demographic

- A. How long have you been working in the Boda-boda industry?
- B. Where is your stage located? How many members does it enlist?
- C. Do you belong to a Boda-boda association?

If yes, which one and what are the benefits you receive from the association? Are there any restrictions imposed on you by the association?

- D. What do you consider a Boda-boda stage?
- E. What is your role as a stage leader? What are the most common issues you come across from Boda-boda riders in your stage?
- F. Do you impose a fare system or leave it to the riders to determine?

System-level

- G. To what extent do you agree with the following statement: “the rise of e-hailing Boda-boda services such as SafeBoda, Bolt threaten the stage Boda service operations.”

Strongly Agree

Agree

Neutral

Disagree

Strongly disagree

- H. Are boda riders from these e-hailing service providers allowed to either wait at the stage or be a member of your stage?

Operational level

I. How many of the trips at your stage transport passengers to minibus taxi or bus stages?

0 - 25%

25 - 50%

50 - 75%

75 - 100%

J. How many of the trips completed by members of your stage transport passengers from minibus taxi or bus stages?

0 - 25%

25 - 50%

50 - 75%

75 - 100%

K. How many of your trips are from stages rather than from the street?

0 - 25%

25 - 50%

50 - 75%

75 - 100%

L. Do riders always go back to their stage if they do not find a customer? Or could they target crowded areas instead?

M. Can you estimate how much time a typical Boda-boda rider at your stage operates without a passenger?

N. To what extent do you perceive the services you provide from the stage you lead as “feeders” to routes which are inaccessible or unattractive to minibus taxis?

Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree

O. To what extent do you perceive the services you provide from the stage you lead as competing to minibus taxi and bus services?

Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree

BRT awareness

P. Have you heard about the Bus Rapid Transit – BRT? If Yes, where did you hear about it from? And do you think the BRT is a good idea?

Q. How do you think the Boda-boda drivers will react to it?

Section Counts Locations

5.3



Figure 16 Kubbiri Station observation points



Figure 17 City Square observation points



Figure 18 Mulago Hospital observation points



Figure 19 YMCA Wandegaya observation points



Figure 20 Shoprite observation points



Figure 21 Queens Way (one direction)



Figure 22 Jinja Rd Police Station observation points

5.4

Video Feeds Snapshots



Figure 23 Kira Road video feed.



Figure 24 Bwaise video feed.



Figure 25 Naguru video feed.

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