



Travel behaviour in Ghana: empirical observations from four metropolitan areas

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ARTICLE INFO

Keywords:
Mode choice
Intra-urban
Commuting
Metropolitan areas
Ghana

ABSTRACT

The paper examines the travel behaviour of residents in four key metropolitan areas in Ghana with data from 926 respondents including 451 females obtained at intra-commuter vehicle terminals. The analysis of the data showed that the Ghana Private Road Transport Union (GPRTU) continues to dominate in the intra-urban commuter service. Also, in spite of persistent complaints from consumers about the high cost of transport fares, it is rather the cost of food, children's education, clothing and to some extent personal entertainment which consume a disproportionate share of residents' disposable incomes. Notwithstanding this finding, respondents' expectation is to pay less than they are doing now for commuting within the study areas.

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1. Introduction

Studies on mode choice and travel behaviour have gained considerable ground in the transport literature in recent decades with Scott (2006) encouraging even further serious engagement in such activity analysis. For many of the studies, trip makers are perceived to act as rational beings, choosing modes most likely to offer them maximum utility. Defined in terms of cost of trip, timeliness of trip, socio-demographic and geographical influences, utility becomes a function of the level of service (Cervero, 2002; Schwanen and Mokhtarian, 2005). Some researchers have however become critical of attempts to assume a direct link between transport services and travel behaviour, arguing that such a link masks a number of important issues such as individuals' trip decision-making processes, including their perceptions towards a type of mode to use (Schwanen and Mokhtarian, 2005). Koppelman and Lyon (1981) who for years championed such thinking stress that people's perceptions about convenience and comfort as well as their normative beliefs correlate positively with preference and hence the choice for a given mode. It is even thought that elements with the most physiological importance to comfort are those which affect quality of a ride as well as the effort of driving such as noise, vibration, ventilation, glare, odour and seating arrangement (Neumann et al., 1978).

The rapid growth and sprawling of cities in less developed countries have also posed challenges to our understanding of people's travel practices. Daily trips both within and outside the cities now tend to cover numerous suburbs, making travellers belong to what Millot (2004) describes as territories in their own right. In

some cases, sections of the city dwellers are forced to reside on peripheral settlements close to the cities, a situation which not only reduces their employment potential as claimed by Srinivasan and Rogers (2005, p. 265) but also places limitations on both the quality and quantity of transport services (Buchanan et al., 2006; Limtanakool et al., 2006). For city dwellers in Ghana, the situation has become even more problematic, especially for the poor and vulnerable segments of their populations such as women and children. Most women are engaged in informal low-paid activities while children are generally dependent on their parents/guardians for their needs. Some children are engaged in several trade-related functions but these are meant to support household needs; in most cases the children are not paid for such services (see, for example, Kwakye et al., 1997; Porter et al., in press). Yet, in transport terms, women in particular tend to make more trips than men as the former are more engaged in distribution and marketing and the travel behaviours of both groups need to be properly contextualised. In particular, it is necessary to test the claim that low income groups and the vulnerable segments of populations tend to spend disproportionate amounts of their time and personal incomes on transport compared to other groups (Sarna and Bhatia, 1991; Abane, 1993a).

A related issue gaining some currency in recent years is the fact that some researchers are quite uncomfortable with the frequently discussed traditional land-use transport interactions which seem to take spatial structures as 'more or less given for an individual or household' (Scheiner, 2006, p. 287). It is argued that when researchers assume such postures, they tend to ignore people's residential locations which obviously are an important component of decision making regarding travel. Whether people choose to reside at a location or move away from it could affect their individual mobility behaviour (Scheiner, 2006). Against this backdrop,

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Scheiner (2006, pp. 287–88) citing from suggest that: (1) the travel behaviour of long-established segments of a population would substantially differ from in-movers and (2) a static (cross-sectional) comparison between areas is not sufficient to adequately explain travel behaviour. They advocate the inclusion of housing mobility and other spatial factors. This study unfortunately partly challenges the latter view as cross-sectional data are mainly used in determining mode choice and travel behaviour.

Existing literature also tends to suggest that choice of mode for various trips is either directly or indirectly influenced by people's personal circumstances including their age, gender, household size, educational attainment and income (Buchanan et al., 2006). Given the different demographic and socio-economic backgrounds of people in urban areas including those in Ghana, it was deemed useful in this study to determine the dominant factors influencing people's choice of mode for trips.

In the last two or three decades there has been a marked increase in the use of private cars and government vehicles for both intra- and inter-urban travel in Ghana. People without cars or other private vehicles are disadvantaged in a way as they are compelled to travel by public buses and trucks with their attendant delays and discomfort (Davison and Knowles, 2006). In separate studies in the country, Abane (1993a,b, 2004) observed some major problems trip makers go through in opting for public buses. Analysing the travel behaviour of workers in the formal economy of Accra, he isolated factors such as gender, education, income and occupation as those largely accounting for choice of mode for trips. He also singled out the buses operating under the umbrella of the Ghana Private Road Transport Union (GPRTU) as the most preferred mode for workers in the city. The GPRTU is a major member of the Ghana Trades Union Congress (TUC) and oversees commercial vehicles whose owners have registered with them. At that time leadership of the Union claimed to control 80–90% of all commercial vehicle terminals and volume of traffic in the country (GPRTU Headquarters, Accra, 2002). Over 10 years on, it is time to subject this claim to test by finding out whether the behaviour of travellers remains the same or it has altered substantially, especially as motorisation has increased with many new transport companies entering the market and many more people now driving private vehicles for their trips than was the case in the 1990s. Secondly, given that socio-economic activities have expanded over the years in Accra and many other cities, thereby generating more motorised travel, it is important to understand what modes are most frequently used and why. Essentially, the study sought to:

- Assemble data with a view to determining the most critical factors influencing urban travel behaviour in terms of the extent to which residences and activity points are interrelated with decisions about transport (see also, Abane, 1993a).
- Establish a pattern for local commuting in selected metropolitan areas, distinguishing between modes of travel for groups and possible variations in travel behaviour.
- Assess the extent to which geographical and non-geographical factors influence the cost and method of travel.
- Analyse how individual persons perceive and articulate their travel behaviour in response to the availability, cost in relation to other needs, and performance of the various commuter transport systems in the four major metropolitan areas of the country, namely Accra, Kumasi, Sekondi–Takoradi and Tamale.

The study was informed by two major factors. Firstly, in spite of modest gains in the last two decades on behavioural aspects of transport research in the country, a substantial proportion still focuses on planning and infrastructure provision, particularly road building and maintenance (see Porter and Abane, 2008). Very

few concentrate specifically on the transport needs of workers, children and vulnerable groups. Also, while there is growing interest in gender issues in transport as well as the mobility and accessibility of young persons (Porter, 2007), the majority are subsumed in the ever-present poverty discourse (see, for example, Awusabo-Asare et al., 2008). An essential element of this paper is the inclusion of young travellers in the analysis, one area which has frequently been ignored, attracting serious criticism in the literature as being short-sighted as the youth represent the future development hope of the country (Porter and Abane, 2008).

Secondly, although transport as a development tool is not explicitly stated in the Millennium Development Goals (MDGs), its access in terms of availability and quality can facilitate the attainment of Goals 1 and 6 which relate to issues on poverty reduction and improved health care. As recognised in the 2006 National Transport Policy, an effective and efficient transport system could impact greatly on the quality of life and provide opportunity for citizens to enhance the formation of a social safety net that would ensure the distribution of wealth through trade and employment in both urban and rural communities. Thus, an understanding of people's travel behaviour is crucial as it constitutes one conduit for addressing their problems in terms of farm prices, access to welfare facilities and low travel costs (Republic of Ghana, 2006).

2. Contextual issues

As indicated, the study covered travellers within the metropolitan areas of Accra, Kumasi, Tamale and Sekondi–Takoradi (Fig. 1a–d). Accra is the political and administrative capital of Ghana and presently covers more than 1000 km² of land or about 45% of the Greater Accra Region. Alongside the administrative and other functions, Accra was also one of the key centres of the country's independence struggle. Derived from the Akan word 'nkran' which literally means an army of ants (reference to its numerous ant hills), Accra has expanded in size and population from a collection of small fishing settlements in an area of about 100 km² before 1877 and now accounts for 30% of the urban population of the country as well as assuming an automatic primate position, dominating all other metropolitan centres including those under review.

Kumasi and Tamale are inland cities, the former located in the forest ecological zone while the latter is in the savannah zone. Kumasi is the second largest urban settlement in the country, covering over 700 km² with an estimated population of about two million. It is both the historical and administrative capital of the Ashanti Region. It was one of the kingdoms that challenged the authority of the British colonial government for a long time until 1901 when the entire kingdom was finally subdued through force. Tamale on the other hand is the dominant urban area in the northern parts of the country, covering a land area of about 125 km² with nearly 400,000 inhabitants. It is the capital of the Northern Region and the largest settlement in the Dagbon Kingdom. Sekondi–Takoradi is a twin city with vibrant port activities, covering nearly 200 km² of land. The twin city has a population of about 500,000 and is likely to remain as the most important settlement in the western part of the country with a primary role in maritime transport since 1928 when Takoradi harbour was completed. With the recent discovery of oil in the area, the port-city is likely to become a new centre of business attraction.

Together, the four metropolitan areas account for about 70% of the urban population, 65% of all industrial activities, 73% of commercial banks, 55% of second cycle institutions, and together with Tema some 75% of the country's industrial establishments employing 10 or more persons (Ghana Statistical Service, 2000).

Travel within each of these metropolitan areas is getting increasingly difficult due partly to congestion in the central

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