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Transport, mobility and social capital in developing countries

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The World Bank defines social capital as the institutions, relationships and norms that shape the quality and quantity of a society's social interactions. Social capital is a multi-faceted concept that implies emotional attachments to relatives and friends as well as interactions between people. Existing studies of transport and its impact on the rural poor in developing countries focus largely on its role in the process of economic growth, by increasing the productive capacity and market accessibility of small-scale farmers through investment in infrastructure and transport services. Few researchers have investigated the role that transport plays in providing access to and maintenance of valuable social networks. Social capital provides a catalyst for sustainable mobility and service delivery in the absence of conventionally measured economic benefits. Without the social capital argument the reasons for maintaining rural transport infrastructure and services remain weak. Access to social capital networks requires mobility, and transport is the agency by which social capital networks are supported. Mobility is essential to the sustainability of social networks yet, to date, existing literature disregards the means by which people physically access social capital, whether through associations and community groups or simply maintaining rural–urban linkages with extended family members. This paper draws on empirical evidence from Kenya to review the relationship between transport mobility and social capital and its relevance for rural development. It examines the significance of transport in accounting for the extent of social interaction and the way that transport interventions enable the poor to access, and be included in, social capital networks.

1. INTRODUCTION

Poverty reduction is now a central feature of global development policy. Despite an unprecedented growth in global economic output in the last 50 years, wealth disparities between regions and within countries have risen dramatically. In 2002, it was estimated that 20% of global economic output was shared by 85% of the world's population, who live in low- and middle-income countries.¹ Currently, more than 1.1 billion people exist on less than one US dollar a day in developing countries.²

The renewed focus on poverty reduction has led to new perspectives on definitions of poverty. For example, the parameters for measuring poverty have now broadened from the simplified poverty line and calorific intake, income and consumption as traditionally used by the World Bank (defined as the purchasing power parity required for minimum calorific consumption, set at US\$1 a day).^{3,4} Poverty is now considered to be a 'multi-dimensional phenomenon, encompassing [the] inability to satisfy basic needs, lack of control over resources, lack of education and skill, poor health, malnutrition, lack of shelter, poor access to water and sanitation. . .'.⁴

In order to address poverty by adopting a more holistic approach, the world's governments agreed to a set of targets called the Millennium Development Goals (MDGs) at the Millennium Summit in 2000, with the overall objective of halving the proportion of extreme poverty by 2015.⁵ There are eight headline goals that can be summarised as

- (a) eradicating extreme poverty and hunger
- (b) achieving universal primary education
- (c) gender equality and empowerment of women
- (d) reduction in child mortality
- (e) improvement in maternal health
- (f) combating HIV/AIDS, malaria and other diseases
- (g) environmental sustainability
- (h) development of global partnerships.

Arguably, past transport programmes have had ambiguous impact on social development in general and a weak contribution to poverty reduction in particular. Traditionally, transport investment proposals are supported on the basis of their contribution to increased economic efficiency through market expansion and reduced transport costs.⁶ The sector's effect on (poor) people is assumed to be through the indirect, trickle-down outcomes of economic growth. In the transport sector the MDGs imply a move from exclusive cost–benefit justifications to linking the outcomes of transport projects to those of poverty reduction.⁷ However, it is becoming increasingly clear that effective poverty reduction needs more than just economic mechanisms.

Access to social networks and political processes is important in creating opportunities for learning and exchange of information on new opportunities as well as influencing

development priorities. A transport system should help in addressing the dimensions of poverty that is related to social exclusion. Mobility is essential to the sustainability of social networks, both in enabling access to cognitive and structural social capital, and in creating opportunities for networking in the very act of making a journey. However, transport is not a panacea for poverty reduction and social exclusion, and can even exacerbate the symptoms of poverty through a number of risk factors. These include increased criminal activity, land acquisition and community displacement, increased promiscuity and spread of sexually transmitted infections including HIV/AIDS via labour camps associated with road works, and an inevitable rise in road traffic accidents associated with increased traffic volumes.⁸ Nevertheless, the means by which people *physically* access social capital, whether in the guise of associations and community groups or simply maintaining rural–urban linkages with extended family members, are generally disregarded. Section 2 elaborates on the relationship between transport and social capital.

2. TRANSPORT IN THE CONTEXT OF SOCIAL CAPITAL

Social capital is a multifaceted term that infers emotional attachments to friends and family, as well as tangible products of interaction. The interface between these social networks is extremely powerful. For example, they provide a safeguard against adversity by facilitating the transfer of capital assets (natural, social, human, physical and financial). Access to these resilient networks requires mobility that is sustained by the available transport system. Transport is not simply a means of travel. It is the agency by which social capital networks can be supported.

The Department for International Development (DFID) defines capital assets as follows.⁹

- (a) *Natural capital*. The natural resource stocks from which resource flows useful for livelihoods are derived (including land, water, wildlife, biodiversity, environmental resources).
- (b) *Social capital*. The social resources upon which people draw in pursuit of livelihoods (i.e. networks, membership of groups, relationships of trust, access to wider institutions of society).
- (c) *Human capital*. The skills, knowledge, ability to labour and good health important to the ability to pursue different livelihood strategies.

- (d) *Physical capital*. The basic infrastructure (transport, shelter, water, energy and communications) and the production equipment and means that enable people to pursue their livelihoods.
- (e) *Financial capital*. The financial resources that are available to people (whether savings, supplies of credit or regular remittances or pensions) and which provide them with different livelihood options.

The World Bank defines social capital as the institutions, relationships and norms that shape the quality and quantity of a society's social interactions. Yet 'social capital' has come to be a catch-all umbrella term for 'horizontal' (between peers of a similar socio-economic strata) and 'vertical' (between peers of different hierarchical socio-economic strata, e.g. farmers and politicians) social networks, reciprocal trust and risk management. Indeed, Woolcock¹⁰ highlights the indiscriminate adoption and imprecise application of the social capital concept in development circles.

The social capital drive began following the work of Putnam *et al.*¹¹ who compared society and governance in Italy. It is rare to find social capital literature that does not pay homage to the research of Putnam and colleagues, but issues of social cohesion differ in the patrilineal societies of Africa and Asia that trace kinship and inheritance through the male line.

Increasingly, the relevance of social capital in bringing about economic growth is being recognised¹² in as far as the bonds within and bridges between social groups and networks open up economic opportunities and provide safeguards against vulnerability and adversity associated with shocks and stresses.¹³

Frankenberger and Garrett¹⁴ agree that social capital is one of the most important resources to be accounted for in poverty reduction programmes. They link social capital to notions of vulnerability, describing its 'reactive' and 'proactive' uses as a means of managing risk. The former refers to the community's reaction to shocks and stresses by providing emergency food, labour or financial assistance to the extreme poor who have no capital assets with which to substitute. The latter refers to community-based social networks that are mobilised in advance of shocks and stresses to manage common property resources or to lobby for social service delivery. Nevertheless, social capital is not wholly positive. Table 1 lists some positive and negative outcomes of social capital that can help or hinder development.

Positive outcomes	Negative outcomes
<ul style="list-style-type: none"> • During hard times, friendship groups and kinship networks can provide emotional and financial support • <i>It's not what you know but who you know</i>—reciprocal obligations within professional or cultural groups can be very strong in providing trust and financial support • Similarly, traders in developing countries operate on a trust basis to ensure that they receive quality goods at market price • On a more regular basis, relations will send remittances and gifts to create a buffer in the event of a crisis • Social capital empowers people to loan material items and financial credit to neighbours, and mobilise groups to build infrastructure and lobby government • Networks of trust help establish informal credit relationships in the absence of collateral 	<ul style="list-style-type: none"> • Social networks, reciprocal trust and obligations can prevent the accumulation of capital for savings and investments—especially if households with surplus funds are under obligation to share their wealth with less fortunate relations • This barrier to personal advancement may reduce incentives to raise productive capacity and generate more income • Religious holy days can obstruct income and productive capacity • Some social groups possess strong social capital even though the outcomes of their actions can be destructive to non-members, e.g. the mafia, Ku Klux Klan and drug cartels

Table 1. Potential outcomes of social capital

Social cohesion, defined as social capital, is critical in order for societies to prosper by increasing people's capacity to organise for development and in providing essential safety nets to manage risks. The difficulty is that by its very nature, social capital cannot easily be measured. 'If physical capital is wholly tangible, being embodied in observable material form, and human capital is less tangible, being embodied in the skills and knowledge acquired by an individual, social capital is less tangible yet, for it exists in the relations among persons.'¹⁵ Furthermore, how do people access social capital stocks and then use them to substitute into other capital assets?

Bourdieu¹⁶ explains that the volume of social capital possessed by an 'agent' depends on the size of the network of personal connections he can effectively mobilise, and is hence related directly to the proximity in physical and geographical space of such a network. On this basis, mobility is required for both the generation and maintenance of social capital networks.

Mobility is essential to the sustainability of social networks, both in enabling access to cognitive and structural social capital¹⁷ and in creating opportunities for networking in the very act of making a journey. 'Cognitive' social capital includes relationships of trust and confidence, along with perceptions of family and rural home. 'Structural' social capital includes networks, membership of groups, access to wider institutions of society, rural-urban linkages and extended family contacts. Hence, transport is more than a physical network—one might argue it is a social network itself.

Existing studies of transport and its impact on the rural poor focus largely on its role in the process of economic growth by increasing the productive capacity of small-scale farmers and promoting agricultural productivity through surplus production and transportation of crops to market. Little research has been undertaken to investigate the role that transport plays in providing access to and maintenance of valuable social networks.

Bourdieu¹⁶ acknowledges the value of time required for maintenance of social capital, explaining that 'the best measure of cultural capital is undoubtedly the amount of time devoted to acquiring it'. The value of time described here is a key concept in transport economics, but is adopted by Bourdieu to mean a solid investment in social exchange, for which the profits will eventually appear in monetary or other form. The value of time applied by transport practitioners constitutes the cost of time expended on trip-making, in terms of lost production or income-generating opportunities, and the value of that time for the individual 'agent'. Where accessibility is markedly improved, the time-cost of a journey is reduced, enabling the poor to acquire other assets through increased productive activities.

This paper argues that there is a plethora of existing data on types of social capital and its significance for rural development but there remains a paucity of information regarding *accessibility* to social capital networks. However, there is now sufficient understanding and theoretical validity that it is possible to study social capital in the context of mobility. Section 3 reviews the implications for social capital and mobility following a case study in Kenya.

3. SOCIAL CAPITAL: KENYAN DEFINITIONS

The Rural Transport Services (RTS) project for Kenya was initiated by the Kenya Network for Draught Animal Technology (KENDAT) in 2001. The RTS project provided an opportunity to investigate the role that transport plays in providing access to and maintenance of social networks. The empirical research was undertaken in the Lari, Mwea, Kalama and Magadi areas of Kenya in 2002, drawing on 250 household questionnaires, a travel diary and key informant interviews. The case study demonstrates how accessibility constraints can be a precursor to vulnerability, and the way in which social capital can help people deflect shocks and stresses associated with vulnerability. The case study supports the assertion that transport is one agency by which social capital networks can be sustained, and gives weight to the argument for accessibility-based interventions in low-density areas.

In referring to social capital in this case study, its definition is acknowledged as the social resources upon which people draw in pursuit of livelihoods, divided into two types—cognitive and structural.

Structural types of social capital in Kenya take the form of revolving funds, commonly known as 'merry-go-rounds', 'harambees' (a social group that raises funds for particular events such as school fees, weddings and to support families during illness) and 'jua-kali'. A jua-kali describes an informal association or business that promotes appropriate technology, ranging from training in cake baking and weaving to the operation of repair garages for intermediate means of transport.

Social capital networks feature prominently in the survey sites, and are characteristic of rural areas in which the majority of people take part in agricultural (pastoral and arable) production. The cognitive networks identified during the field surveys are those that do not stem from any financial incentive that will result in capital gain. They are the product of social relations in which people invest time and money, often with limited returns, and can be referred to as coping mechanisms. The maintenance of links between friends, relatives and neighbours is undertaken as a form of risk management. While there may be no immediate or long-term gains, the formation of cognitive networks ensures the availability of a sustainable 'safety net' that can be deployed during periods of adversity as illustrated in the following example.

Jephitha Gichoya, a teacher living in Ngurubani, Mwea, owns a bicycle, wheelbarrow and ox-cart, but currently has no oxen due to lack of funds. Jephitha can borrow oxen from friends to use when transporting manure and water, and has an arrangement with a neighbouring farmer who owns oxen but no cart. While Jephitha no longer belongs to any farmers' groups, this reciprocal arrangement has strengthened his relations with neighbouring farmers who inform each other of the current market price for vegetables, and lend each other produce when capital is needed quickly. Jephitha recently lent a farmer 10 kg of French beans to sell in order to pay for his children's school fees. Although the farmers' group has disbanded, the farmers remain on good terms, which further strengthens the support network.

The type of social capital described above is defined as 'reactive' by Frankenberger and Garrett¹⁴ who explain that

members in a community solidarity group will try to help each other prevent the occurrence of a food or income shortfall by sharing key outputs of production (in this case French beans).

Structural networks in which members invest time and money for capital gains by contributing to a revolving fund can range in size and influence, from farmers' groups aiming to increase their productivity through acquisition of a plough to entrepreneurial self-help groups that generate income through contributing a community service. In his explanation of social capital in the creation of human capital, Coleman¹⁵ discusses the value of trustworthiness that is implicit in these rotating credit associations, and without which the institutions could not exist: 'a person who receives a payout early in the sequence of meetings could abscond and leave the others with a loss'. Coleman indicates that revolving funds are more likely to operate successfully in rural areas that typically constitute a more homogeneous (and therefore close-knit) society than among their urban counterparts who are characterised by a high degree of social disorganisation.

In most instances, the social groups organise events such as weddings and funerals, but few are organised to improve accessibility either through the provision of means of transport (bicycles, handcarts, animal carts) or through voluntary labour to improve community access routes (through spot maintenance). There are, however, some exceptions, notably in Mwea. Nguka Taxis are one such group that operates *boda boda* (a colloquial name for a bicycle taxi on which the passenger rides pillion, operated in Kenya) in Ngurubani, Mwea Division. There are 24 members in the Nguka *boda boda* self-help group. There is a charge of 2500 kshs* to join the association as a licensed *boda boda* operator, and the group contributes 500 kshs to the council a year. Members contribute money each week to a kitty, and then hold a ballot where one member receives the kitty and uses it to purchase a bicycle (at a cost of 2800 kshs). The self-help group will continue until every member has paid for a bicycle out of the group's kitty. The self-help group also acts as a *boda boda* station (see Fig. 1) where a shelter has been constructed and a queuing system has been put in place to ensure there is an equitable distribution of fares.

The *boda boda* generally only service areas where cars cannot access and hence have captured a niche in the market. There are 28 bicycles in the self-help group, with some members owning two bicycles. Most members own their own bicycle, but some rent them from the owner to whom they must pay 60 kshs per day, whether they have generated 60 kshs in fares or not. Often whole days can be spent without receiving a fare, notably when the bicycle is under repair. Average earnings of the Nguka taxi operators are 500–1000 kshs per week, and there are seven other *boda boda* groups in Ngurubani that service different routes.

4. SOCIAL TRIP-MAKING IN KENYA

The first-hand accounts of the structural networks described above show that strong structural and cognitive social capital exists in rural communities of Kenya. Individuals with a common interest (such as self-help groups that collectively seek credit,

*The exchange rate at the time of research (2002) was 79 Kenya shillings (kshs) to 1 US dollar.



Fig. 1. Nguka taxis self-help group, Kenya

small business operators such as *boda boda* riders and communities who mobilise themselves into collective action to improve the condition of local feeder roads) draw on and support the maintenance of social capital networks in a subconscious effort to stave off vulnerability.

Of the sample surveyed in Mwea, Lari and Magadi Divisions, the number of journeys made for social purposes per year varied. The three social activities that were most regularly pursued were leisure activities (average of 141 trips per year), attending a place of worship (average of 114 trips per year) and visiting friends (average of 106 trips per year). Fig. 2 illustrates the variation in social trip-making between Divisions. Leisure activities featured highly among those sampled from Lari (270 trips per year, equivalent to five times a week), while in Magadi, journeys to a place of worship (of any religious denomination) accounted for an average of 214 trips per year, equivalent to four times a week.

The social outings listed in Fig. 2 will most likely have values attached to them that vary between respondents and will undoubtedly bias the frequency of journeys made in each Division. Nevertheless, the propensity for making journeys that will strengthen social capital is clear, with trips to burial societies, village committees, women's groups and religious meetings accounting for weekly trips (52 trips per year) in some Divisions, most notably Magadi and Mwea.

Table 2 lists a breakdown of journeys made in 2002 by purpose, gender and age for all Divisions from the household surveys. Men undertook the majority of social trips, possibly because they had more access to surplus cash than women through income-earning opportunities and formal employment (for which 100% of all trips were made by men). Nevertheless, women undertook more journeys than men to access credit associations, which is in keeping with the notion that credit providers have more trust and confidence in women to pay back loans and women are more likely than men to access credit from such associations.¹⁸ The only significant journeys that children (under 18 years) undertook were to weddings and funerals and to visit relatives and places of worship.

The frequency of trips declined with increasing distance for social and income-earning activities (see Fig. 3). This trend was most

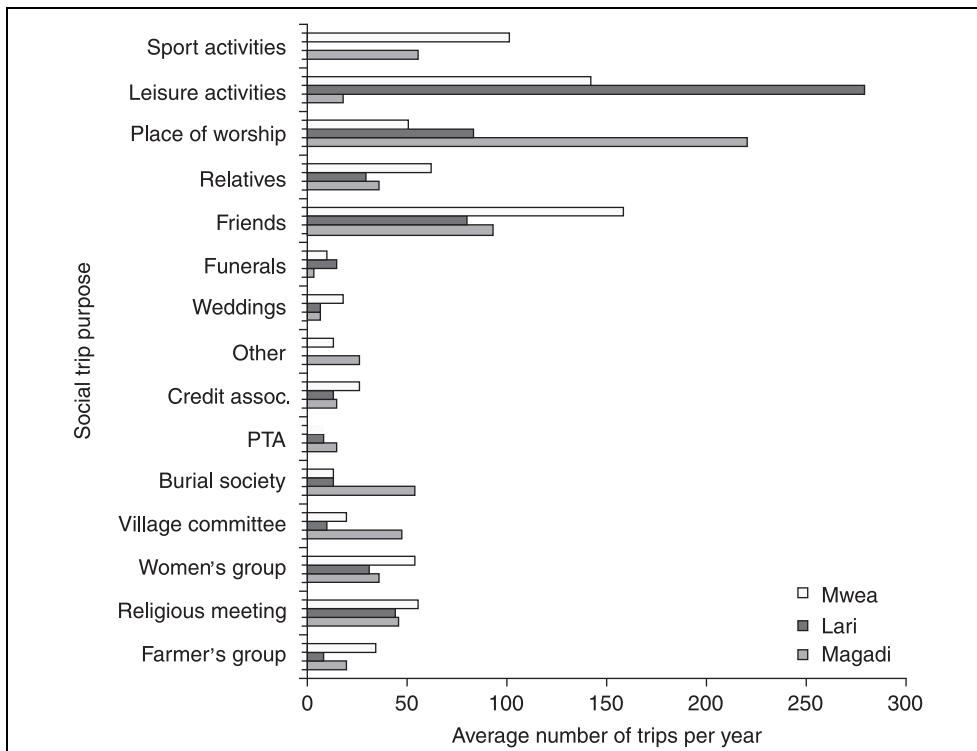


Fig. 2. Frequency of average annual household trips by social purpose, Kenya (2002)

pronounced for social trip-making activities, where the frequency of social trips dropped to below 20 journeys per year beyond 40–50 km. Visits to friends and relatives continued, albeit infrequently (on average between 1 to 15 trips a year), for up to 250 km from the trip origin.

For income-earning activities, more journeys were made at increased distance from the origin, especially for visits to town and also to collect farm inputs. At short distances, many more journeys were made per year (up to twice daily for transporting harvests and visiting farms), and this was likely to be because these trips were considered a necessity and not perceived to be a luxury as are some social trips (notably leisure and sport). Arguably, many social trips might have been perceived as non-essential, and were hence undertaken more regularly at close

	Men: %	Women: %	Boys: %	Girls: %
Farmers' group	73	25	2	0
Religious meeting	46	39	7	7
Women's group	14	76	4	6
Village committee	86	11	3	0
Burial society	51	47	1	1
PTA	55	39	3	3
Credit Association	46	54	0	0
Weddings	40	39	10	10
Funerals	36	39	12	12
Friends	53	45	1	1
Relatives	34	38	14	13
Place of worship	27	28	22	22
Leisure activities	86	11	2	2
Sport activities	100	0	0	0

Table 2. Proportion of social journeys disaggregated by gender and age, Kenya (2002)

proximity to the trip origin where the cost of accessing the social activity is cheaper and less time-consuming.

A small proportion of social trips (7%) were made beyond 50 km from the trip origin, compared with income-earning trips, for which 10% were made beyond 50 km from the trip origin (Fig. 3). Visits to friends and relatives accounted for most of these social trips (86%) undertaken beyond 50 km, indicating the importance of access to social capital destinations, given the frequency and distance of destinations involved.

The use of social capital in the management of risk by the rural poor is well documented. The Kenya case study supports the concept that relationships between friends, relatives,

community associations and even revolving credit funds provide a strong support network for mitigating shocks and stresses associated with vulnerability.

In summary, the principal outcomes of the case study are as follows.

- 'Structural' social capital was found to be strongest among participants in the field study, evidenced by membership of social groups and community associations.
- Personal mobility is a significant variable in accounting for the extent of social interaction, particularly for visits to friends and relatives.
- Frequency of social trips is related to distance, cost and mode, with 81% of the sample undertaking trip-making on foot.
- Social relationships between friends, relatives and interactions of social networks and credit funds provide a strong support network for proactive risk management.
- There is a role for social capital benefits in rural road investment appraisal and for justification of a rural transport service subsidy to strengthen 'cognitive' and 'structural' social capital in areas where a conventional cost-benefit analysis (CBA) does not apply.

From the perspective of the road sector, the question is: how can the concept of social capital and associated networks be adopted by key policy and decision makers as a justification for road investment in remote rural areas?

The transport sector consumes a considerable part of overall donor investment in developing countries. With the current focus on poverty reduction, there is increasing emphasis on investment in low-volume roads that service the remote poor. However, traditional appraisal frameworks, such as CBA, do not cater well

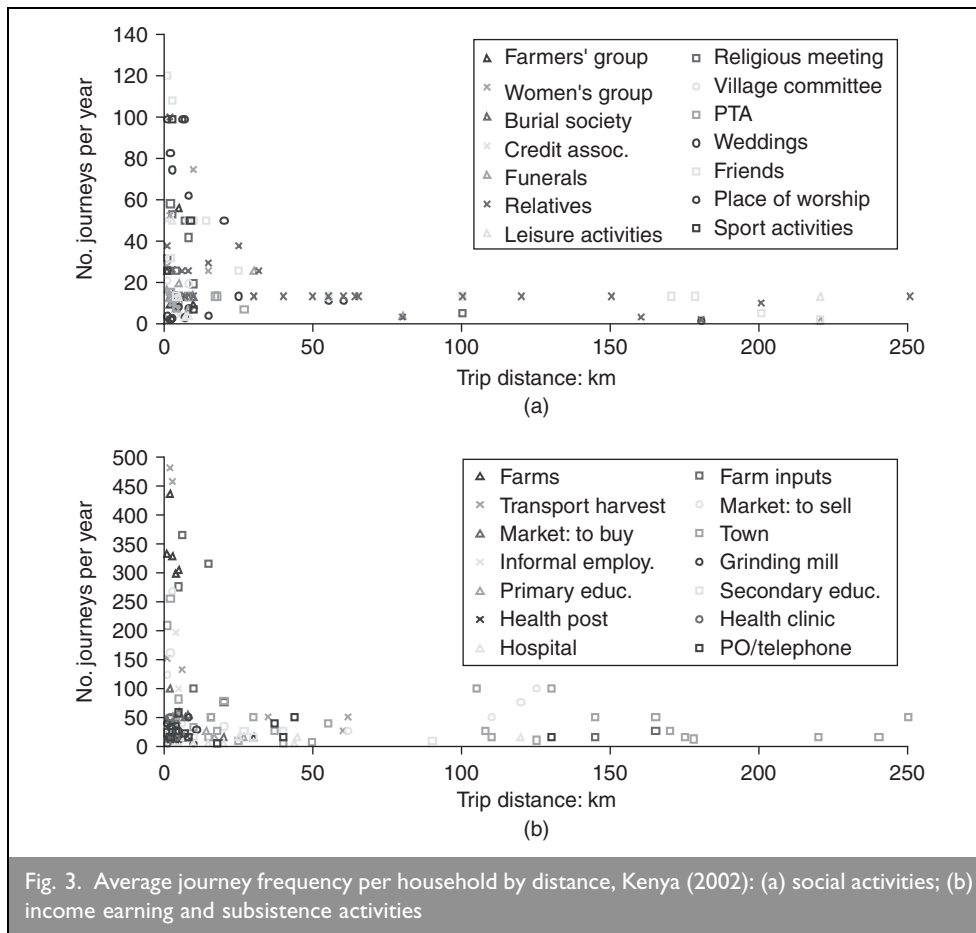


Fig. 3. Average journey frequency per household by distance, Kenya (2002): (a) social activities; (b) income earning and subsistence activities

for poverty reduction and the other social benefits of roads. The inclusion of social benefits within a road investment appraisal has the potential to focus investments on the poor in line with the MDGs.

Over the past 20 years, road investments in developing countries have been planned and prioritised on the basis of economic appraisal models¹⁹ and prioritisation indices/ranking procedures. The latter procedures are more often used to plan rural access or feeder roads. These are less economic in orientation and often include a social benefit component, yet there is no commonly accepted method of defining or incorporating social benefits into road appraisal criteria.

Certainly, there are effective procurement strategies in place for improving road infrastructure, including resources from central government, dedicated road funds or donor financing.²⁰ The most common source of funding for the maintenance of rural roads is central government, which typically provides up to 5% of public sector revenue to rural governments for the transport sector. Malmberg Calvo²⁰ highlights that this figure barely covers salary expenditures of local rural road units, nor the equipment and fuel required for undertaking capital-intensive works. Cost sharing is another means of obtaining funds for road maintenance through a combination of road users, central government or donors financing an amount proportional to that provided by local government.²⁰

Road maintenance funds are used to transfer the cost of routine and periodic maintenance improvements to the road user through charges collected by central government, including fuel

levies, vehicle licence fees, road tolls and international transit fees.²⁰ In the main, where a formal framework for ownership of community roads is absent, it becomes the responsibility of the local community to finance and undertake maintenance works to village access routes. The adoption of social benefits (that includes social capital) are thus likely to be highly significant in areas where there is no existing access at all, or where existing roads are impassable throughout much of the year, or where existing traffic volumes, population density and agricultural productivity are very low.

Social benefits tend to be more intangible than economic benefits because they entail 'subjective interpersonal relations that have a variable and incalculable value to individuals'.²¹ Previously, 'such nebulous issues would have been ignored, but current

development theory has given pride of place to social capital considerations' and the psychological and material importance of such interpersonal relations.²¹

5. IMPLICATIONS FOR SOCIAL CAPITAL AND MOBILITY

Successful development transformation affects not only what we do, but also how we do it. . . in the end, successful development must come from within the country itself, and to accomplish this, it must have institutions and leadership to catalyse, absorb and manage the process of change, and the changed society.²²

Villages included in the Kenya case study were mostly found to have strategies at the household level for improving livelihoods through asset substitution, in the absence of state support. Social capital networks appear to be an implicit aspect of village relationships, often presented in a well-organised structure that can be mobilised in the pursuit of a common goal, an example being community road maintenance. Woolcock and Narayan²³ support the argument that when citizens are deprived of services and benefits, informal networks substitute for the failed state and form the basis of coping strategies.

Morduch and Sharma²⁴ agree that helping to reduce vulnerability poses a new set of challenges for public policy, in particular determining an appropriate role for public action. Their reference to coping mechanisms is through informal exchange of transfers and loans within families and communities, and also more structured institutions that provide savings and credit. Morduch and Sharma²⁴ introduce the idea that poor households lack the 'insurance cover' required when hit

by severe income shocks, as their asset base is weak and they are typically without access to external coping mechanisms. They assert that without concrete means of insurance, such households absorb minor shocks through reductions in household expenditure and adopting other livelihood strategies. However, should there be a major shock that affects an entire community (thus reducing the 'safety nets' available in the form of social networks) then more drastic action must be taken, as alluded to by Morduch and Sharma²⁴ in their list of reactions following severe shocks and stresses

- (a) removing children out of school and putting them to work to both save school costs and generate additional household income
- (b) increasing utilisation of public goods such as forests for the sale and consumption of firewood
- (c) reducing consumption of nutritious foods and reducing the quantity of meals
- (d) non-payment of taxes and contributions to community associations during the period of economic instability
- (e) selling material assets such as land, livestock and crops that can provide instant financial relief
- (f) in severe and prolonged cases of vulnerability, such as long-term drought and food insecurity, households may resort to urban migration for job seeking.

The *World Development Report Attacking Poverty*⁴ examines the need for community involvement in planning and managing local infrastructure services for increased ownership and sustainability. It describes the involvement of beneficiaries in decision making as the starting-point in creating local ownership of infrastructure assets, important in three dimensions.⁴

- (a) *Choosing priorities*: particularly for deciphering the relative value of social and productive investment and targeting within communities.
- (b) *Effective operation and maintenance*: because governments are notorious for neglecting local infrastructure.
- (c) *Local ownership*: required for community cost sharing in investments and operation in the absence of adequate budget allocations for infrastructure.

Such approaches to infrastructure and access provision have the dual benefit of nurturing social capital through community organisation, while including beneficiaries in decision making.

The significance of road maintenance programmes for poverty-focused development also receives recognition from Porter²⁵ who indicates that unmade roads could be maintained by local communities to a passable standard *if* they had access to necessary equipment such as graders, rollers and lorries, etc. from local government sources.

The case study indicates that where poor people have the necessary materials to undertake repair works to aid basic access they do not, in the majority of cases, hesitate to mobilise themselves into collective action. Yet, due to their relative isolation, vital communication between state and civil society at the micro level is all too often absent: 'lack of a good road and other facilities is not infrequently blamed by inhabitants of off-road settlements on their powerlessness to influence

decision-making by policy makers. In countries across Sub-Saharan Africa, personal contact is often an essential component in the decision-making process'.²⁶

Woolcock and Narayan²³ suggest that policy makers are to blame for miscommunication and in particular lack of uptake of social capital, claiming that there is a tension between social capital's virtues and vices that explains why scholars and policymakers have been so ambivalent about its potential as a policy instrument. They also highlight that having high levels of social solidarity and informal groups does not necessarily lead to economic prosperity.

Woolcock²⁷ urges development practitioners and policy makers to ensure that the activities of the poor 'reach out' and are 'scaled up'. Inaccessibility and immobility are clearly symptoms of social exclusion but, as Woolcock²⁷ demonstrates, marginalised groups themselves possess unique social resources that can be used as a basis for overcoming that exclusion and as a mechanism for helping forge access to institutions.

After reviewing the theoretical and practical evidence, it would appear that social capital provides a catalyst for service delivery, enabling personal mobility in the absence of conventionally measured economic benefits. Indeed, without the social capital argument, the reasons for maintaining rural transport infrastructure and services in isolated areas remain weak.

An imperative for the transport sector is arguably to move from a position of isolation and to find clear interfaces with other sectors that are delivering on poverty reduction. This provides increased scope for more integrated methods of planning that involve optimal combinations of transport and proximity planning interventions. The sector needs to develop pro-poor, institutional and regulatory frameworks. Key elements of these include the following.

- (a) Establishing and formulating mechanisms for collaboration with other sectors such as health, education, small enterprise, etc.
- (b) Institutionalising participatory approaches in the transport sector and mainstreaming gender and social assessments.
- (c) Adopting regulatory standards that support low-cost means of transportation and infrastructure.

There is a need for the transport sector to increase its understanding of the links between accessibility and poverty. The transport sector can learn from the experiences of other sectors including agriculture, water and health services, etc. Common threads that run through many of these sectors are principles of participation, cross-sector collaboration and partnerships, and an emphasis on balance between hardware investments and software elements (emphasis on local capacity building, local knowledge, monitoring of impacts). Arguably, this is the paradigmatic shift that the transport sector needs to make.

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