

BODA BODA - LESSONS FROM EAST AFRICA'S GROWING NMT INDUSTRY

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Abstract

The aim of this paper is to describe the origins, growth and characteristics of the *boda boda* phenomenon in East Africa. Essentially they are a bicycle-based taxi service and have grown from modest origins in the early 1960's in the border region of Uganda and Kenya, to achieve the status of a significant industry in one country and a substantial and growing presence in the other. The reasons for this, their evolving characteristics, influence on the poor, and relationship to motorised services are examined. The paper is mainly based on original research in Uganda conducted by the authors in the context of an analysis of livelihoods and the contribution that mobility and accessibility have on these. Where possible, comparisons are made with Kenya.

Boda boda are shown to fill a gap in the transport market that has traditionally existed in African countries where - in contradistinction to Asia - non motorised transport [NMT] based services are rare. Essentially they meet the need for short distance, low-capacity transport able to operate in areas with limited demands that would not support more conventional services. The industry is also a major source of employment and livelihood support for the poor. The absence of either donor or government influences on the growth of the industry is striking, and is shown to have both positive and negative consequences.

Keywords: Cycle and motor cycle public transport; Employment generation

Topic Area: G03 Non-motorised Transport

1. Introduction

Africa, in sharp contrast to Asia, has developed few fleets of non-motorised transport (NMT) that might deserve the appellation *industry*. Until recently the major exception was the donkey carts that characterize the francophone West African countries in the Sahel region, which are estimated at several hundred thousand [Starkey 2001]. Farmers predominantly use these carts for personal goods transport; while some are hired out by owners, the number used wholly for commercial purposes is likely to be small. Animal-drawn carts in significant numbers are especially uncommon in Eastern Africa and south of the Sahara. A number of African cities exhibit fleets of hand drawn, or pushed, carts, but nowhere are they very numerous. Other than walking the most ubiquitous form of NMT is the bicycle, but it has seldom been accorded the status of a serious means of transport. This is corroborated by evidence indicating that in the 1980's the number per capita actually declined due to the continent-wide recession and a politically hostile climate. The latter restrained growth by, among other things, taxing imports as if they were toys, sports items or luxury goods [Dennis and Howe 1993]. The 1990's witnessed a growing realisation among governments of the economic significance of bicycle use, especially for the poor, and a number drastically reduced the formerly high taxation levels. As a consequence, ownership appears to have accelerated in those countries where tax cuts have reduced the cost of acquisition.

Despite its ubiquity the bicycle is not commonly used for wholly commercial purposes. Such use is more likely to be a part-time activity. An exception is provided by the so-called *boda boda* of Kenya and Uganda. Originally these were bicycle-based taxi services carrying mainly people and some goods. The term is a corruption of the English word 'border' repeated twice. It derives from their initial use in the early 1960's on the Kenya/Uganda boundary to carry people and smuggle goods between the two countries [Malmberg-Calvo 1994]. After three decades of steady growth and dispersion around the country they were complemented - in Uganda, but not Kenya - by the emergence of a motorcycle-based equivalent that confusingly is known by the same name.

Recent research has revealed the current scale of *boda boda* activities in Uganda. A number of independent estimates converge on a total population of around 200,000 bicycles that are in regular operation. Motorcycle-based *boda boda* are estimated at about 70,000. From these figures it can be implied that around 1.7 million people, or 7% of the population, receive part of their livelihood from *boda boda* activities [Howe 2003]. Thus, in Uganda *boda boda* fully deserve being described as an 'industry' in which bicycles have a dominant share. Within the transport sector *boda boda* command significant market share of both supply and demand, and are developing backward and forward economic linkages.

Backward linkages are evident in the repair and maintenance shops, and the food and drinks establishments that provide sustenance to the operators for an occupation that requires a high-energy expenditure. Forward linkages are apparent in the increasing use of *boda boda* as an essential part of other commercial operations. User surveys in Uganda found that about half claimed use of the *boda boda* had enabled them to increase incomes and described plausible mechanisms by which this had resulted [Bryceson et al 2003].

The use of *boda boda* on an industrial scale raises a number of questions. What particular market niche do they serve and might this exist in other African countries? What combination of factors has led to their emergence in Kenya and Uganda? How significant are they in the lives of the poor? In what way is the industry likely to evolve? The remainder of this paper addresses these questions and concludes by indicating the lessons that can be drawn from the Kenyan and Ugandan experience. However, it is first necessary to outline the main characteristics of the industry. The description focuses on the bicycle-based *boda boda*, however, for completeness it is necessary to mention some aspects of their motorised counterparts.

2. Main characteristics of the industry

Organisation

Boda boda are a classic form of what has been characterised as 'informal transport' [Cervero 2000]. This term describes the context in which the sector usually operates – informally and illicitly, somewhat in the background, and outside the officially sanctioned public transport sector. It has proved difficult for governments to regulate the *boda boda* industry. However, some operational discipline is provided by the 'associations', to which the majority of *boda boda* operators belong. Attempts to form a single national organization in Uganda have been defeated by the chronic instability that plagues most associations.

Members of an association pay an annual fee in the range US\$3-6. These figures disguise two separate payments. They comprise a registration fee, or operating license, to the municipality of around US\$3, and an annual subscription to the association. The association acts as their mouthpiece, represents them in cases of harassment by security personnel, traces members in cases of theft, or their relatives if there is an accident, and through 'stage committees' enforce discipline and hygiene by a range of sanctions such as

finances, suspension of membership and the right to operate. In some cases the association also has a semi-banking (savings) and credit role for members.

The District authorities have the legal right to invite annual tenders from *boda boda* or taxi 'associations' to collect fees on their behalf from association members. These fees are for the right to use municipal parking facilities and the provision of services to passengers. The dominance of the revenue collection role is (presently) less evident for *boda boda* associations than taxis, because their turnover is of a different, and much lower, order of magnitude. They still appear to function primarily as unions, although some of the main urban associations are collecting revenue on behalf of some Municipal authorities.

Types of service

Boda boda primarily provide three types of - predominantly - short-distance services:

- within the main urban areas, where they compete with conventional sole hire and shared taxis;
- as feeders to urban areas on routes that - due either to the low density of demand or the roughness of the route - are unattractive to taxis; and
- as feeders to the main roads in which role they tend to complement taxi and large capacity bus services.

Boda boda operate from 'stands' in towns, in trading centres, and on the feeder routes that provide access to public passenger service vehicle stops along main roads. On feeder routes they are the dominant service in many areas of the country. In congested conditions the motorcycles are also valued for their ability to weave through the traffic and shorten door-to-door journey times. Bicycles are considered to be too slow, and thus vulnerable, where motorised traffic is dominant.

The area of operation of a *boda boda* is called a 'stage'. Each has a 'stage master' appointed by the association, or selected by the members providing services on that stage, who enforces association regulations. A village might have 2-3 stages with a minimum of 10 registered operators each [Iga 2001].

Fares

Charges are normally levied for a particular stage, or distance. Bicycle operators will accept shorter distance stages (as little as US\$ 0.06) than motorcycles. As would be expected motorcycles charge higher fares than bicycles for the same stage. The difference varies with the distance travelled, but is about double per km. In February 2001 short stage fares (0-1 km) were US\$0.28 by motorcycle and US\$0.17 by bicycle

[Howe 2003].

Motorcycle fares per km vary in the range US\$0.07 to US\$ 0.12 with the lower rates applying to longer trips of up to 16 kms in length. Comparable inter-urban bus fares per passenger are around US\$0.02 on paved routes and US\$0.04 on unpaved [Benmaamar *et. al.* 2001]. Thus, motorcycle *boda boda* are 2-6 times more expensive than bus fares. However, they are cheaper than sole hire taxi services, which realistically are their most likely competitors in cities.

Earnings

Earnings clearly depend on the number of passengers carried. These are dependent on the location of the stage and competition, with the relatively wealthy city centres generating proportionately more, but shorter, trips than small towns or rural feeder routes that have fewer but longer journeys. Also, not all operators' work continuously - many take time off for other activities and occupations.

In the Ugandan capital (Kampala) bicycle operators claimed substantially higher numbers of passengers than in the secondary city (Jinja), in the range 75-330 per week, with a mean of 153. Bicycle *boda boda* operators in Jinja carried 35-160 passengers per

week, with a mean of 86, or 12 per day [Howe 2003]. In both cities the claimed number of passengers correlate closely ($r^2 = 0.86$) with stated earnings, which gives credence to the figures. These average US\$24 per week within a range of US\$7-59.

3. Market niche

Essentially *boda boda* provide a short-distance, low-capacity service that is able to serve low-density demands, or those where access is restricted by the width or quality of the route. Household surveys show that mean trip length varies with income from 1.3 to 5.4 km, although most operators claim that they seldom exceed 3 km [Bryceson et. al. 2003]. The light motor vehicle-based shared taxis that exist in most African countries find it unprofitable to serve many villages, due to insufficient demand, and are confined to the major routes. Equally they physically cannot use the footpaths that provide access to many low-income urban settlements. Thus the strength of the *boda boda* services lies in the absence of any other form of transport able to meet low-density demands in an economically viable way.

Interviews with users confirm that *convenience* is a major reason for using *boda boda*, despite their poor public image. Operators are routinely chastised in the press and by the public for their wild behaviour, rudeness, poor hygiene, and cheating. However, for the short distance trips that are typically demanded they have few competitors either in terms of cost or availability.

Observations in Kenya and Uganda indicate that bicycle *boda boda* are restricted to favourable (flat) terrain, comparatively short distances (normally < 5kms) and where the volume of motorised traffic does not militate against their use. They are also more common in the poorer rural areas and small towns. Thus in Uganda they are ubiquitous in the major towns around Lake Victoria (Jinja, Kisumu) where the terrain is flat, but largely absent from the hilly and heavily trafficked cities (e.g. Kampala) where the motorised version predominates. Whilst the motorcycle *boda boda* do compete with the bicycle-based versions, they also complement them by extending the range of services. They are also able to operate in terrain where bicycle services are impractical.

The market niche occupied by the services in Uganda - and to a lesser extent Kenya, due to the absence of motorcycle-based *boda boda* - is clearly not peculiar to those countries. Similar conditions exist in many other African countries. It is thus germane to examine the factors that appear to have influenced their emergence.

4. Factors influencing their emergence

The factors that enable new modes of transport to be introduced into an area and grow to reach a self-sustaining *critical mass* are known to be complex. Significantly the history of efforts to do this is littered with failures [Starkey 2001]. This knowledge makes the success of the *boda boda* phenomenon all the more intriguing.

With respect to the more unconventional intermediate means of transport (IMT), of which NMT are a subset, four main factors have been identified that influence the level of ownership [Dennis 1999]. These are:

- the capacity to earn an income;
- affordability and in particular the availability of credit;
- the priority and status given in the community; and
- common usage in the community, which creates customer confidence.

Capacity to earn income

Historically a proportion of bicycles have always been used for essentially commercial purposes. With some this is a near full-time utilisation, such as by water sellers who are common in many countries, however in general, most bicycles are used occasionally by

owners for commercial reasons, be this crop transport during the harvest season or hiring to a neighbour or family member. However, anecdotal evidence suggests that it was the smuggling of goods from Kenya during the chaos of the Idi Amin reign in the early 1970's that gave a major boost to the commercial use of bicycles because the economic returns were considerable. The severe recession in conventional transport services, consequent on the oil price increases of 1973-74 and 1979, gave further impetus to their commercial use. This process seems to have resulted in the adaptation of bicycles to carry passengers by operators providing a full-time, year-round service. This was the distinguishing feature of the *boda boda* phenomenon with NMT services leading the way. It appears to have evolved from the initial goods trade, and has the advantage that it is not seasonal - although market days generate peak demands - and provides an instant and largely untaxed return on investment.

Estimating this return is difficult because it depends on the type of bicycle used (new or second hand), whether it is operated full or part-time, and if it is owner-operated or hired. Surveys indicate that for most *boda boda* operators (>80 %) it is their main occupation, with 71% being owner-operators. The rest hire, usually from family members or friends. The fear of theft and lack of collateral has precluded a third party hire market from developing.

Currently (November 2003) a typical *boda boda* bicycle costs \$ 45 new on the road. To this must be added, perhaps \$10 for strengthening – wheels, frame and carrier – and decoration. Thus, notwithstanding that the previous figures on earnings are gross, from which association fees and operating costs must be paid, they imply a healthy return on capital investment.

Affordability and availability of credit

In 2001 Uganda was estimated to have fleet of 1.7 million bicycles in a population of around 23 million [Howe 2003]. This equates to slightly less than half of all households having a bicycle and suggests, as previous studies have done, that bicycle ownership is still the prerogative of the relatively wealthy [Dennis and Howe 1993]. Affordability is evidently a significant issue among the poor. It is not helped by a combination of high price relative to the incomes of the poor and the general absence of credit to facilitate purchase.¹

It may be significant that away from the border area, and lucrative smuggling trade, *boda boda* are reported to have taken hold first in coffee growing areas, then spread to the sugar, rice and cotton production zones. The implication being that cash rich rural economies are necessary to support propagation, both of demand and supply.

For reasons that are not clearly understood the use of *boda boda* seems to have become much more widespread in Uganda than Kenya where propagation has been relatively slow. For example, *boda boda* have only recently become established on the Mwea rice plains in the centre of the country on the south slopes of Mount Kenya. This is about 350 kms from the Kenya/Uganda border, implying a near 40-year period for the innovation to travel this distance from its area of origin.

One reason for slow propagation may be population density e.g. Kenya is only half that of Uganda. It is also much more unevenly spread, with dense concentrations in some places and large areas of low population density.

Priority and community status

There is no well-structured research to show what priority is given by households to the acquisition of a bicycle, but anecdotal evidence is that it is high, especially among adult

¹ The current on the road price of \$ 45 for the cheapest *roadmaster* model might appear cheap, but 48% has been added to the CIF cost in taxes, the main ones being VAT (17%), Excise Duty (15%) and withholding tax (4%).

males. Surveys in rural Uganda emphasise the prestigious nature of bicycles [Malmberg Calvo 1994]. This image differs, however, between men and women. In many areas their use by women arouses culture-based disapproval, although efforts to change this perception have and are being made. These are hampered by the familiar problem that the bicycles available are designed for use by men rather than women. In common with much of urban Africa use of bicycles has declined in Uganda's towns and cities with rising traffic levels. Since they are distained by the urban middle and upper classes – among whom the bicycle has the image of 'poor man's' transport, even though the really poor are seldom users – reviving ownership is a difficult proposition. However, and somewhat paradoxically, it is the middle classes that are the main users of *boda boda*. It would seem that it is acceptable to be seen on a bicycle as long as one is a passenger rather than operator.

Common usage in community

The bicycle has been ubiquitous in most African countries for decades. Thus, it is not in any sense a *new* vehicle. This familiarity probably assisted adoption of the *boda boda* concept in Uganda, but does not explain its relatively slow propagation in Kenya or absence in other countries where bicycles are an equally popular means of personal transport.

In many countries a sort of chicken or egg situation seems to prevail in the sense that a supply cannot exist without an appropriate demand. But the population cannot express a demand for a supply of which they have no experience. This impasse can only be broken by stimulating demand with demonstration projects.

5. Significance to the poor

The poor appear to derive few service benefits from *boda boda* simply because they cannot afford to use them. Their main significance to the poor lies in the employment opportunities provided, which can be fulfilled with few qualifications other than youth, being male and strong. In Uganda youth comprise a significant proportion of the chronically poor. They experience lack of productive resources, inability to acquire worthwhile education and skills, unemployment, lack of income sources, susceptibility to diseases particularly sexually transmitted diseases, HIV/AIDS, and idleness [Ministry of Finance, Planning and Economic Development 2002]. Conversely, gainful employment is recognised as the single most important factor that enables people to move out of poverty [Ministry of Finance, Planning and Economic Development 2003]. The industry may also provide essential business experience and earnings to enable operators to move onwards and upwards. Certainly the majority see it as no more than a transient occupation. It is arduous, unsafe and the risk of violence and theft are ever-present threats. More than a half (52%) had been operating for less than 2 years, and only 10% for more than 5 years [Howe 2003].

6. Likely evolution of the industry

It is difficult to be confident about how the industry might evolve. In Uganda the volume and regularity of complaints from operators about competition from within the industry suggests that in many areas the market may well be close to saturation. More of the same type of service is clearly not the way forward to develop the industry. However, there has been surprisingly little technical innovation in the more than 40 years that *boda boda* services have been in existence. The original services were provided on a man's bicycle equipped with a padded cushion fitted over the rear carrier. Little has changed in the ensuing period. The bicycle remains the basic 'roadster' model that has been popular in Africa since the 1930s. Some strengthening of the frame, spokes, and seat carrier are

apparent, but specialist goods carriers or tricycle versions have yet to emerge. Moreover, there do not yet appear to be any of the urban courier services that have become popular in cities of many developed countries, although some *boda boda* undoubtedly do this kind of small parcel work. The problem may well be the generally untrustworthy image that operators have in the public mind, coupled with the lack of insurance cover for many consignments.

It is reported [Bryceson et al 2003] that some of the motorcycle *boda boda* operators carry mobile phones so that they may be summoned as needed by clients, but it is not known how widespread is this demand-responsive practice. Bicycle-based *boda boda* operators are undoubtedly poorer than their motorised counterparts, and presumably less able to provide such a refinement, although stage masters could offer a 'pooled' service on their behalf.

7. Lessons from the Kenyan and Ugandan experience

The rapid spread and pervasiveness of the *boda boda* services in Uganda and to a lesser extent Kenya clearly indicates that a latent demand had existed for a long time. It must be assumed that similar latent demands exist in many other African countries that currently have no equivalent service. If this is so it raises the question of how a supply of services might be stimulated.

Exceptional circumstances - the emergence of a lucrative smuggling trade that needed stealthy transport able to pass over tracks and paths - provided the initial reason for services in Kenya and Uganda. Subsequently the difficulties experienced with conventional transport services, and the increasing number of unemployed youth, created an additional stimulus to both demand and supply.² However, the path of expansion has not been smooth, especially in Kenya. It appears that innovation in the industry is slow without outside assistance, either in terms of the geographic spread of services or technologically. The general absence of credit that faces those seeking involvement in the industry is also a restraining factor. Similarly, the lack of training for mechanics is thought to be a significant reason why bicycle *boda boda* have not penetrated to many areas in which the villages are characteristically small [Heyen-Perschon 2001].

While private sector propagation can be considered highly successful in the case of Uganda, and to a lesser extent Kenya, it seems unlikely that this mechanism can be relied on in other countries. There is a case for a facilitating role to be played by donors, government, NGOs, or all three, in combination with private sector vehicle and finance suppliers. Efforts should focus on demonstration, credit and training of operators and mechanics.

Although the evidence is not conclusive, density of population appears to be a significant demand factor. Thus, with large countries such as Ethiopia, Sudan, Tanzania and Zambia efforts to stimulate service demands would need to be carefully targeted. In these countries the population tends to be clustered with large intervening areas having few people to serve.

It is clear that the major benefit of the industry to the poor is as a provider of employment opportunities. Few of the poor can afford the fares to travel by *boda boda* however, the industry does provide the ability to generate an income - as long as one is fit and healthy - for thousands who otherwise would be unemployed.

² The extensive motorcycle services that emerged in West African cities in the 1970s and 1980s seem to have resulted from similar causes [Howe and Oni 1996, Goddard 2003]

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