



“Bodaboda” Services and Their Socio-Economic Impacts in East Africa: An Empirical Literature Review

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Abstract: Over more than two decades “bodaboda” services have become common among the East African countries Kenya and Tanzania inclusive. Despite its commonness in the area, its socio-economic impacts emanating from business have not been well searched, compiled and documented. The study aimed to explore the socio-economic impacts of “bodaboda” services in Kenya and Tanzania using empirical literature review. Compiled and documented impacts are essential for different stakeholders engaging in the business. The study adopted empirical literature review design. The design enabled authors to collect data from 26 published authentic secondary data sources between 2019 and 2024 in Kenya and Tanzania using inclusion and exclusion principles. Data were analysed by using frequencies and percentages. The results from study have shown that 66.7% “bodaboda” generate economic benefits to operators and help customers to access in difficult geographical environment. However, the study revealed that 71.4% “bodaboda” service led to disability and death among its users as negative impacts among others. The study concludes that “bodaboda” services results into both positive and negative impacts. To avoid negative impacts, the study recommends routine awareness programmes into operators, introduction of digital “bodaboda” monitoring system (DBMS), installation of cameras in every zebra crossing lines and traffic lights in cities and towns, and manufacturers to reconsider alternative strategy including improved safety gears for operators and passengers. Moreover, law enforcers should make sure that every bodaboda driver own health insurance as a requirement among others when processing or renewing licence to ensure access to medication services in case of emergency.

Keywords: “Bodaboda” Services, Socio-Economic Impacts, Kenya, Tanzania.

How to cite this work (APA):

Masatu, J. S. & Mwita, B. C. (2025). “Bodaboda” Services and Their Socio-Economic Impacts in East Africa: An Empirical Literature Review. *Journal of Research Innovation and Implications in Education*, 9(4), 851 – 863. <https://doi.org/10.59765/cgy38j>.

1. Introduction

Globally, the number of young men engaging in motorcycle (bodaboda) transportation services is increasing (Luinga, 2021; Keino et al. 2020; Mukwaya et al. 2022; Kalemile & Kimario, 2023). The increase of men in the provision of “bodaboda” services has been due to the fact that motorcycle transport is now the most common means and affordable form of transportation in the world (Okebiro *et al.*, 2023). The increase in the use

of motorcycle as a public transport has also been facilitated by global increase in motorization and its potential for quick income generation especially in low- and middle-income countries (National Crime Research Centre – NCRC, 2018). In 2017 for example, motorcycle taxi business in Africa was estimated to cross \$9 billion by 2022 (Munishi & Hamidu, 2022). Some of the well-known countries in the world often using motorcycle taxi as a means of transportation are Thailand, Indonesia, Cambodia, Nigeria, Uganda, Ghana and Cameroon (Okebiro *et al.*, 2023). The

“bodaboda” business is a common mode of transport and means of livelihood as it provides alternative employment for young men in developing countries including African countries. In African countries, “bodaboda” due to its usability has acquired different connotations regionally. It is called “zemidjan” in Benin while in both Togo and Cameroon is known as “bendskin”, in Niger it is called “kabukabu”; and in Nigeria is termed as “okada” or “alalok” (NCRC, 2018). The evolution of motorcycles as a system of transport in sub-Saharan Africa has mostly been driven by the need to access remote areas with ease and affordable (Essau &Ngonzi, 2022) and they have become a major public transport system (Martin *et al.*, 2023).

In East Africa, Kenya, Tanzania and Uganda two-wheel motorcycle taxi is termed as “bodaboda” (Bishop *et al.* 2019: Amone, 2021: Gaba, 2022: Kalemile &Kimario, 2023). In this area, “bodaboda” service is growing as a major public common transportation (NCRC, 2018: Havugimana *et al.* 2020: Luinga, 2021). The “bodaboda” service is a Ugandan innovation originated at Busia in the Kenya-Uganda border (Walter *et al.* 2014: Havugimana *et al.* 2020: Zuma *et al.* 2021). The term “boda” is from English word ‘border’ (Walter *et al.*, 2014: Havugimana *et al.* 2020). According to Online Longman Dictionary of Contemporary English the term ‘border’ denotes “*the official line that separate two countries or states*”. Therefore, the term has been borrowed from English and adopted at Busia border between Kenya and Uganda and has mushroomed to other East African countries. The “bodaboda” service has remained the common means of transportation in lowest and middle-income countries including East African communities because it is cheap and accessible to many people (Havugimana *et al.* 2020). Further, the main reason for massive use of “bodaboda” as a public transport in most developing countries such as Kenya and Tanzania is poor public transport in cities and towns (Mbegu &Mjema, 2019), but other factors remain constant.

Records reveal that besides “matatu”, “bodaboda” transport is mounting in Kenya as a public transport (Muguro *et al.*, 2020). The registration of motorcycles increased because majority of the urban and rural areas have embraced this mode of transport as a household solution for their livelihoods (Ndwiga, *et al.* 2019). Statistics reveal that about 1,393,390 to 1.4 million motorcycles have been registered in Kenya although the exact numbers of these motorcycles operating as “bodabodas” are not known and documented (NCRC, 2018: Kalemile &Kimario 2023). The use of motorcycles for public transport has increased by more than 33% in just 15 years, from 6% in 2005 to 39.6% in 2020 in Kenya (Cholo *et al.* 2023). The motorcycles use as “bodaboda” services have also risen in Tanzania and the trends indicate that the number of registered motorcycles has increased to over 1,280,000 in 2018

(Mbegu and Mjema 2019). The growth of motorcycle taxis in Tanzania was inspired from the success of Uganda experience (Essau &Ngonzi, 2022). The influx of “bodaboda” started in 2009 when the government of Tanzania licensed motorcycle to carry passengers to reduce transport problems, especially in both urban and rural areas (Bakari *et al.* 2023). The statistics reveal that there were over 1,280,000 registered motorcycles in Tanzania (Bishop *et al.*, 2019). On the other hand, data from the Ministry of Work and Transport, showed that there were 1,026,709 to 1,587,814 motorcycles registered in Tanzania between 2015 and 2019 respectively (Francis, 2023: Kalemile &Kimario, 2023).

The presence of “bodaboda” services is attracting youth who seek employments since it is ease to engaging in business, a quick way to gain daily income, cheap to customers and quick transport service to reach different areas (Bakari *et al.* 2023). Bakari *et al.*, (2023) proceed on informing that most of unskilled and semiskilled youths engage in this “bodaboda” industry as an alternative economic opportunity to attain livelihoods. The business has provided employments to youths; more than 1.2 million youths in Kenya and 1.1 million youths in Tanzania. It has improved living standards of both “bodaboda” riders (Mbegu &Mjema, 2019). The business is attractive and has an influence on families’ income, it also provides an affordable mobility services (Luinga, 2021). The “bodaboda” business is one of the life opportunities since it employs huge number of youths to overcome unemployment situation (Munishi& Hamidu, 2022). This service provides daily income and reduces the number of youths migrating from rural to cities to find jobs and other opportunities (Gaba, 2022). The business also has significantly impacted on poverty reduction, improved families’ economy since it is a source of income (Bakari *et al.* 2023) to urban and rural communities.

The business provides passengers’ and goods transportation services (Walter *et al.*, 2014) in both rural and urban areas. The “bodaboda” services are easily accessed in all types of roads (rough roads, unplanned settlements, earth roads, and easy manoeuvring heavy traffic roads), cost effective and low fuel consumption (NCRC, 2018). The users and operators are mainly from the poor population and they provide huge social and economic benefits in rural areas (Zuma *et al.* 2021). “Bodaboda” services are only means of motorized transport available to most rural people. It provides the convenience of travelling services irrespective of (time, type of road and distance) always is readily available. The services are found nearly on any street and “bodaboda” services can drop customers off at their exact location or at home (Zuma *et al.* 2021). The business also is assuming to have a vital role in transporting goods and other services, which contributes to the economy of the nations and livelihood (Luinga, 2021). However, contrary to the prior declared benefits, other records reveal that in 2002

about 20 - 50 million people were injured in “bodaboda” transportation service related accidents globally (NCRC, 2018).

Despite the benefits offered by the “bodaboda” services, little is known on the socio-economic impacts of the business from compiled current studies. Compiled and documented socio-economic impacts of the business is necessary for different stakeholders including “bodaboda” riders, expected new entrants to the sector to enjoy benefits available and take precautions on the undesirable side effects before entering into the business. The study is also very crucial to manufactures, law enforcers, health sectors and policy makers to weigh both positives and negatives of the service for appropriate decisions. Therefore, this study aims at exploring socio-economic impacts emanating from “bodaboda” services specifically by assessing the benefits versus negatives of the business in Kenya and Tanzania.

2. Literature Review

This part presents two aspects of literature which are theoretical literature that guided the study and empirical review which indicates what exists in the field due to the presence of “bodaboda” services in the study area.

2.1 Theoretical Literature Review – The Capability Approach

The study is guided by Capability Approach (CA). The CA is a theoretical framework engineered by Amartya K. Sen in the 1990s (Mihyo *et al.*, 2020). The approach is concerned with aspects of people’s lives such as good health, education and what people can do such as being able to work, raise a family, travel among others and make people enjoy from social networks (Robeyns, 2023). The CA is based on social arrangements that aim at expanding people’s capacities i.e. their freedom to promote and achieve valuable beings and doings. Functioning’s are valuable activities and states that make up people’s wellbeing – such as a healthy body, being safe, being calm, having a warm friendship, an educated mind, a good job. Functioning’s are related to goods and income, but they describe what a person is able to do. For instance, lack of employment makes youths unable to function, and failure to function make them incapable of achieving their aspirations. Although youth are energetic physically, but lack of income or employment makes them functionless and weak. In order for youth to function, they need to look for any economic activity, which will generate income and make them not only functional but also able to meet their life potentials.

The capability approach emphasizes people to have different abilities to convert resources into functioning’s. The conversion factors therefore

represent how much functioning one can get out of a resource. The capability approach, the ends of wellbeing freedom, justice and development should be theorized in terms of people’s “functioning’s” or capabilities (Robeyns, 2023). Availability of motorcycles in rural, urban and in cities of Kenya and Tanzania is an opportunity. The opportunity should be changed to capabilities. This is to say youths engaging in “bodaboda” services create employments. Employments being created become the source of income, which enables youth to meet life goals. Achieving life goals imply functioning’s while failure to achieve life goals imply functionless or incapable. Youth engaging in “bodaboda” services acquire their own income, employments, and various assets among others, which make them respectable. Respect in the society is an indicator of functioning or having capability in the society. However, same time, engaging in the provision of “bodaboda” service may result to accidents, long term illness, disability, psychological stress and death which lead to failure to achieve life goals. But failure to achieve life goals denotes dysfunction. Thus, this study aimed to explore functioning’s emanated from “bodaboda” services in the study area from secondary data sources.

2.2 Empirical Literature Review

“Bodaboda” services may lead to both positive and negative impacts in the economy of Kenya and Tanzania. This part therefore elucidates positives and negatives of the “bodaboda” business in the study area as documented from contemporary literature.

2.2.1 Positive impacts of “bodaboda” services

The positive impacts in the business of “bodaboda” can be categorized into five areas i.e. economic benefits, geographical and environmental benefits, time saving, quick and cheap transport as well as a profitable business as explained in this study.

1. “Bodaboda” services and economic benefits

“Bodaboda” service requires low capital investment and is the source of employment as they generate employment opportunities (Luinga & Kilasara 2020). The service serves money (Munishi & Hamidu 2022) in the case of travellers. This means the business provides employment to youth while utilizing low capital (Gaba, 2022). The industry provides employment opportunities to youths and contributes to improved livelihoods of riders. “Bodaboda” services serve as messenger, as they facilitate the delivery of shipments and documents. “Bodaboda” services contribute to poverty alleviation, involve in jobs creation, improve market access and foster entrepreneurship (Bakari *et al.*, 2023). Motorcycle taxis create self-primary employment

opportunities, to some youths are major source of income to improve financially, and they enable individuals to own better houses (Maulaga *et al.*, 2019). Moreover, Okebiro *et al.*, (2023) affirm that the business in Kenya is a source of employment and livelihood to many youths, as it creates income to youth as well as to the nation; for instance, the business generates 400 million shillings daily, which contribute to the raise of per capita income of the nation (Nyaga & Kariuki, 2019). Martin *et al.*, (2023) regard the business as the source of self-employment opportunity to youth. The motorcycle taxi transport is a successful business because it enables monetary gains for the unemployed youths in Kenya, by creating employment chances for income generation, while addressing poverty and unemployment issues (Okebiro *et al.*, 2023). Not only that, motorcycle business has become the saviour to mostly unemployed Kenyan youth who use only Ksh. 50-200 to get trained so as to engage in riding motorcycle taxi (Nyaga & Kariuki, 2019).

2. “Bodaboda” and reaching in difficult geographical environment

Literatures have shown that “Bodaboda” services provide many geographical and environmental transportation benefits. Some of the benefits include ease entry and ability to navigate in congested and poor-quality roads (Luvunga & Kilasara 2020: Okalo *et al.*, 2023) and its ability to access rough roads (Martin *et al.*, 2023). The “bodabodas” are easily to navigate along narrow paths (Ngesa, & Abuga 2024). They are also flexible transport, which helps to access in remote areas (Maulaga *et al.*, 2019). In addition to that “Bodaboda” services are efficient in navigating around traffic jam delays and are available day and night (Cholo *et al.*, 2023). Furthermore, the services help to transport patients to hospitals in areas that are not reachable (Nyaga & Kariuki, 2019). Finally, services of “bodaboda” are convenient solutions for transport issues that affect private vehicles and public transport (Ngari *et al.*, 2020: Okebiro *et al.*, 2023) like poor road infrastructure and traffic jams.

3. “Bodaboda” services and time saving

Apart from the geographical and environmental benefits offered by “bodaboda” services, they are also time saving in congested cities (Munishi & Hamidu 2022), as they provide quick services (Maulaga *et al.*, 2019) compared to other transport. “Bodaboda” provides fast services around cities, towns and rural areas (Cholo *et al.*, 2023). The services are easier and convenient (Okebiro *et al.*, 2023). The service contributes to the mitigation of traffic congestion in numerous urban regions (Ngesa, & Abuga 2024) for example in Nairobi and Kisumu in Kenya; Dar es Salaam and Mwanza in Tanzania. “Bodaboda” also provides door-to-door services (Martin *et al.*, 2023). The “bodaboda” serve and provide convenience of travelling irrespective of

time, type of road, distance and they are readily available (Okebiro *et al.*, 2023) when it is required.

4. “Bodaboda” service and cost effective advantage

The “bodaboda” service can reach in remote areas and is flexible transport (Maulaga *et al.*, 2019); it can be used according to user requirement available. The services are affordable and become solution to livelihoods (Okebiro *et al.*, 2023). The service is cheap and able to navigate where cars cannot reach (Nyaga & Kariuki, 2019). The service offered by “bodaboda” is cost-effective (Ngesa, & Abuga 2024). The services are also perceived affordable to the majority of users (Martin *et al.* 2023). Nevertheless, “bodaboda” provides the quickest transportation service, and always is ready available around (Ngesa, & Abuga 2024). Lastly, it simplifies transportation (Maulaga *et al.*, 2019) whether rural or urban based.

5. “Bodaboda” service and multiplier effects to other sectors

“Bodaboda” services provide multiplier effects to other sectors. The services provide quick monetary gains on a daily basis and facilitate access to loans (Luvunga & Kilasara 2020: Okebiro *et al.*, 2023). The sector generates significant profits which play a major role in fostering various economic activities out of the difficulties it presents (Bakari *et al.*, 2023). Gaba, 2022 considers “bodaboda” as high and quick means of gaining return. Moreover, emergence of “bodaboda” services influence businesses for selling of motorcycles’ spare parts and fuel. The operation of “bodabodas” has resulted to the rise and expansion of fuel sector in Tanzania. The expansion of the sector (fuel stations) has led to the generation of employment. Furthermore, “bodaboda” is used as tool for advertising business (business promotion). The business can also be used to expand the use of mobile money transactions via payment for the services provided, which may also lead to the development of the mobile banking industry. Several delivery enterprises too such as Pizza Faster, KFC, Burgerhut, EMS, and among others, have enhanced operational effectiveness facilitated by “bodaboda” industry, which has supported development of other industries in Tanzania (Bakari *et al.*, 2023). According to Maulaga *et al.*, (2019), the business reduced drug abuse, levels of crimes and maintained peace in the society. Generally, the presence of “bodaboda” business, has improved financial, social, psychological and physical health, which have reduced criminal and illegal activities among youth.

2.2.2 Negative impacts of “bodaboda” services

The rapid growth of “bodaboda” services is associated with its own share of challenges, which are mostly

unpleasant. Some of challenges compiled in this study from different literature include the following: -

1. “Bodaboda” services and accidents for road beneficiaries

Nyaga & Kariuki (2019) argue that the business of “bodaboda” has resulted to several cases of road accidents to various road users. Munishi & Hamidu (2022) also admit that riders, passengers and other road users, experience injuries from accidents, due to high speed above the maximum driven by operators in scrambling to get passengers, driving while drunk or driving carelessly (Maulaga *et al.*, 2019). Operations of “bodaboda” services may cause the largest proportion to be victims of injuries when majority of vehicles involve in crashes (Sawe *et al.*, 2021). Mbegu & Mjema (2019) also support that “bodaboda” business is the source of injuries for operators and passengers. For example, Hamis & Juma (2019) argue that motorcycles’ driving cause many road accidents accounting to 53% in Tanzania. “Bodaboda” services have led to the increase of road accidents and difficulty in traffic management (Okalo *et al.*, 2023). The increase in the use of “bodaboda” transport has led to the rise in road accident crashes (Maina *et al.*, 2023). Motorcycle accidents have negative effect on households’ livelihood. For example, physical conditions of the victims determine whether the victim will continue to provide for the family. Most of the victims obtain temporal injury or permanent disability. This denotes that their working condition is affected permanently or temporarily. For this case, the household income is affected. Resources which are used for treatment may affect the household income in a negative way since the treatment for injured victims is expensive in which family members may fail to meet their basic needs (Okalo *et al.*, 2023). Statistics have shown that most “bodaboda” operators are causative of accidents which lead to traffic-related fatalities in Kenya (Okalo *et al.*, 2023). Moreover, the increases of motorcycle accidents drain individual, family, and national economy through cost of treatment, loss of income to injured riders, loss of labour in the country, loss of support for households especially when breadwinners dies or incapacitated. The loss of time which could be used for other activities instead is spent to care injured people. Those who are injured in accidents, their treatments are costly in terms of times and money in hospital. The accidents lead to emotional pain for relatives in case death (Okebiro *et al.*, 2023)

2. Motorcycle services; the source of disability and death to its users

The “bodaboda” services are the source of deaths emanated from accidents (Munishi & Hamidu 2022). In Tanzania, “bodaboda” accidents stand as the third cause of deaths after malaria and the business create disables (Mbegu & Mjema, 2019). Road traffic injuries (RTIs) contribute significantly to the burden of injuries,

morbidity and mortality among victims (Sawe *et al.* 2021). For example, data showed that 391 “bodaboda” caused deaths in Nairobi in 2014, while an average of 3000 “bodaboda” caused deaths countrywide in 2016 (Mbegu & Mjema, 2019). Further, more literature declares that the use of motorcycles for transport in Kenya has led to increased morbidity, mortality, and disability (Cholo *et al.*, 2023; Zuma *et al.*, 2021). They contribute to a substantial number of deaths and hospital admission especially among productive age in Kenya (Ngari *et al.*, 2020). Death – statistics showed 1,075 people died from “bodaboda” accidents in 2020 (Okalo *et al.*, 2023). This means, motorbikes are becoming more and common mode of transportation that significantly has led a number of people to be wounded or killed in traffic accidents (Okebiro *et al.*, 2023). Since, it causes injuries, death and overall economic costs to the individual, family and the nation (Okalo *et al.*, 2023). Also, numerous crashes of “bodaboda” accidents lead to permanent disabilities or critical bone injuries, putting a heavy burden on healthcare system of the nation. Furthermore, Maru *et al.*, 2024 proclaim that “Bodabodas” services are silent killers since they contribute to half of the road accidents in Kenya. The victims from “bodaboda” services are becoming a standard feature in hospitals for example the Mathare Korogocho Hospital in Nairobi, Kenya. The most “bodaboda” riders are not insured which makes them to face a very costly hospital bill payment, which in turn drive them into poverty (Maru *et al.*, 2024). In addition to that, there are other medical risks that may negatively affect “bodaboda” riders and their passengers such as suffering from dust related diseases including running nose and coughing, pneumonia, chest pain, cold and severe headaches (Nyaga & Kariuki, 2019).

3. “Bodaboda” services; the source of poverty

Researchers argue that “bodaboda” do not contribute much to economic growth, instead it leads to poverty cycle, from unemployment to purely disabled dependents (Mbegu & Mjema, 2019). The business changes its beneficiaries from jobless fathers or mothers to orphans and dependents, since creates economic burden in the society including orphans. Also, motorcycle injuries have caused a significant health burden in Kenya. Records show that over 20% of road traffic injuries in Kenya are caused by motorbike accidents (Poehler, 2019). “Bodaboda” accidents have resulted to negative impacts on the economy because they produce serious injuries, lead to huge medical bills and financial costs to riders, passengers, pedestrians and other users involved in such accidents. Treatment to those involved in accidents take long time duration for treatment which is also expensive since the majority face head and limb injuries. A study by Zuma *et al.*, (2021) estimates financial implications of road traffic injuries to a country ranging between 1.3% and 3.0% of the GDP. Motorcycle crash injuries are the second most

common cause of both emergency department visits and hospital admissions. The motorcycle injury cases contributed to greater radiological diagnostic service use, operating theatre use for minor and major surgical procedures, and intensive care unit admissions, demonstrating the extent to which motorcycle crashes contribute to increased use of public health system resources (Cholo *et al.*, 2023). Moreover, findings indicate that injuries resulting from motorcycle accidents leave families of the victim(s) in terrible conditions due to costs associated with such accidents (Okalo *et al.*, 2023)

The injuries from “bodaboda” accidents contribute to mortality and morbidity, placing major economic burden on individuals injured, the public health system, and governments by lost wages, employment, long-term medical expenses and intangible sufferings. Motorcycle crash injuries exert additional pressure on the Kenyan health system, which is poorly equipped to provide the needed health care services. Hospital morbidity statistics in Kenya show that injuries from motorcycle crashes account for 2%–3% of all hospital visits, 22%–64% of trauma admissions, and 50%–52% of surgical interventions. Motorcycle injury patients comprised 62% of all the patients receiving X-rays and motorcycle injuries were the second leading cause of radiological investigations after assaults. Motorcycle injuries were the leading cause of computerized tomography (CT) scans, representing 31.3% (Cholo *et al.* 2023). The injuries contribute to mortality and morbidity, placing a significant economic burden on the injured individuals, families, the public health system and governments through lost wages, unemployment, long-term medical expenses and intangible sufferings. The flow in the number of disabilities from head injuries or loss of a limb contributing to increased suffering, loss of livelihood as well as draining of family resources that are used to offset the resulting huge hospital bills (Maina *et al.*, 2023). Kenya like many other developing countries is experiencing economic loss as a result of the road traffic accidents emanated from motorcycle accidents. Road traffic accidents cost the Kenyan economy approximately Ksh.14 billion which represents 5% (Okalo *et al.*, 2023). Thus, the “bodaboda” services in Kenya and Tanzania are perceived as the sources of poverty to youth and the nation at large.

4. “Bodaboda” services; the source of crimes

Some literatures consider “Bodaboda” operators as source of crimes or being attacked by criminals. Some operators may involve in the crime either by participating or colluding with robbers to steal from various residents including their own customers. Crimes affect operators’ humanity, physical, social, financial and natural assets which are the critical aspects of their livelihoods (Munishi &Hamidu 2022). In addition, unlawful acts committed by operators like blocking or

obstructing other service providers have negative impact to individuals, families and the nation at large (Maulaga *et al.*, 2019). Also, operators are targeted by criminals and become victims of being robbed off their motorcycles. The situations contribute to instability of “bodaboda business. Finally, increase insecurity in cities and towns and increase the cases of robbery and theft (Nyaga&Kariuki, 2019: Mbegu &Mjema, 2019) among society.

5. “Bodaboda” services; the source of other evils

“Bodaboda” operators experience psychological stress and pressure (Munishi &Hamidu 2022). The operators harass passengers and other road users (Maulaga *et al.*, 2019). The business causes noise and environmental pollution (Mbegu&Mjema 2019). Serious noise and increase in local air pollution and greenhouse gas emissions (Okalo *et al.* 2023) which had adverse impacts on environment. The business may cause high demand for imports of motorcycles and its spares, created unfavourable balance of trade and payments, (Mbegu &Mjema, 2019). The service also influences school dropout among boys and girls. It is perceived as a venture for young boys who form the role model to boys in school. The young boys in school view “bodaboda” operators as successful economic business; as role models and business is seen as a lucrative economic activity (Nyaga&Kariuki, 2019).

3. Methodology

The study applied empirical literature review design. The design enables authors to collect current data from published authentic secondary data sources between 2019 and 2024 in Kenya and Tanzania. The papers under the study were accessed using Google, Google scholar, Emerald, www.sciencedirect among other search engines. Choosing appropriate vocabulary was what guides the whole search processes (Yannascoli *et al.* 2013). Different terms in searching literatures were used such as benefits of “bodaboda” business among youth, disadvantages of using “bodaboda” transport, social benefits of motorcycle, impacts of bodaboda in Kenya, impacts of “bodaboda in Tanzania, benefits of motorcycle taxi among operators, guided the authors in searching related studies during the searching process.

In searching 51 papers were accessed. The study was guided by inclusion and exclusion principles. Based on the inclusion principle 26 authentic papers explaining benefits, advantages or disadvantages of “bodaboda” business in the study area, within the set time frame, written in English language, coming from either Kenya or Tanzania and having open access were included in the sample for study. While 25 were excluded because of out of time scope. Similarly, papers which do not explain the impacts of “bodaboda” were excluded in this study. The study opted Kenya and Tanzania purposely as they have biggest economy among the

member states of East African Community. Ernest (2022) while writing empirical literature used 20 literatures but other authors' comment that even 12 literatures are sufficient for drawing conclusion. The total of 26 published papers were consulted, examined and scanned for study purposes in which 12 studies used attain positive and 14 provided negative social economic impacts. This was sufficient sample to show a picture of socio-economic impacts emanating from "bodaboda" services in the study area. Data were analyzed by using frequencies and percentages. Those impact either positive or negative listed repeatedly by different studies were given high rank of socio-economic impacts of the "bodaboda" services. Those impacts have less repeated frequencies have been considered to be the low socio-economic impacts in the study area (Figure 1 & 2).

4. Results and Discussion

4.1 Positive Socio-Economic Impacts

The study reviewed 12 studies explaining the benefits of "bodaboda" services documented in the literature. The results found that 66.7% of the studies showed that "bodaboda" services provide economic benefits of different types, at the same times 66.7% of studies indicated that "bodaboda" is beneficial for to reach difficulty geographical areas and in difficult environment, 58.3 indicated that "bodaboda" transport is time saving, on the other hand 50% of studies showed the transport is quick and cost effective while 50% of studies revealed that "bodobada" service generate profit and have multiplier effects to other sectors (Figure 1)

4.1.1 "Bodaboda" services generate economic benefits

From the study it was found 66.7% of the studies surveyed appraised that presence of "bodaboda" services generate various positive economic impact to various beneficiaries (Figure 1). Economic benefits include all benefits which is related to earn income or to spend low income in access services. The business itself requires low capital to invest in terms of money to buy motorcycle and time for training a person to become a rider. The "bodaboda" serve money for both owners and passengers. It is difficult for common people to hire car taxi but it is possible for majority to hire "bodaboda" for various use. Passengers opt to use the services because of its affordability. It is used as source of employment opportunities, improve livelihoods, contribute to poverty alleviation, help individuals to build house, contribute to raise per capita income and foster entrepreneurship activities. Similarly, the business is the saviour to majority of youth because of provision of employment opportunities. Therefore, running "bodadoda" services in East Africa has great implication because the services is the source of

economic gains; several measures should be put in place to ensure the economic gains emanated from the business is profitable, protected and sustainable for economic growth.

4.1.2 "Bodaboda" service access in difficult geographical environment

The study also found that 66.7% of the surveyed studies reported that "bodaboda" service reach in difficult geographical environments where other vehicles cannot (Figure 1). This is benefits of the services offered by the "bodaboda" in the study area. In Kenya and Tanzania as any other countries in the third world countries road infrastructures have great challenges due to poor settlements and road maintenance. Majority of people live in the areas which are not surveyed whether rural, urban or cities. Cities like Nairobi – Kenya and Dar es salaam – Tanzania some streets motor vehicles cannot reach at home to offer travelling services when there is emergency like having sick people. Similar condition is also found in rural areas where roads are not available or passable, motor vehicles are very few and even if are available are so expensive. "Bodaboda" services take this opportunity to help poor people living in difficult geographical positions. The tendency of living in squatters lead to people to have challenge to access homes by using motor vehicles even if they are rich. The presence of "bodaboda" services have rescued those people living in difficult geographical environments because the "bodaboda" can reach everywhere regardless condition of settlements whether squatters or planned. The services are helpful in difficult geographical environment because of ease entry and ability to navigate in congested and poor roads, able to access in remote areas and it is flexible transport. In addition, the services are efficient in navigating traffic jams in the cities, easily navigable along narrow paths and are available during day and nights. Lastly, "bodaboda" service is convenient transport and having ability to travel in poor road infrastructure and have challenged the problem of linking rural and urban areas.

4.1.3 "Bodaboda" service and time saving

From this study it was found 58.3% of the reviewed literature acknowledged that "bodaboda" service is time saving (Figure 1). Wastage of time it has been associated with poverty since *'time is money'*. In Kenya and Tanzania people lost time because of using public transport passing in congested, narrow and poo roads. Also, the drivers and conductors of public buses such as "matatu" in Kenya and "daladala" in Tanzania have tendency of wasting time for various reasons such as heavy traffic jams, roadblocks, waiting for customers, having many unknown stopping centres, drivers and conductors disregard their customers, lack of customer cares among others. These factors cause delays in the

road instead of using that time in production process where there no waiting cost. Those who are using public transport always complain of delaying to reach at their working stations. Based on this scenario “bodaboda” service became the saviour of time since it is a fast means of transport. It provides door-to-door services and convenience travelling irrespective of time, type of road, distance and they are readily available on time. The emergence of “bodaboda” services is associated with time saving behaviour and increased production.

4.1.4 “Bodaboda” services perceived quick and cost-effective transport

From the study it was found 50% of surveyed studies indicated that the service of “bodaboda” is fast and cost effective compared to motor vehicles (Figure 1). The service is very fast and serving time of the customers. At the same time the services are cost effective in term of money spent by users. For this case majority of passengers can hire the services of “bodaboda” because of its affordability. The coming of “bodaboda” increased mobility of people, goods and services in rural areas. Due to fast and cheap transport attracted majority of customers to opt “bodaboda” when travelling in poor roads and heavy traffic jams. This implies that evolution of motorcycle taxi increased

people with low-income access to transport and transportation.

4.1.5 “Bodaboda” service generate profits and have multiplier effects to other sectors

From the study found 50% of the reviewed literature showed that “bodaboda” service generate profits and have multiplier effects to other sectors (Figure 1). Operating “bodaboda” create profit and increase income among riders. This had implication that engaging into “bodaboda” services give economic advantages to riders and owners the motorcycles. On the other hand, “bodaboda” service provide multiplier effects to other economic sectors because provide quick monetary gains on routine basis. The income generated from “bodaboda” services play major role in fostering various economic activities such as access to loan, the business influenced sale of spare parts and fuel stations for motorcycles. In addition, business resulted into rise and expansion of fuel sector and generation of employments. “Bodaboda” is used as a means of business promotion. Also, business expanded the use of mobile money transactions, development of the mobile banking industry and other industries in Tanzania. Presence of “bodaboda” business, improved mental, physical health, reduced crimes, drug abuse and other illegal activities among youth. The business-maintained peace in the society.

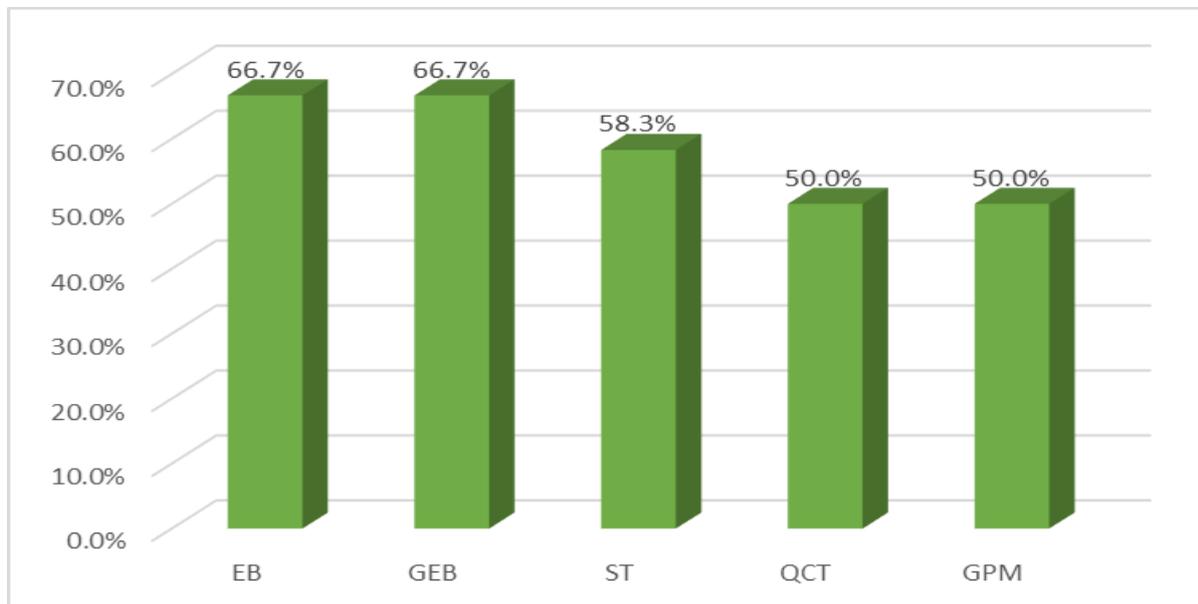


Figure 1: Positive Socio-Economic Impacts

Source: Study findings (2024)

Key

1. **EB** – “Bodaboda” service generate economic benefits
2. **GEB** – Bodaboda” reach in difficult geographical environment
3. **ST** – “Bodaboda” save time
4. **QCT** – “Bodaboda” is quick and cost effective transport
5. **GPM** – “Bodaboda” generate profits and multiplier effects

4.2 Negative Socio-Economic Impacts

From 14 reviewed studies it was found 71.4% of the studies showed that “bodaboda” services cause disability and death to various road users, 64.3% of studies indicated that “bodaboda” is the source of accidents and injuries for road beneficiaries, 50.0% indicated that “bodaboda” transport is the source of poverty, on the other hand 28.6% of studies showed is the source of crimes while 35.7 % of studies revealed that “bodaboda” service cause other negative impacts such as psychological stress and pressure (Figure 2)

4.2.1 “Bodaboda” services are the source of disability and death among users

Data from the study showed 71.4% revealed that “bodaboda” services were the source of disability and death among road beneficiaries (Figure 2). This implied that using “bodaboda” services has impact to users to be at risk of getting disability or death due to accidents. The riders of “bodaboda” have low knowledge of using roads and also drive negligently this result into accidents and final outcome for both riders and passengers may end up get disability or death due to accidents. The operators and passengers suffer from disabilities or death because of using services. Using “bodaboda” services, may increase disability, morbidity and mortality within the countries. Regular uses of “bodaboda” services denote the increase of disability and death in the society. The number of deaths from injuries affects productive age group from injuries and cause hard economic situation and also put affected people into permanent disabilities putting a heavy burden on families, communities, and the healthcare system of the nation. “*Bodabodas*” are silent killers and they contribute to half of the road accidents. When someone becomes disability because of accidents this situation increase poverty instead of liberating from poverty.

4.2.2 “Bodaboda” is the source of accidents and injuries

From the study it was found 64.3% of the studies mentioned that the presence of “bodaboda” services influence accidents and injuries among road beneficiaries (Figure 2). The presence of “bodaboda” business influences of occurrence of accidents and death. This is due to competition to get customers, over speeding, driving under in due influence of alcohol, lack knowledge of road signs among others. All these together influence the “bodaboda” to cause accidents and injuries from event of accidents. The emergence of “bodaboda” services has contributed to negative effects among various beneficiaries particularly accidents. Majority of youth as embraced motor cycle transport as means of employment opportunities but their impacts it ends up with youth to become disabled because of

accidents and injuries. Motorcyclists especially motorcycle taxi accounted for big proportion to be victims of injuries and increased road accidents. Road accidents have negative impact to operators, passengers, and owners of the motorcycle, relatives, hospital, police and government at large. The increased of motorcycle accidents drain economy through loss of income for riders who are harmed, loss of labour in the county, loss of support for households especially for breadwinner if dies or incapacitated. The loss of time which could be used for other socio-economic activities are spent to care injured people. Those who are injured in accidents, their treatments are costly in terms of times and money in hospital facilities. The accidents lead to emotional pain for relatives in the case death or long treatment period.

4.2.3 “Bodaboda” become the source of poverty

From this study 50% of reviewed studies showed that “bodaboda” services become the source of poverty to riders and passengers (Figure 2). This means that “bodaboda” in most cases do not contribute to economic growth; instead promote vicious cycle of poverty, from unemployment to disabled dependents. The business changes from unemployment to orphans and dependents. The business creates economic burden in the society. “Bodaboda” accidents provide negative impacts on the economy because produce serious injuries, huge medical bills and financial costs to the riders, passengers, pedestrians and other users involved in such events. Those injured in accidents, the treatment takes long time and expensive in terms of economic. The motorcycle injury cases contributed to greater use of resources in health sector. Injuries resulting from motorcycle accidents leave families of the victims in terrible conditions due to costs in terms of money and time. Youth engaging in “bodaboda” service do not own health insurance when face accident spent all resources including sell of land, home assets and mortgage some resources for treatment. Therefore, the business contributes to poverty situation

4.2.4 “Bodaboda” business is the source of crimes

Data from this study showed 28.6% of reviewed papers showed that “bodaboda” operators are the source of criminals (Figure 2). This means that the operators engage themselves in criminals such as stealing, robbery, rape among others either by participating or colluding with robbers to steal from their own customers and other road users. Crimes affect operators’ human, physical, social, financial and natural assets which are the critical aspects of their livelihoods. On the other hand, the operators are targeted by criminals and become victims of being robbed off their motorcycles. Unlawful acts committed by operators like

blocking or obstructing other service providers, harassing passengers, insecurity in cities and towns, mob psychology and develop gangs for attacking other road users. From this perspective “bodaboda” operators are considered to be the source crimes in the streets where they stay.

4.2.5 Other negative impacts

The study found 35.7% from reviewed papers that business cause noise and environmental pollution (Figure 2). Also, business demand high imports of motorcycles and its spares create unfavourable balance of trade and payments. It influences school dropout among boys and girls. For boys drop from schools to engage in “bodaboda” services while girls drop from school due to pregnancy claimed the source to be of “bodaboda” operators.

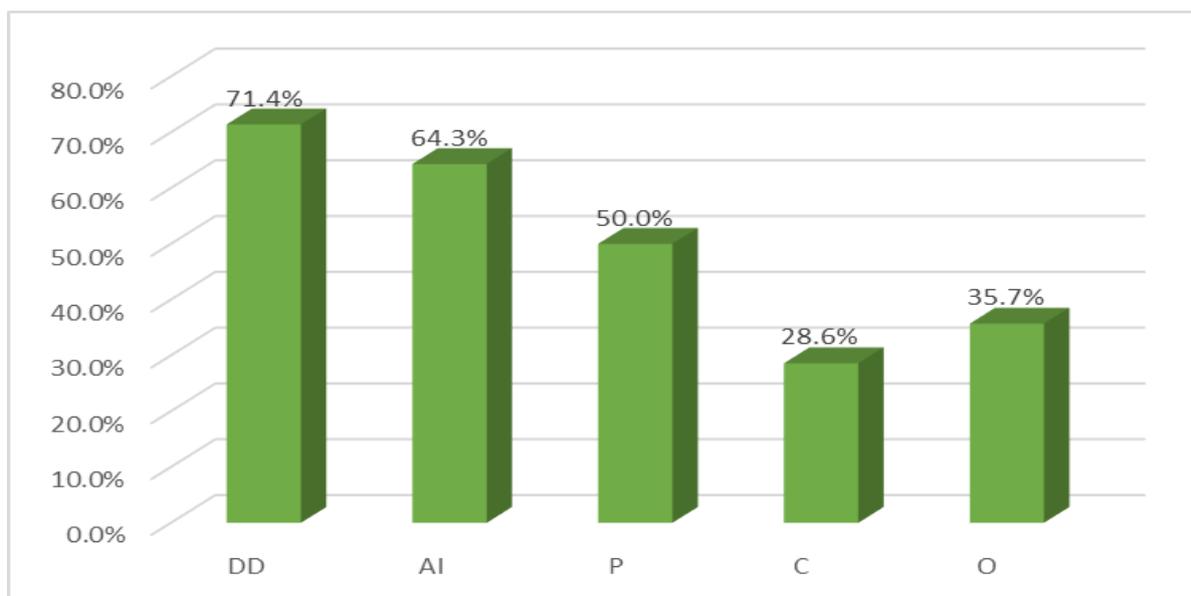


Figure 2: Negative Socio-Economic Impacts

Source: Study findings (2024)

Key

1. **DD** – Motorcycle taxi cause disability and death
2. **AI** – “Bodaboda” is the source of accidents and injuries for road beneficiaries
3. **P** – “Bodaboda” is the source of poverty
4. **C** – “Bodaboda” is the source of crimes
5. **O**– Others

5. Conclusion and Recommendations

The study aimed to explore socio-economic impacts originated from “bodaboda” services by assessing the benefits against negatives of the business in Kenya and Tanzania. It was generally found that “bodaboda” services in the study area play dual roles. The positive role as well as negative roles in supporting youth attain to socio-economic development. Objectively any socio-economic activity is anticipated to produce positive benefits and make partners engaging in the particular business to function both socially and economically. It is not a strange to find that “bodaboda” services as socio-economic activity generates economic benefits (employments and income), reach in difficult geographical environments, save time, it is quick and cost-effective transport and provide multiplier effects to other economic sectors. To provide those benefits it is obvious because it comes from the objective of the

business. On the other hand, “bodaboda” services become abnormal and wonderful when affect negatively partners of the business both direct and indirect beneficiaries in obtaining services. The services instead of liberating operators from income poverty contrary contribute to increase chances of operators to be vulnerable and having a state of emergency in many aspects. From this study “bodaboda “services” are the source of disability and death to riders and other road users, source of accidents and injuries to riders and pedestrian, the source of poverty, becomes source of crimes and contribute to environmental pollution. This is where socio-economic impacts emanated from “bodaboda” services to be in dilemma.

The study recommends routine and periodical awareness creation programmes for “bodaboda” operators. Women youth should be encouraged to offer “bodaboda” services purposely to challenge men dominance and its associated negligence. Motorcycle

manufactures are recommended to reconsider alternative improved safety gears for operators and passengers. Law enforcers in the study area among requirements needed during processing or renewing licence to operate motorcycle taxi additional requirement is recommended to be ownership of health insurance. The ownership of health insurance should be taken as among essential protective gears for riders. Appropriate authority managing road safety and infrastructure in the study area are advised to introduce digital “bodaboda” monitoring system (DBMS) and installation of cameras in every zebra crossing lines, traffic lights and roundabout in big cities and towns purposely to monitor operators to comply with set road safety laws and guidelines. These automation efforts can help to reduce crimes and accidents since will be accompanied with fines in case of violation and make “bodaboda” services be reliable to the users. Also, the appropriate authority is advised to design special roads in big cities and towns for “bodaboda” riders to accommodate their needs. Lastly, policy makers in the study area are recommended to create conducive environment and attract motorcycle investors to establish industries within East African area purposely for creation of favourable balance of trade and payment and design motorcycles according to East Africa standards. Opening branches or introducing new motorcycle industries is an opportunity for investors because of availability of customers at the same time creation of employments to youth to complement riding business. To establish East African motorcycle standards to avoid the area to be the dumping place. Area for further studies may be conducted to estimate the benefits against cost of “bodaboda” services in the contribution of national economic growth.

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