



Accelerating COVID-19 related ‘best practice’ in the urban motorcycle taxi sector in Sub-Saharan Africa

Country report: Tanzania

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Abstract	
The outbreak of the COVID-19 epidemic and the various measures put in place to mitigate its spread had a considerable impact on the urban transport sector. This report presents and assesses the findings of approximately 60 motorcycle taxi operators and approximately 15 key stakeholder interviews conducted in Dar es Salaam and Morogoro, Tanzania. The main purpose of the report is to provide evidence-based inputs to policy formulation.	
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ACRONYMS

URT	United Republic of Tanzania
LATRA	Land Transport Regulatory Authority
NIT	National Institute of Transport
HVT	High Volume Transport
MCT	Motorcycle taxi
MoH	Ministry of health
PPE	Personal Protective Equipment
BRT	Bus Rapid Transit



EXECUTIVE SUMMARY

This report presents the findings of a study on the impact of the COVID-19 outbreak on the motorcycle taxi transport sector in Tanzania. Motorcycle taxis (MCTs) in Tanzania play an important role in facilitating mobility for city dwellers. They are recognised by the country’s transport regulatory authority and operators are licenced to provide their services. With the onset of the COVID-19 epidemic and the introduction of mitigating measures, conventional urban transport was significantly affected. In response to these negative consequences, MCTs were given access to areas previously banned for this intermediate form of transport, to give people more options for transport. This report discusses the measures put in place to reduce the spread of COVID-19 relevant to this sector and explores MCT operators’ perceptions of the acceptability of these restrictions and the extent to which they feel their sector has adapted and adhered to them. Primary data for this report was collected in two cities - Dar es Salaam and Morogoro – through qualitative interviews with key stakeholders/ informants and approximately 60 short operator surveys. Country findings were presented to and discussed among the key stakeholders in a series of (online) workshops. The results of this report – together with similar research activities in five other Sub-Saharan countries – have been used for an aggregated report and policy brief on the impact of the COVID-19 outbreak on the urban motorcycle/ tricycle taxi (MCT/ MTT) sector in Sub-Saharan Africa.

Key facts

- In the first two months (March to May 2020) of the COVID-19 epidemic in Tanzania, 509 cases and 21 deaths were reported. Official statistics of cases and deaths in the period thereafter have not been disclosed;
- The government responded with measures such as physical distancing, closure of schools and cessation of social gatherings. No lockdown was introduced and measures to stop the spread of COVID-19 were less strict compared to other countries in the region;
- Public transport providers were required to limit passenger numbers to comply with physical distancing regulations, with passengers required to wear face-masks;
- Motorcycle taxi services continued as usual but were required to comply with heightened hygiene measures.

Key findings

- MCT operators were not directly involved in designing COVID-19 measures relevant to their sector, but some MCT union leaders contributed to the sensitisation seminars organised by the licensing authority;
- Restrictions to combat the spread of COVID-19 were mainly enforced by the traffic police. More than a quarter of the MCT operators surveyed stated that they self-complied with the restrictions and measures;
- Social and/or technical innovations were limited beyond those advised by the government and health experts. Some operators provided headcovers, gloves and hand sanitiser to their passengers;
- Wearing face masks (38%), washing hands between journeys (35%) and taking one passenger at a time (30%) were the most frequently implemented measures, according to the surveys;
- The government was generally trusted over COVID-19 related information and measures, while other institutions such as the police and MCT unions were trusted less.

Key recommendations

- While formulating a country-specific approach, rather than using a blue-print approach, in dealing with the COVID-19 epidemic is laudable, it is recommended that this should still be predominately informed by science and evidence, rather than politics;
- Regular public updates on COVID-19 cases and deaths from government authorities will likely facilitate self-compliance among MCT/ MTT operators, especially in difficult to reach areas;



- While MCT transport may offer fewer opportunities for COVID-19 transmission, compared to conventional means of public transport, preventative measures, such as wearing face masks and hand washing, should be promoted.



1. Introduction

In the last 25 years or so, motorcycle taxis (MCTs) – and more recently motor-tricycle taxis (MTTs) – have fundamentally changed mobility and access in urban Sub-Saharan Africa, providing rapid and door-to-door transport, supporting livelihood activities, and facilitating access to essential services, such as health, markets and education. In many African cities, motorcycle taxis – often referred to as *Okadas* in West Africa or *Boda-Bodas* in East Africa – are responsible for the majority of transport movements of both people and goods and provide hundreds of thousands of jobs to low-skilled and/or marginalised youth.

During the recent COVID-19 epidemic, urban motorcycle/ tricycle taxi operators provided essential services, including to key health-workers, but also experienced risks of contracting the virus and spreading it, due to their close and multiple interactions with customers. Understanding the impact of COVID-19 – and of the measures taken to mitigate the spread of the virus – on this widespread intermediate form of transport is crucial for planning, managing and operating urban transport services, so that essential services remain accessible for urban dwellers during periods of lockdown or curfews.

While MCT operators have in many cases shown ingenuity and an ability to adapt and innovate when responding to different (health) challenges, policy-makers and regulators often remain somewhat unwilling to engage with (or are even hostile to) the – often informal – motorcycle taxi sector. Furthermore, because of the intermediate and informal nature of the motorcycle taxi sector, policymakers, urban planners and transport regulators tend to overlook its role and potential (as a force for good/ support but equally as a factor in further spreading COVID-19) or are not sure how to engage with the sector and its representatives. Prior to the COVID-19 pandemic, many of the measures taken by African cities to curb or even completely ban motorcycle taxi riding ignored the essential services they deliver and seem to be mainly a response to the rising number of traffic accidents involving or caused by motorcycle taxi riders. The rapid spread of urban motorcycle taxis does pose a series of challenges. Bringing motorcycle taxi operators/ unions and key stakeholders in urban (health) planning and transport together will be essential for the future sustainable socio-economic and environmental development of SSA’s cities.

1.1 Project aims and objectives

The aim of the project *Accelerating COVID-19 related ‘best practice’ in the urban motorcycle taxi sector in Sub-Saharan Africa* is to improve understanding of the impact of the COVID-19 outbreak (including the measures and restrictions put in place to reduce its spread) on the urban motorcycle taxi sector in Sub-Saharan Africa (SSA), via case studies of three West African countries (Sierra Leone, Liberia and Ghana) and three East African countries (Uganda, Kenya and Tanzania). This report analyses and communicates the data and findings for Tanzania.

Knowledge (including false/ ineffective ‘knowledge’) about how to reduce the chance of COVID-19 infection, through behaviour changes and/or social and technical innovations, may be shared spontaneously among individuals or small groups of riders. However there is limited opportunity to share best practices between motorcycle taxi operators in different cities or between different LICs (and lower MICs). This study’s objective, therefore, was to share the findings, best practices, and any social and technological innovations developed/ adapted by motorcycle taxi operators to mitigate the impact of COVID-19. It was intended that by sharing them with urban motorcycle taxi operators and key stakeholders, including policymakers, this would allow for evidence-based rapid interventions. This was done via workshops, a sharing platform freely accessible to all relevant beneficiaries and key stakeholders, and one generic policy brief, together allowing for intra-city, inter-city and international peer-to-peer learning and knowledge exchange.

1.2 Transport challenges being addressed during/ post COVID-19

Motorcycle taxis play a pivotal role in the provision of urban transport. However, relations and trust between the concerned authorities and motorcycle taxi operators/ unions can be strained at times, possibly affecting the effectiveness of COVID-19 measures and restrictions. This research established:

- If and how the COVID-19 pandemic has affected urban motorcycle taxi services in general;



- If motorcycle taxi operators or unions have been consulted in the COVID-19 measures taken, and what their level of compliance with these has been (including reasons for limited or non-compliance); and
- Social and technological measures and innovations motorcycle taxi operators have introduced to limit infection by or spread of COVID-19.

2. Methodology

2.1 Summary of approach

This project used a mixed methods research approach, divided into three key activities or work-packages. The three work packages set out below allowed us to collect important data to answer the various research questions, to create opportunities for the key stakeholders and beneficiaries to discuss and access the findings in user-friendly formats, and to learn from peers across different countries and regions. The approach has high utility due to the multiple opportunities created for peer-to-peer and peer-to-stakeholder learning, as well as for knowledge exchange at an intra-city, inter-city, inter-national and virtual levels.

2.1.1 Work Package 1: Data collection

In each of the study's case countries, data were collected through key informant interviews and motorcycle taxi/ motor tricycle taxi operator surveys in two cities.

2.1.2 Work Package 2: Sharing of findings

Data findings, including responses and socio-technological innovations, were discussed in country-level Focus Group Discussions (FGDs) between the country researcher, key stakeholders, and representatives of the beneficiaries. Due to ongoing COVID-19 restrictions in the case-study countries, typically the number of participants in these FGDs had to be limited to comply with regulations.

2.1.3 Work Package 3: Feeding back findings from regional workshops

Findings from the country studies and FGDs were presented at a webinar on 16th April 2021. The webinar participants included the various country researchers and key stakeholders (from all six case-study countries) such as representatives of MCT unions; traffic police; representatives from ministries of health (and other relevant ministries); market board members; city council representatives; transport sector regulatory bodies; and urban planning departments. The key stakeholders were identified by the country researcher based on a country specific literature review at the start of the project. A website and online open-access sharing platform have been developed (<https://www.africawheels.org>) on which the study's findings are shown, including short videos (of one to two minutes in duration) of MCT operators explaining COVID-19 related challenges they have experienced and how they have overcome these.

2.2 Detailed methodology

Data were collected through a mixture of semi-structured qualitative interviews and short surveys. The research objectives set out in the section above were operationalised in five open-ended qualitative questions that were asked to the key informants/ key stakeholders (see Annex B for the stakeholder interview form). For each case study country approximately 15 key informants were interviewed (see Annex A for a list of interviewed stakeholders). The questions asked were:

1. What have been the impacts/ effects of COVID-19 on urban transport in general and the motorcycle taxi (MCT) sector specifically?
2. If transport-related restrictions or a lockdown were introduced, what were the specifics of these, to what extent have motorcycle taxi unions and/or riders consulted in this, and to what extent have MCT riders complied with these?
3. Are there any social or technological innovations or adaptations MCT riders can take (or have taken) to reduce exposure and limit the spread of COVID-19?



4. Have experiences with and responses to previous outbreaks/ pandemics been used when addressing the current COVID-19 outbreak (for Sierra Leone and Liberia, think Ebola; for other countries, think for instance of tuberculosis, feared to be spread by using shared helmets)?
5. If motorcycle taxi transport, from all the modes of public transport (shared-car taxis, mini- and midi-buses, etc.) poses the lowest risk of COVID transmission, do you think that motorcycle taxi transport should be promoted?

In addition, further survey questions were designed to provide more quantitative data on these five topics. While some of these survey questions were in a simple 'yes/no' format, others used a Likert scale or provided multiple answers to choose from. MCT/ MTT operators were surveyed in two cities in each of our six study countries, with a total of 60 surveys per country. The full research instrument is included in Annex C to this report. Since the MCT surveys were (largely) standardised across the 12 locations (two urban settings in six countries), this resulted in an aggregated 'bank' of about 360 surveys. As can happen when conducting surveys in large numbers, in a few cases one or more questions were not answered or correctly recorded. If, and when this happened, it is reflected in the graphs via the N number.

While 60 to 80 surveys can hardly be considered as sufficient for a meaningful quantitative analysis on its own, it is believed by the researchers that because of the way in which surveys were conducted (as described in the above paragraph), together with the key stakeholder interviews, that the data provides insight on par with what would be expected from a rapid appraisal method, for instance. The qualitative and quantitative data, plus the literature reviews, allowed for some level of triangulation to assess the validity of claims and findings.

3. Tanzania context

This section provides a short overview of the first eight months of the COVID-19 pandemic in Tanzania and how it impacted the country's transport sector.

3.1 COVID-19 in Tanzania

Tanzania announced its first case of COVID-19 through the Ministry of Health on 16th March 2020, with a passenger arriving at Kilimanjaro International Airport (KIA) from Belgium testing positive (1). Subsequently, various measures towards limiting the spread of the virus were undertaken, such as the closure of all schools and a ban on all public and social gatherings, as well as quarantining passengers from countries reported to have been affected by COVID-19. A testing and tracing programme started, reporting cases daily. However, on 4 May 2020, Tanzania stopped reporting new cases of COVID-19 following false test results issued by the National Health Laboratory after (allegedly) biological samples submitted from a pawpaw, car oil and a goat had tested positive for COVID-19 during its standard laboratory equipment check-up. Before it stopped to release daily test results, a total of 509 COVID-19 positive cases were reported of whom 183 had recovered, and 21 had died.

The ban on public, social gatherings and schools lasted for about three months and on 1st June 2020, the order to re-open universities was given. On 29th June all schools – kindergarten, primary and secondary schools – were re-opened, but with strict health guidelines aimed at preventing a further spread of COVID-19. A ban on claiming/ reporting that the level of infections had declined substantially was lifted as well. Generally, measures taken were considered mild, as no lockdowns or travel restrictions from one region to another were imposed. Justifying the country's position against lockdowns, the late President of the United Republic of Tanzania stated that the country prioritised the economy and livelihoods of people. He further added that the country would not allow itself to be ruled by COVID-19. With regards to the international country borders, the President emphasized that the borders would remain open to limit economic damage.

In addition to the official measures stipulated by the Ministry of Health, members of the public, including politicians, religious leaders, and entrepreneurs propagated their own measures to combat the disease. For example, the use of ginger and lemon juice was a popular home 'remedy' and was widely adopted, as it was believed that the practice would alkalise the body and, therefore, make it less vulnerable to the virus. The demand for lemons soared and by April their price had increased fivefold, especially in Dar es Salaam.



Politicians and other government leaders, including the President, also appealed to members of different religious denominations to resort to prayer as a way of fighting the pandemic (2). Following the belief that with God nothing is impossible, the President declared three days of prayer for the entire country and ordered religious groups to diligently implement the order. Therefore, the days from 17th to 19th April 2020 were set apart for prayers and many people complied by attending churches and mosques.

Steam inhalation, popularly known in Kiswahili as *kujifukiza* or *kupiga nyungu* was another measure widely adopted, using a mixture of various locally available herbs such as lemongrass, gum trees and lime base. Steam inhalation services were provided by some entrepreneurs in special spots where one pays about 500Tsh (0.25 USD) and enters a facility for the steaming session. While some entrepreneurs made and sold steam machines, most people carried out the treatment at home by covering themselves with blankets while inhaling the steam (3).

Allowing congregational worship in churches and mosques and not imposing a lockdown on the country are clearly diverting from the approaches taken by other Sub-Saharan African countries. While some are concerned about Tanzania's approach toward overcoming the COVID-19 pandemic, others have applauded the country as one of the best examples of a response that is based on local circumstances, and criticised African countries that have merely duplicated Western approaches (4).

Irrespective of the mild measures, the country still experienced negative socioeconomic effects. The tourism sector suffered heavily following the suspension of international flights into the country in April 2020. This measure led to the closure of hotels, lodges and restaurants and about 80% of the revenues of tour operators was lost (5). The loss in business forced many establishments to lay off part of their workforce and those who were retained had to accept salary cuts (6).

Some farmers were not able to sell their produce because buyers struggled to visit the farms. Reduced mobility to collect food products from rural areas for urban markets due to the fear of COVID-19 affected the entire supply chain. From lorry drivers to coolies who load and unload products in urban markets to hawkers in cities like Dar es Salaam, all felt the pain as many of them lost their usual income (7). In the mining sector, challenges such as the disruption of the global supply chain and the ceasing of operations by mining companies to comply with physical distancing policies, were also noted (8). Data provided by Google on urban mobility in Dar es Salaam showed a decline of around 30% in workplaces, transit stations and restaurants (5).

3.2 COVID-19 and urban transport measures

Urban transport in the country was affected by COVID-19 measures, especially during the first wave around March 2020. Measures such as the requirement to maintain physical distance between passengers in commuter buses and the BRT were instituted and operators were compelled to control the number of passengers onboard. The use of face masks and washing of hands were made compulsory. Motorcycle taxis were allowed to operate as normal and no specific MCT measures were introduced. However, the hygienic measures for the general public obviously also applied to MCT operators. Nevertheless, their implementation in the country was short lived: effective implementation on commuter buses, the BRT and by MCT operators lasted for less than three months, from mid-March to June 2020. After that period, hardly any MCT operators wore a face mask and hand washing facilities were no longer seen in MCT stations. In mini-buses and the BRT, the one-meter distance rule between passengers was no longer enforced and the characteristic tendency of overloading resumed. The rational or scientific base for this relaxation of COVID-19 measures in all modes of transport was unclear as information on new cases and fatalities was no longer made public.

3.3 Motorcycle and motor-tricycle taxi sector

Motorcycle groups in Tanzania exist in every region, although most of these "unions" are registered as youth development groups and not as sector-specific associations. According to information from community development officers of the three districts of Kigamboni, Ilala and Ubungu in Dar es salaam, these so-called unions are registered under the same category as women, youth or entrepreneur groups. They therefore have access to the same benefits as for instance youth groups, including access to soft loans. In Tanzania, the law requires that 10% of all revenue generated by municipal and district councils must be allocated as soft loans (low interest/ long pay-back terms) for such groups. At the national level, the association of motorcycle



owners and drivers in Tanzania – *Chama Cha Madereva na Wamiliki Pikipiki Tanzania* (CHAMWAPITA) – was registered in June 2020. It has 1.2 million members, coming from all regions in the country. For Dar es salaam, the regional *Chama Cha Madereva na Wamiliki wa Pikipiki Dar es Salaam* (CMDP) association has a total of 60,000 members (according to information availed by the CHAMWAPITA General Secretary).

4. Perspectives of key stakeholders on COVID-19 and the motorcycle taxi sector

In this chapter data collected via the key stakeholder/ key informant interviews is presented, analysed and discussed. In Tanzania, 12 interviews were conducted (six of them with stakeholders in the capital and six with stakeholders in a secondary city). A full list of key stakeholders interviewed is presented in Appendix A; these included urban transport planners, traffic police representatives, health workers, motorcycle taxi union representatives, MCT users' representatives and transport regulatory authority representatives. The chapter is organised according to the five semi-structured questions that the informants were asked.

4.1 Impacts of COVID-19 on urban transport

The COVID-19 pandemic had serious effects on urban transport, especially in Dar es Salaam City where more cases of the pandemic were reported and measures were more stringently enforced, as compared to other regions. The implementation of measures affected public transport in various ways.

Some degree of the impact is illustrated by the statement given by the representative of transport regulatory authority in Dar es Salaam:

"Urban transport was affected since buses had to carry fewer passengers than their actual capacity in order to abide by the physical distancing rule. There were also delays in bus stations as demand exceeded supply of buses since most economic activities and movements continued as usual".

The problem of increased time for waiting at bus stations was also compounded by the decisions of bus owners to stop offering services, with some service providers stopping working completely, due to fear of the drivers that they could not pay the hire charges on time. Commuter buses in the city normally overload passengers and according to operators, that is the only way they can make some profit and be able to pay hire charges, buy fuel and pay themselves and the conductor a salary.

Although there was no official travel restriction in the city, general mobility in the city fell sharply. According to a traffic police representative in Dar es Salaam, most roads were almost completely empty and there were no traffic jams at all. The drop in mobility was also caused by closure of schools, and a reduced movement to workplaces since some people opted to work from home. All these contributed to reduced mobility in the city's roads and, as result, all modes of transport experienced income loss. A motorcycle union representative commented:

"There were few passengers since many people left the city to their villages or locked themselves in their homes. You may stay at the station for the whole day and earn only peanuts."

For intercity buses, most passengers were travelling to their villages in the countryside and very few were coming into the city of Dar es Salaam. This migration happened to avoid the risk of being infected with COVID-19 since Dar es Salaam was deemed to be unsafe. People from other regions postponed travel plans to the city for the same reason.

Although general mobility levels fell, some key informants stated that the public's fear of contracting COVID-19 in public buses offered an opportunity for MCT riders. More people opted for individual modes transport such as MCTs in the belief that they were safer. According to one MCT user representative in Morogoro town:

"Motorcycle riders made more money and more trips especially during the rush hours of morning and evening. I witnessed that because I am a regular user of motorcycle taxis. Similar comments were made by an urban planner in Morogoro who said: Most people avoided public buses during the COVID period because of the high risk of infections, motorcycle taxis made a lot of trips, they gained many passengers who resorted to motorcycles since it was the only alternative that was deemed safe. This sentiment contradicts that of the motorcycle union representative, who said: There were very few



passengers for motorcycles. Our income was also negatively affected because we made fewer trips than the period before COVID-19. The situation has almost returned to normal now."

Another comment related to income loss by motorcycle riders concerns a specific segment of customers, namely car owners, who had been using MCTs to avoid traffic jams but were switching back to their cars to reduce the likelihood of contracting the disease. The issue of whether MCT riders made more trips, and hence more money is not a straightforward one, further complicated by a general tendency among business people in Tanzania to only talk of the negative impacts on their businesses.

4.2 Impact of transport-related measures and consultations of the sector

Tanzania, like other countries, took various measures and steps to limit the spread of the COVID-19 pandemic. However, in comparison with other nations in the East African community such as Kenya, Uganda and Rwanda, measures in Tanzania were less strict. With respect to the transport sector, for example, it introduced neither curfews nor restrictions on certain routes. The main measures introduced were the use of face masks, washing hands with running water and soap or the use of hand-sanitisers.

All key informants, including the motorcycle unions, stated they were not consulted in designing or formulating the COVID-19 measures. On reasons for not involving stakeholders in designing the measures, a medical officer from the Ministry of Health said:

"The pandemic was considered an emergency situation and therefore we could not involve various stakeholders in designing safety regulations against the disease."

He further added that meeting with stakeholders for discussions might have spread the disease further. However, a Lands and Transport Regulatory Authority (LATRA) official stated:

"Seminars on COVID-19 measures were provided to all transport service providers including bus owners, operators and MCT union leaders so that they could sensitise their members and passengers on the importance of complying with the measures."

Such seminars were organised in collaboration with the Ministry of Health, communicating the guidelines prepared for the transport sector.

Additionally, the LATRA official in Morogoro said that they visited 39 motorcycle taxi stations to sensitise them on COVID-19 measures. On the level of compliance with the regulations of COVID-19, most key informants said that the majority of MCTs complied with regulations, but a few did not. However, additional data collected showed that this level of compliance was only high during the early days of the pandemic. This may have been influenced by government actions such as the discontinuing of the publishing of COVID-19 cases and, later, the lifting of the ban on social gatherings and sports events. These actions made many people feel that the pandemic no longer existed and therefore many took a more relaxed stance.

4.3 Social or technological adaptations made by motorcycle taxi operators

Apart from the official measures taken to curb the spread of COVID-19, a few other social and technological adaptations were observed among MCT operators. A medical officer in Dar es Salaam stated:

"Some riders provided disposable headcovers to their passengers to be worn underneath the helmet to reduce the possibility of spreading the disease."

Passenger helmets are normally shared and therefore there was a possibility of transmitting the disease among passengers. The issue of wearing helmets in the battle to limit the spread of COVID-19 created a misunderstanding when the regional government in Dar es Salaam ordered passengers not to share helmets – generally interpreted as suggesting that there was no need to wear helmets since passengers do not typically carry their own helmets – while at the same time the police insisted on the wearing of helmets for road traffic safety. The use of headcovers, therefore, was a commendable move by MCT operators.

A more technological measure was observed in Dar es Salaam by a medical officer who observed: Some riders provided gloves to passengers to protect themselves from the virus when holding touch points on the bike. One rider came to our office to request for some gloves so that he may provide [them] to passengers.



Another representative from LATRA, while not having observed any technological measures adopted, advised that the electronic ticketing system that is being promoted for use in making payments and for issuing tickets by bus operators would also help to reduce the risk of infection if adapted by MCT riders.

4.4 Useful lessons from previous health crises

Diseases such as cholera and tuberculosis are high on the country's health agenda. For example, cholera is categorized as "very high risk" in the nation's public health risk listing (9). Outbreaks have been recurrent, and the last outbreak was in 2015-2016, when it was reported in five major cities and lasted for a year and a half. According to an interview with a public health officer in Dar es Salaam:

"The experience of cholera outbreaks in the country to a large extent contributed towards informing measures relevant to reducing the spread of [COVID-19]."

He further added that as a member of the country's epidemiology committee, he is aware that the experience was relevant because measures taken for preventing the spread of cholera such as the isolation of patients, physical distancing and washing hands are also used in fighting the spread of COVID-19. Other diseases such as Ebola were reported in the neighbouring countries of Uganda and the Democratic Republic of Congo in 2018. Measures such as scanning incoming passengers at all major airports and border posts and distributing PPE in all district hospitals, were subsequently introduced.

Through African Union coordination, Tanzania sent doctors with expertise in human epidemiology to help fight the spread of disease during the West African Ebola outbreak in 2014/2015. When asked to comment on whether their involvement in fighting Ebola in Liberia has provided any lessons to the country, the representative said:

"I am aware the country sent doctors to Liberia but I cannot comment on that. What I know is that preventive measures at entry points taken during Ebola are similar with the ones taken against the spread of [COVID-19] in this country".

4.5 Motorcycle taxis as a low-risk means of transport?

There is widespread belief that motorcycle taxis are a relatively safe mode of transport in the face of the COVID-19 pandemic because they offer good ventilation and exposure to sunlight. However, this notion was challenged by several key stakeholders interviewed for this study.

One interviewee, a transport engineer with the National Institute of Transport (NIT) in Dar es Salaam stated:

"I don't think MCT poses a lower risk, the risk is the same for all transport means. It is even higher for motorcycles because there is no physical distance between a rider and a passenger. Also, the fact that all passengers touch the same place (for support) is even riskier. I think we need to conduct research to see what mode of transport contributes more towards the spread of the pandemic. A private motorcycle is safe, MCT taxis I am not sure".

In a similar vein, a town planner of Morogoro Municipal Council commented:

"If you don't take measures you may get COVID in any form of transport including motorcycle. If a passenger or a rider sniffs and you have no mask, you will contract the disease. No mode of transport is safer than the other, of importance is to take measures as recommended by the Ministry of Health".

Most respondents however felt that it would be important to promote the use of MCTs, arguing that they play a significant role in urban transport. The demand for MCT services is influenced by the deficiencies of urban transport in cities. Factors such as traffic jams and a limited network of public transport in rapidly expanding cities, make MCT the best alternative in fulfilling the transport needs of urbanites. In an interview with traffic police in Dar es Salaam, the respondent said:

"I think they should be promoted because they have helped many people considering that urban transport is cumbersome. With good training on MCT riding and on how to run their business, I think they will help many young people".



This sentiment points to the critical issue of proper training, which is generally perceived as an area for further attention. Proper training on how to ride MCTs should be a pre-condition for promoting this transport sub-sector. This will enhance road safety and contribute towards making it a reliable means of transport.

In Morogoro, a MCT union representative stated:

"I think MCTs are safer than buses when it comes to diseases such as COVID-19, therefore it should be promoted but with some caution. For example, many riders here are not licenced to drive so they need licences to allow them to operate legally".

This interviewee draws attention to the need to licence those involved in MCT riding. The reason for not applying for a licence is unclear, although many riders claim that the processes involved, and the cost of the document are the main constraints. If the issue of licencing is enforced, only those who qualify will obtain licences and therefore be allowed to operate. This will control what is now basically a free entry into this transport sub-sector.

At the government level, some effort has been made to accommodate MCTs in urban transport planning, yet there appears to be no actual wish to promote their use (10). For instance, in the transport master plans for Mbeya and Arusha cities, exclusive lanes for motorcycles were proposed during the design stage. However, these were not realised during the actual implementation.

One different opinion regarding promoting MCTs was made by a regular user who commented:

"MCTs should not be promoted because they are expensive as compared to other transport modes."

He further claimed that people cannot afford to use MCTs regularly, because it is about four to five times more expensive than commuter buses. Furthermore, motorcycles are also prone to accidents. The sector is not fully controlled, and many riders lack training and professionalism. He instead insisted that public transport be improved as it is affordable to many.

5. Motorcycle taxi survey findings

5.1 Findings

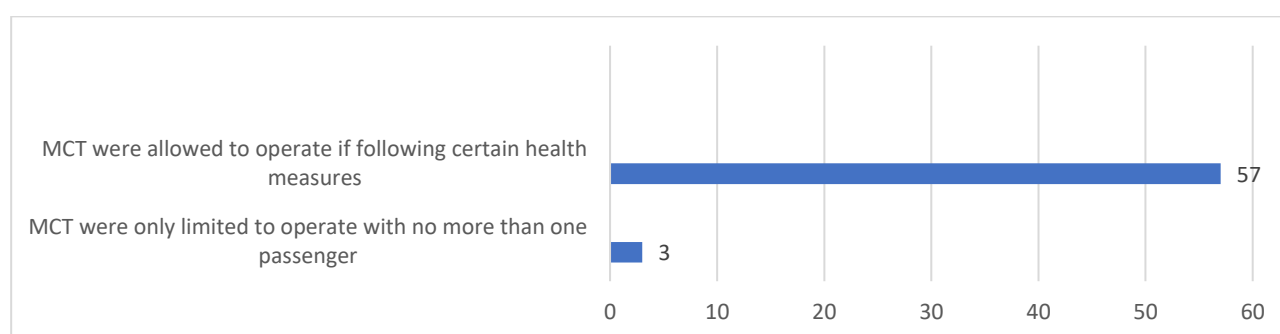
Below the findings of the motorcycle taxi surveys are presented. 60 surveys were conducted, spread equally over two cities (Dar es salaam and Morogoro). The country researcher, when collecting the survey data, approached this exercise as more than a 'box-ticking' event, and typically asked the respondents to explain their answer, to get a better appreciation of why such an answer was given. This understanding proved to be extremely useful for the interpretation of the data as well as for the workshops.

5.2 Restrictions during COVID-19

Measures for the MCT sub-sector were the same as that required for the general public. Motorcycle taxis were allowed to operate as usual provided that they abided by the recommended health measures such as wearing face masks and washing hands with soap or use of hand sanitisers (Figure 1). The MCT sub-sector in the country is recognised by law and LATRA licences them to provide services. When COVID-19 measures were first introduced, MCTs were even given more access to areas in which they were previously banned, such as the CBD in Dar es Salaam. The purpose of this was to provide more options for passengers who might have struggled to catch transport because buses had to operate below their normal capacity.



Figure 1: Restrictions Enforced During COVID-19



5.3 Number of journeys

MCT operators made more trips during the period preceding the COVID-19 era than during the period when measures were enforced (Table 1). Although there was no mandatory lockdown in the country and MCTs were allowed to operate, the closure of schools as well as some businesses, as well as the overall decline in mobility as individuals decided to lock themselves in their homes, reduced demand for MCT services. For the pre-COVID-19 period, MCTs recorded a higher number of journeys during days with serious traffic jams, during weekends when people go out and during celebrations and holidays.

Table 1: Comparison of the number of journeys

	Number of journeys pre-COVID-19 normal day	Number of journeys pre-COVID-19 busy day	Number of journeys during COVID-19 normal day	Number of journeys during COVID-19 busy day	Lockdown normal day	Lockdown busy day
Average	18.06	26.82	9.24	14.42	No lockdown was imposed	
Minimum	5	10	3	6		
Maximum	34	60	20	25		

5.4 Length of journeys in minutes

The following table shows time in minutes of all journeys made per day by MCT riders. The minutes were obtained by multiplying the average duration per trip with the number of journeys made per day. Later, total minutes (for all respondents) for the respective column were added and from there an average, minimum and maximum time was obtained. The shortest trips were made during a COVID-19 normal day, probably because passengers were not travelling long distances to work, and the longest trips were made during pre-COVID-19 normal days.

Table 2: Comparison of the length of journeys

	Length of trip (minutes) per day pre-COVID-19 normal day	Length of trip (minutes) per day pre-COVID-19 busy day	Length of trip (minutes) per day during COVID-19 normal day	Length of trip (minutes) per day during COVID-19 busy day	Length of trip during lockdown normal day	Length of trip during lockdown busy day
Average	252.92	385.34	144.46	217.22	No lockdown was imposed	
Minimum	35	35	30	54		
Maximum	850	875	600	550		

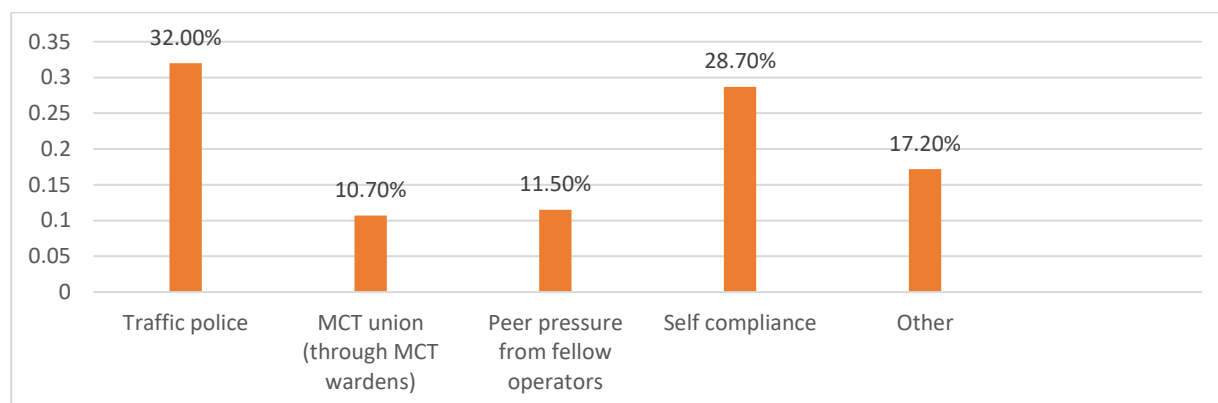
5.5 Enforcement of restrictions

Measures to combat the pandemic were enforced by the traffic police, mostly along main roads while ward/village leaders and Ministry of Health officials implemented these in other areas far from main roads (see



Figure 2). Beyond the institutions officially tasked with enforcing regulations, pressure to abide to the rules also came from other areas. For instance, some respondents said that family members and spouses also reminded them of the importance of adhering to COVID-19 measures because they were deemed to be at risk of being infected. Self-compliance and other measures were more common in areas outside of major roads. Such areas are rarely visited by traffic police. Here, local government leaders were typically in charge.

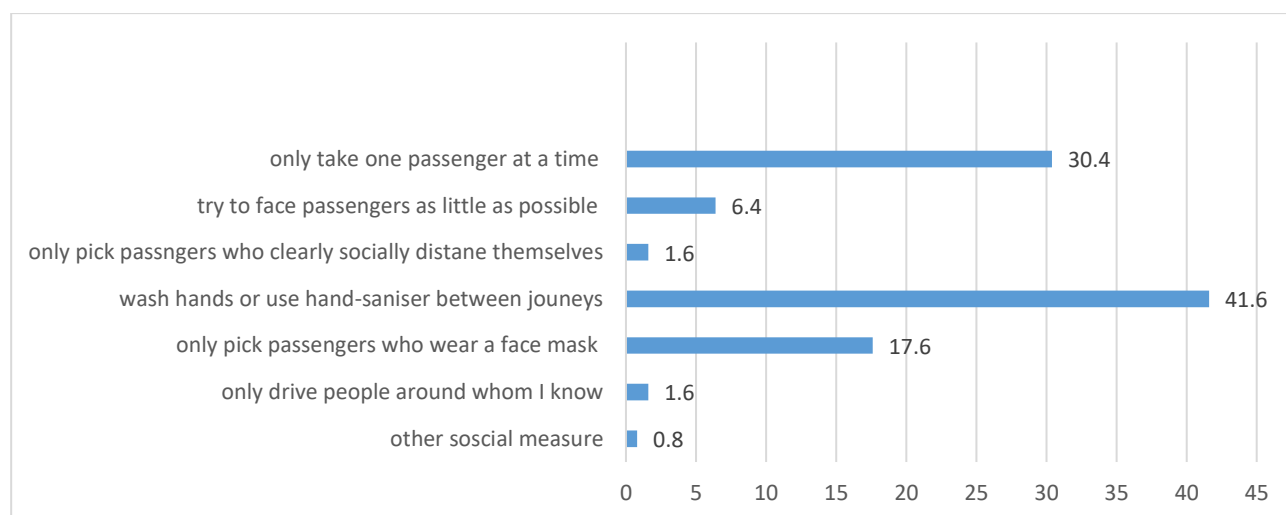
Figure 2: Who enforced the restrictions?



5.6 Social measures

Washing hands or using a sanitiser were the most common measures opted for by MCT riders (Figure 3). This method is probably the easiest to implement since facilities for hand washing were installed at the MCT stations. The costs for these hand washing facilities were covered by the operators themselves. The hand washing facilities at the station were also made available to passengers.

Figure 3: Social measures taken by MCT Operators to reduce the spread of COVID-19

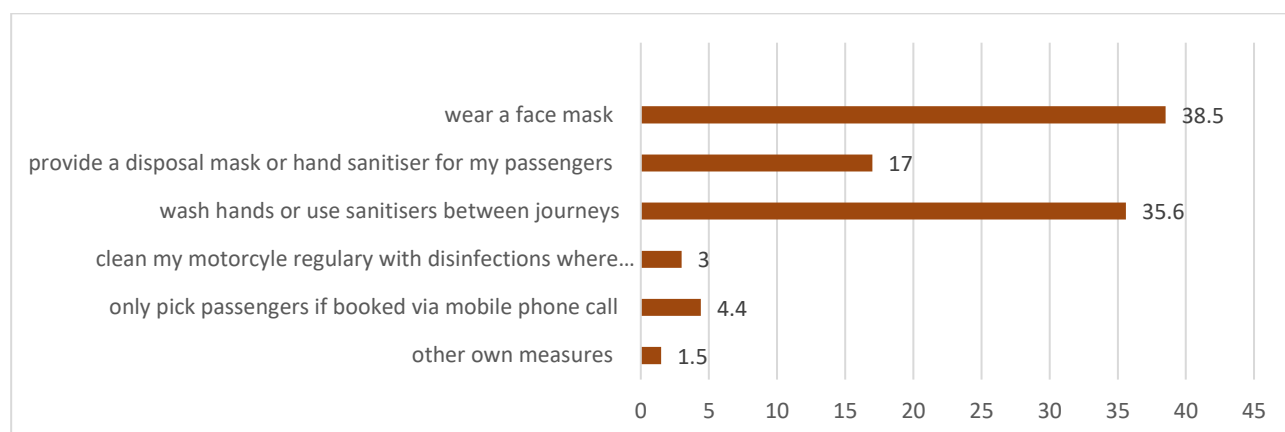


5.7 Technological measures

Wearing of face masks and washing of hands were the most common technological measures used as shown in Figure 4. These two were readily implemented because they were less expensive for the operators. Furthermore, support from various private companies and businesses supported MCTs with hand washing facilities and face masks. Other measures, such as cleaning motorcycles with disinfectants, would have been more expensive and therefore less feasible to implement.



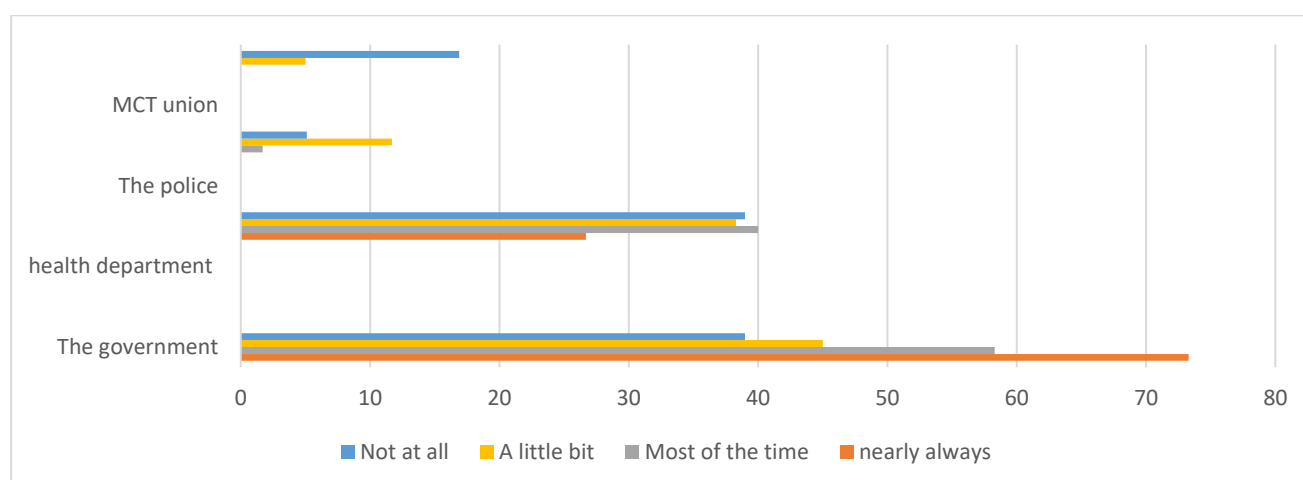
Figure 4: Technological measures taken by MCT Operators to reduce the spread of COVID-19



5.8 Trust in institutions

The institutions which were trusted the least by the motorcycle taxi operators were the police and the MCT unions. For the police, their relationship with MCT riders has never been particularly good. Many operators believe that the police do not treat them in a fair manner and that they are always out to arrest and fine them, even for minor offences. MCT leaders were often not trusted because of leadership dynamics and issues within the unions. Leaders involved were not often from within the ranks of the MCT stations and were therefore not known by the operators. Government institutions were trusted the most, perhaps because top government leaders were frequently engaging with the public in providing information on dos and don'ts of life amid the COVID-19 pandemic.

Figure 5: Trust in key institutions on COVID-19 restrictions





6. Conclusion

Urban transport providers, including MCT operators, have been negatively affected by COVID-19 despite the fact that stringent measures such as lockdowns and travel restrictions were not imposed in the country. Motorcycle taxis were allowed to operate as usual provided that they abided by the recommended health measures such as wearing face masks and washing hands with soap or use of hand sanitisers. However, the impact of the reduced demand for transport due to the fear of being infected was felt by MCT riders, mainly as loss in income. In our surveys, MCT operators reported making more trips during the period preceding the COVID-19 era. They also reported making shorter journeys, probably because passengers were not travelling long distances to work during this period.

Key stakeholders suggested that most MCT operators initially complied with measures to combat the pandemic. In our surveys, operators reported that restrictions were mainly enforced by the traffic police, mostly along main roads, while ward/ village leaders and Ministry of Health officials implemented these in other areas further from main roads. However, key stakeholders explained that when the government stopped releasing statistics on infections and deaths, many people stopped complying with the measures.

Most respondents claimed that MCTs are not notably safer compared to other transport means if one does not take precautionary measures. The practice of sharing helmets between passengers may make it even riskier. However, in our surveys operators reported having taken a number of social and technological measures to reduce the risk of spreading COVID-19, which most commonly included reducing the number of passengers carried at any one time, wearing face masks, washing hands and using hand sanitisers.

Because of the significant role that MCTs have in providing quick and relatively cheap transport, many respondents suggested that the sub-sector should be promoted. Provision of training for MCT operators and controlling entry to this transport sub-sector by requiring all operators to be licenced and qualified, would make MCTs a more reliable and safer means of transport.



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APPENDIX A: KEY STAKEHOLDERS INTERVIEWED

Representatives of the following organisations/institutions were interviewed:

- Traffic Police Officer at Slender Bridge Police Station, Dar es Salaam
- Transport Engineer, National Institute of Transport (NIT), Dar es Salaam
- Public Health Officer, Ministry of Health, Dar es Salaam
- Mikocheni Shelly's boda-boda and Bajaj union (MISHEBO) Chairperson, Mikocheni Dar es Salaam
- Motorcycle User Representative, Dar es Salaam
- Lands and transport regulatory authority (LATRA) representative, Dar es salaam
- Regional transport officer, Morogoro police station
- Medical officer Morogoro
- Government town planner, Morogoro municipal
- Officer in charge of the regional office, (LATRA) Morogoro
- Motorcycle union representative, Morogoro
- Motorcycle user category representative, Morogoro



APPENDIX B: KEY STAKEHOLDER INTERVIEW QUESTIONS

Project Title: Accelerating Covid-19 related 'best practice' in the urban motorcycle taxi sector in sub-Saharan Africa

Introduction: This survey/interview is funded by UK Aid via the High Volume Transport Programme in order to better understand the impact of COVID-19 on the transport sector, and specifically the motorcycle taxi sector, in 6 African countries. Participation in the survey/interview is voluntary and there is no financial compensation available, but the researchers do hope that your responses will help to inform policy makers and practitioners to develop good and evidence-based interventions. Your answers will be anonymised, so we will not link your name to your answers and aggregated with other responses. However, we do ask you to provide your name and mobile number, in case we want to contact you again for further questions and/or to share with you the findings of our study.

Signature of interviewee

Interview number (to be linked to name and phone-number of interviewee, kept on a separate piece of paper)

Date:

Location:

Name of data collector:



COVID-Q1 What have been the impacts/effects of COVID-19 on urban transport in general and the motorcycle taxi (MCT) sector specifically?

COVID-Q2 If transport-related restrictions or a lockdown were introduced, what were these specifics of these, to what extent have motorcycle taxi unions and/or riders consulted in this and to what extent have MCT riders been in compliance with these?

COVID-Q3 Are there any social or technological innovations or adaptations MCT riders can take or have been taken to reduce exposure and limit the spread of COVID?

COVID-Q4 Have experiences with and responses to previous outbreaks/pandemics been used when addressing the current COVID outbreak (for Sierra Leone and Liberia, think Ebola, for other countries, think for instance tuberculosis, feared to be spread by using shared helmets)?

COVID-Q5 If motorcycle taxi transport, from all the modes of public transport (shared-car taxi, mini and midi-bus, etc.) poses the lowest risk of COVID transmission, do you think that motorcycle taxi transport should be promoted?



APPENDIX C: MOTORCYCLE/ TRICYCLE OPERATOR QUESTIONS

Project Title: Accelerating Covid-19 related 'best practice' in the urban motorcycle taxi sector in sub-Saharan Africa

Introduction: This survey/interview is funded by UK Aid via the High Volume Transport Programme in order to better understand the impact of COVID-19 on the transport sector, and specifically the motorcycle taxi sector, in 6 African countries. Participation in the survey/interview is voluntary and there is no financial compensation available, but the researchers do hope that your responses will help to inform policy makers and practitioners to develop good and evidence-based interventions. Your answers will be anonymised, so we will not link your name to your answers and aggregated with other responses. However, we do ask you to provide your name and mobile number, in case we want to contact you again for further questions and/or to share with you the findings of our study.

Signature of interviewee

Interview number (to be linked to name and phone-number of interviewee, kept on a separate piece of paper)

Date:

Location:

Name of data collector:

Member of motorcycle taxi union: YES/NO

Motorcycle taxi operator or motor-tricycle taxi operator:



COVID-Q1a The impact of COVID-19 on my job as a motorcycle taxi rider is/was:

1. Very large and mainly negative
2. Very large but mainly positive
3. Not very large, but negative
4. Not very large, but positive
5. No real impact, either positive or negative
6. Other and/or explain your answer above

COVID-Q1b During the COVID-19 the number of MCT journeys I made/make per week:

1. Increased a lot
2. Increased a little
3. Remained more or less the same
4. Decreased a bit
5. Decreased a lot
6. No journeys were made at all
7. Other and/or explain your answer above

	Pre-Covid normal day	Pre-Covid busy day	During Covid normal day	During Covid busy day	During Covid- lockdown normal day	During Covid- lockdown busy day
Number of journeys per day*						
Duration of total number of trips in time (hours per day)						
Duration of total number of trips in distance (kilometres per day)						

*For the interviewer: while exact number may be difficult to recall, key is to find out relative changes between the various column categories.

** For the interviewer: while the exact length in time or kms may be difficult to recall, key is to find out relative changes between the various column categories.

COVID-Q1c Please explain the reasons for the changes in the boxes in the above table.

COVID-Q2a What restrictions on MCT riding were introduced during the lock-down? (please tick all that apply)

1. MCTs were not allowed to operate during the lockdown ☐
2. MCTs were only allowed to operate along certain routes/in certain areas ☐
3. MCTs were only operated to operate during certain times of day or night ☐
4. MCTs were limited to operate with no more than 1 passenger ☐



5. MCTs were only allowed to operate if following certain health measures, such as ☐
6. No restrictions were imposed on the operation of MCTs ☐
7. Other and/or explain your answer above ☐

COVID-Q2b Were the above restrictions

1. Overall, clearly communicated by the government and health department/ministry
2. Generally, clearly communicated by the government and health department/ministry, but there has been some confusion at times
3. Not clearly communicated by the government and health department/ministry, with lots of confusion over what is allowed and what is not allowed.
4. Other and/or explain your answer above

COVID-Q2c Do you trust the following institutions regarding COVID restrictions and measures taken?

	Always	Most of the times	Sometimes	Never	Do not know
The government					
The health department/ministry					
The police/army					
Motorcycle taxi unions					

COVID-Q2d Have motorcycle taxi unions and operators been consulted or involved in designing these rules?

1. Yes, I have been involved in it myself
2. I have not been involved in it but I know my MCT union has been consulted or involved in it.
3. No, we, riders and the unions, have not been consulted or involved in formulating the rules
4. Other and/or explain your answer above.....

COVID-Q2e Who enforced the above restrictions? (tick all that apply)

1. Traffic Police ☐
2. Army ☐
3. MCT unions (through MCT wardens, if in place) ☐
4. Peer pressure from fellow MCT operators ☐
5. Self-compliance ☐
6. Other and/or explain your answer above..... ☐

COVID-Q2f Compared to normal times, have those who enforced the above restrictions been?

1. Much more forceful (higher fines, confiscation of motorcycle, etc.)
2. As strict as in normal circumstances
3. More lenient and understanding (not giving fines for instance)
4. Other and/or explain your answer above

COVID-Q2g To what extent were the above restrictions followed by MCT operators?

1. All MCT riders followed the rules all of time



2. Most MCT riders followed the rules most of the time
3. Some riders followed the rules but many did not
4. Most MCT riders did not follow the rules most of the time
5. All MCT riders did not follow the rules at any time
6. Please provide examples of how rules were broken by MCT riders

COVID-Q2h Do you think that COVID is?

1. A real disease and the measures taken are necessary
2. A real disease but its dangers are exaggerated
3. Not a real disease
4. Other and/or explain your answer above.....

COVID-Q3a What social measures or innovations have you and other MCT riders taken to reduce exposure and limit the spread of COVID (tick all that apply)

1. Only take one passenger at a time ☐
2. Try to face my passenger as little as possible ☐
3. Wash hands or use hand-sanitizer between journeys ☐
4. Only pick up passengers who are clearly socially distancing themselves ☐
5. Only pick-up passengers who wear a facemask ☐
6. Only drive people around who I know ☐
7. Take drugs (pills, vitamin supplements, herbals, traditional medicine, etc.) ☐
8. Other and/or explain your answer above: ☐

COVID-Q3b What technological measures or innovations have you and other MCT riders taken to reduce exposure and limit the spread of COVID (tick all that apply)

1. Wear a facemask ☐
2. Provide a disposal mask or hand-sanitizer for my passengers ☐
3. Wash hands or use hand-sanitizer between journeys ☐
4. Clean my motorcycle regularly with disinfections where passengers sit or hold on to. ☐
5. Only pick up passengers if booked via a mobile phone call ☐
6. Made a design adjustment for my motorcycle taxi ☐
7. Other and/or explain your answer above: ☐

COVID-Q4a Previous outbreaks of diseases/pandemics have affected my motorcycle taxi job

1. Yes, namely (name outbreak/disease)
2. No, not really

COVID-Q4b If answered yes to the above question, in what way have previous outbreaks prepared you:

.....

COVID - Q5a If you have gained new regular customers what are the reasons quoted for them switching to motorcycle taxis (tick all that apply):

1. Another mode of transport not available on my route ☐
2. Frequency of other modes is reduced ☐



- 3. Irregular service from other transport modes ☐
- 4. Fear of Covid19 infection from using other modes of transport ☐
- 5. Easier to socially distance from other passengers on motorcycle taxis ☐
- 6. Other passengers not wearing masks and/or following government guidance ☐
- 7. The journey now takes much longer on other transport modes ☐
- 8. Other reasons (please specify) ☐

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