

Behaviours of the taxi motorcycle drivers of Arusha City

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'Ajali ya gari litokea!' There's been a car accident!

(Lamont, 2012)



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'Bodaboda' = 2 wheelers vehicle used for commercial scope



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Background

Tanzania

- Motorcycles registration have been climbing up in the last years (Tanzania Revenue Authority, 2015)

Period	Jan-Dec	Jan-Dec	Jan-Dec	Jan-Dec	Jan-Dec	Jan-Dec	Jan-Dec	Jan-Dec	Jan-Dec
Year	2006	2007	2008	2009	2010	2011	2012	2013	2014
Motor cycles (2 wheeler)	20,117	28,529	45,474	85,702	115,732	114,743	108,238	159,944	185,110

- The number of the 2 or 3 wheelers vehicles represents 53.6% of the vehicles registered (WHO, 2015)



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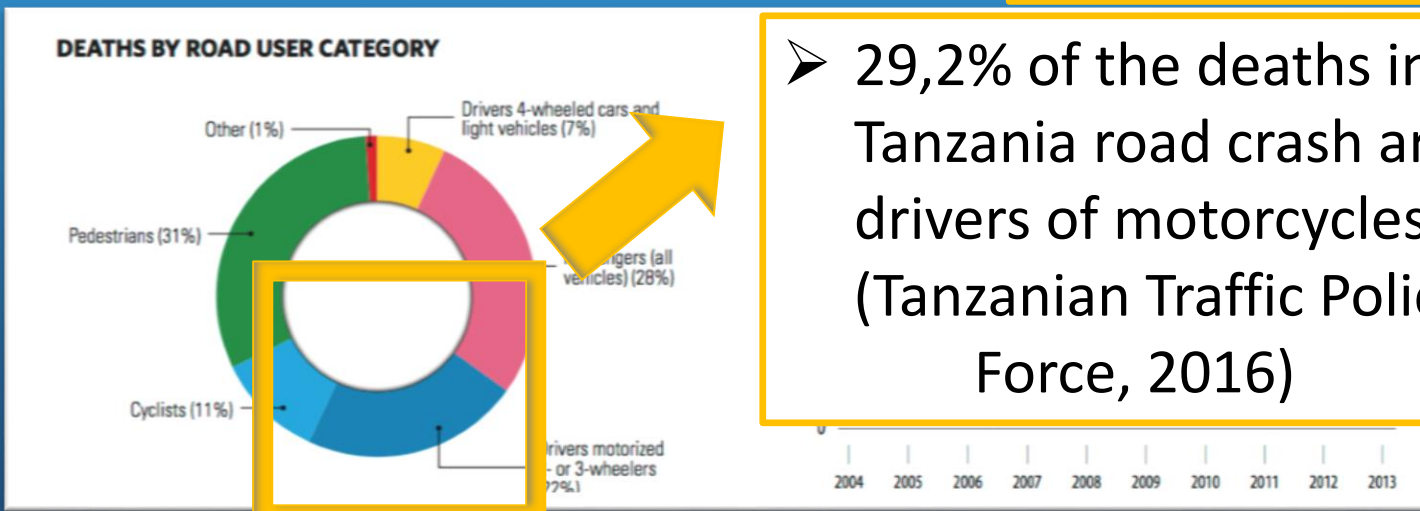
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Background

Tanzania 2016

- 3,381 people were killed on the roads
- 9549 people were injured on the roads
- (Tanzania Traffic Police Force, 2016)

WHO, estimated that the real figure was more than four times as much (WHO, 2015)



- 29,2% of the deaths in Tanzania road crash are drivers of motorcycles (Tanzanian Traffic Police Force, 2016)

What role can a Traffic Psychologist play in education of Bodaboda drivers in Tanzania?



**Bodaboda
ajira 'chungu'**

Takwimu zinaonyesha mwaka 2014 ndiyo ulikuwa mbaya zaidi kwa wamendesha bodaboda biada ya kutokea kwa vifo vya watu 160 huku 1,768 wakijeruhiwa katika ajali 2,082, zilizoitokea.

Raymond Kaminyoga, Mwananchi

dereva wa pikipiki zinazochukua

pikipiki ni rahisi pia ni wa haraka zaidi ukilinganisha na gari au bajaji.

Bodaboda ina uwezo wa kukwepa msongamano wa magari kwa hapa nchini hasa jirani Dar es Salaam, lakini mwenye kasi wa bodaboda unahatarisha maisha ya watumiaji wa usafiri huo.

Hipo ni changamoto kuu ya usafiri kwa njia ya bodaboda ambaye kikutwaa inasababisha

Project:
'Bodaboda
Questionnaire'
(BbQ)

Study Area

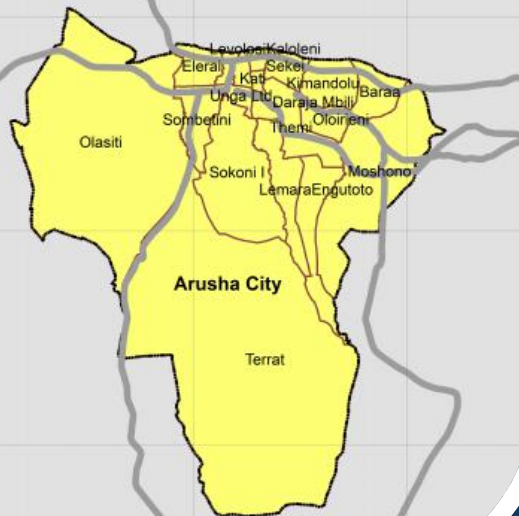
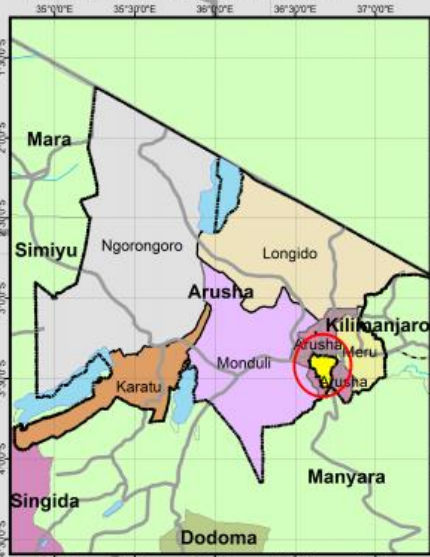
TANZANIA IN THE WORLD



ARUSHA REGION IN TANZANIA



ARUSHA CITY IN ARUSHA REGION



➤ Tanzania
Population (2015)
Total 53,470,000 ⁽¹⁾

➤ Arusha Region
Population (2012)
Total 1,694,310 ⁽²⁾

➤ Arusha City
Population (2012)
Total 416,442 ⁽²⁾

(1) The World Bank, 2015
(2) National Bureau of Statistics, United Republic of Tanzania, 2013

BbQ First Version

March - April 2016

Distribution of 54 BbQ First Version

- 4 different locations in Arusha City
- The distribution of the BbQ was undertaken manually
- No assistance or explanations on how to fill in the BbQ



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BbQ Final Version

BbQ Final Version



October 2016

- BbQ Final Version in English

November-December 2016

- Focus group with Swahili speakers
- Translation in Swahili
- Training of 14 Tanzanian Interviewers
- Distribution of 513 BbQ in Arusha City



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BbQ Final Version

44 questions - 7 Sections

- Demographic info
- Protective equipment
- Passengers/customers
- Motorcycle
- Police fines
- Driver's crash history
- Reason of the road crashes

BODA BODA QUESTIONNAIRE N° HOJAJI ZA BODA BODA

AGE UMRI	MALE MKE	FEMALE MKE
1. GENDER JINSI	URBAN AREA MJI	RURAL AREA VILAJI
2. WHERE ARE YOU FROM? UNATOKA WAPI?	YES NDIYO	NO HAFANA
3. ARE YOU MARRIED? UNDEKA?	YES NDIYO	NO HAFANA
4. DO YOU HAVE CHILDREN? UNA WATOTO?	NONE SILOKWA	PRIMARY MSINGI
5. SCHOOL LEVEL KIWANGO CHA UELMU	SECONDARY SEKONDARI	UNIVERSITY CHUO
6. DO YOU HAVE A DRIVING LICENSE? UNA LESeni YA KUENDESHA?	A	B
7. IF YES, WHICH KIND OF DRIVING LICENSE? KAMA NDIJO, AINA GANI YA LESeni?	C	D
8. WHEN DID YOU START TO WORK AS A BODA BODA DRIVER? KAMA NDIJO, AINA GANI YA LESeni?	E	
9. IN WHICH TOWN OR VILLAGE ARE YOU WORKING AS A BODA BODA DRIVER? KINYE MJI UPI ALI KULI GANI UNAFANYA KAZI YA UDEREVA WA BODA BODA?	YES NDIYO	NO HAFANA
10. ARE YOU INSIDE A BODA BODA ORGANISATION? WUWE UPO KWENYE CHAMA CHA BODA BODA?	YES NDIYO	NO HAFANA
11. IF YES, WHICH ONE? KAMA NDIJO, KIFU?		
12. HOW OLD IS YOUR BODA BODA? KIPIKI YAKO NA UMRI GANI?	(NEVER) (SUWA)	1 2 3 4 5 (ALWAYS) (KILAWAKATI)
13. DO YOU USE THE MOBILE PHONE WHILE DRIVING YOUR BODA BODA? WUWE HUTUMA SIMU UNAPENDESHA BODA BODA?	(NEVER) (SUWA)	1 2 3 4 5 (ALWAYS) (KILAWAKATI)
14. DO YOU USE THE HELMET? UNA VAA KOFA (HELMET)?	YES NDIYO	NO HAFANA
15. IS YOUR HELMET SAFER TO PROTECT YOUR HEAD? JE KOFA (HELMET) YAKO UNA KULINDA KICHWA CHAKO?	YES NDIYO	NO HAFANA
16. DO YOU USE THE VEST? UNATUMA SHUMZI (VEST)?	YES NDIYO	NO HAFANA
17. DID YOU TRY TO DRIVE DRUNK OR STONE? ULIJARIBU KUENDESHA UHWA UMELEWA?	YES NDIYO	NO HAFANA
18. HOW MANY CUSTOMERS DO YOU HAVE DURING A NORMAL WORK DAY? WATE IA WANGAPI UJIPATA KATIKA MUDA WA KAWADA WA KAZI?	(NEVER) (SUWA)	1 2 3 4 5 (ALWAYS) (KILAWAKATI)
19. DO YOUR PASSENGERS USE THE HELMET? ABIRIA WAKO HUTUMA KOFA (HELMET)?	(NEVER) (SUWA)	1 2 3 4 5 (ALWAYS) (KILAWAKATI)
20. DO YOUR PASSENGERS USE THE VEST? ABIRIA WAKO HUTUMA SHUMZI (VEST)?	(NEVER) (SUWA)	1 2 3 4 5 (ALWAYS) (KILAWAKATI)
21. DO YOU TRY TO CARRY MORE THAN ONE PASSENGER? WUWE HUKUBA KUBWA ZAYO YA ABIRIA MMWIA?	(NEVER) (SUWA)	1 2 3 4 5 (ALWAYS) (KILAWAKATI)
22. DO THE PASSENGERS ASK YOU TO DISOBEY THE ROAD RULES? ABIRIA WAKO HUKUJOMA UKANDIUVUNJE SHERIA ZA BARABARA?	(NEVER) (SUWA)	1 2 3 4 5 (ALWAYS) (KILAWAKATI)
23. DO YOU RESPECT ALL THE RULES OF THE ROAD? WUWE HUIJESHU SHERIA ZOTE ZA BARABARA?	YES NDIYO	NO HAFANA
24. CAN YOU CONSIDER YOUR BODA BODA A SAFE VEHICLE? WUWE UNACHUKUA BODA BODA YAKO CHOMBO SALAMA?	YES NDIYO	NO HAFANA
25. DID YOU CHECK YOUR BODA BODA IN THE LAST YEAR? ULIKAGUA BODA BODA YAKO MWAKA JANA?	YES NDIYO	NO HAFANA
26. DID YOU CHECK YOUR TYRES IN THE LAST WEEK? ULIKAGUA MATARI YAKO MWAKA JANA?	YES NDIYO	NO HAFANA
27. DID YOU CHECK THE BRAKE SYSTEM IN THE LAST MONTH? ULIKAGUA MJI-NDI WA BESI MREZI UJORTA?	YES NDIYO	NO HAFANA
28. DO YOU HAVE THE MIRRORS ON YOUR BODA BODA? UNA WOO KINYE BODA BODA YAKO?	YES NDIYO	NO HAFANA
29. DID YOU HAVE A FINE BY THE POLICE? ULIKIWA FANI NA POLISI?	YES NDIYO	NO HAFANA
30. IF YES, HOW MANY? KAMA NDIJO, SIHI LINZI NGANI?	YES NDIYO	NO HAFANA
31. DID YOU TRY TO BRIBE THE POLICE? ULIJARIBU KUTOA RUSHWA KWA POLISI?	YES NDIYO	NO HAFANA
32. DID YOU HAVE A ROAD CRASH/ACCIDENT? ULISHAWA KUPATA AJALI YA BARABARA?	YES NDIYO	NO HAFANA
33. IF YES, HOW MANY? KAMA NDIJO, MWA NGANI?	YES NDIYO	NO HAFANA
34. DO YOU THINK YOU COULD HAVE AVOIDED THE CRASH/ACCIDENT? UNAFIKRI UNAWEZA KUEPLUKA?	YES NDIYO	NO HAFANA
35. IF YES, HOW? KAMA NDIJO, AINA YA JERHA?	YES NDIYO	NO HAFANA
36. DID YOU HAVE AN INJURY? ULIPATA JERHA?	YES NDIYO	NO HAFANA
37. IF YES, WHICH KIND OF INJURY? KAMA NDIJO, AINA YA JERHA?	YES NDIYO	NO HAFANA
38. DO YOU THINK YOU COULD HAVE AVOIDED THE INJURY? UNAFIKRI UNGEWEZA KUEPLUKA JERHA?	YES NDIYO	NO HAFANA
39. IF YES, HOW? KAMA NDIJO, NAMNA GANI?	YES NDIYO	NO HAFANA
40. DO YOU THINK TO BE A GOOD DRIVER? UNAFIKRI KUWA DEREVA MZURI?	YES NDIYO	NO HAFANA
41. WHICH KIND OF KNOWLEDGE DO YOU LIKE TO IMPROVE? AINA GANI YA MAARIFA UNATAKA KUBORISHA?		
42. WHICH IS THE MOST DANGEROUS SITUATION YOU HAVE EVER COPED WITH DURING YOUR WORK AS BODA BODA DRIVER? HALI GANI YA HATAJI UMEKUTANA NAYO NA UMEPAMBANIA NAYO WAKATI WA KAZI YA BODA BODA?		
43. WHICH IS THE MOST DANGEROUS SITUATION YOU HAVE EVER SEEN ON THE ROAD DURING YOUR WORK AS BODA BODA DRIVER? IFI NI HALI YA HATAJI ULIYOKUTANA NAYO BARABARA?		
44. WHICH IS, IN YOUR OPINION, THE MOST FREQUENT CAUSE OF CRASHES/ACCIDENTS? MAGZI YAKO NI YAPI, JUU YA KILELEZO MUHIMU CHA KUJAA SALAMA BARABARA?		



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Results of the BbQ

- 27.5 years old (SD=5.67) 62% married and 59% have children
- 42% declared to use 'always' the helmet.
- 17 passengers per day (SD=5.60) and 23% declared to carry more than one passenger 'often'
- 69% took fines and 48% bribed the police
- 49% were involved in a crashes
- 3.3% identified 'Lack of Attention' as reason of crashes



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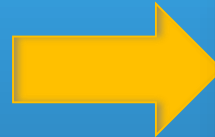
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Video

July - August 2017 Arusha



4 video camera
for video recording
the Bodaboda behavior
(from 8 am to 8 pm)



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RPi Cam_3 2017.04.27_20:43:56

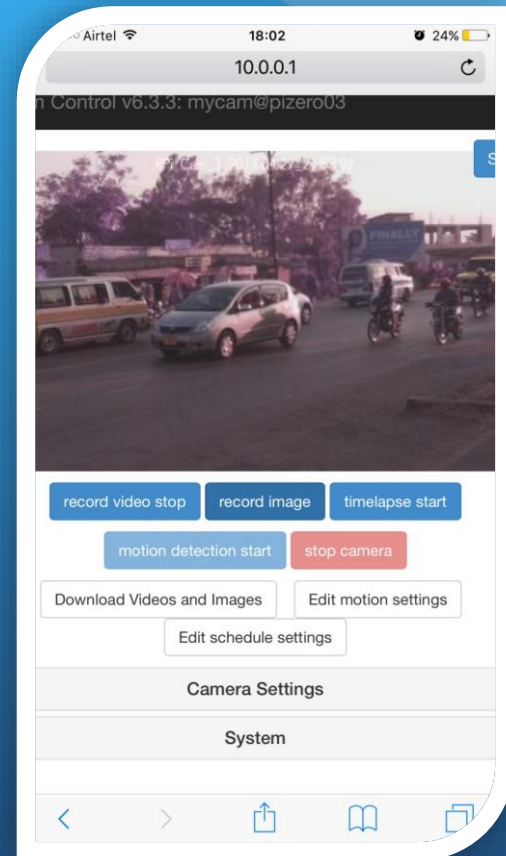


Video: Analysis of the data

November 2017 - Present



Analysis of the data
with BORIS- Behavioral
Observation Research
Interactive Software
Università degli Studi di Torino
(www.boris.unito.it)



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Results of the Video

- Numbers of hours recorded: 48
- Numbers of riders observed: 4044
- Helmet use rate: 68,66 %
- Drivers helmet use: 79,85%
- Passengers 1 helmet use: 40,58%
- Passengers 2 helmet use: 6,06%

42% declared to use
'always' the helmet

9,6% declared the
passenger use
'always' the helmet



Conclusions

- Bodaboda drivers show a lot of different illegal behaviour, and effective police enforcement is hindered by widespread bribery
- The results of this investigation represent a starting point for road safety in Tanzania and sub-Saharan Africa Regions
- In conclusion more education, a modification of existing road rules and increasing police enforcement is needed to improve road safety in Tanzania



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Asante sana
Thank you
Grazie per l'attenzione

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