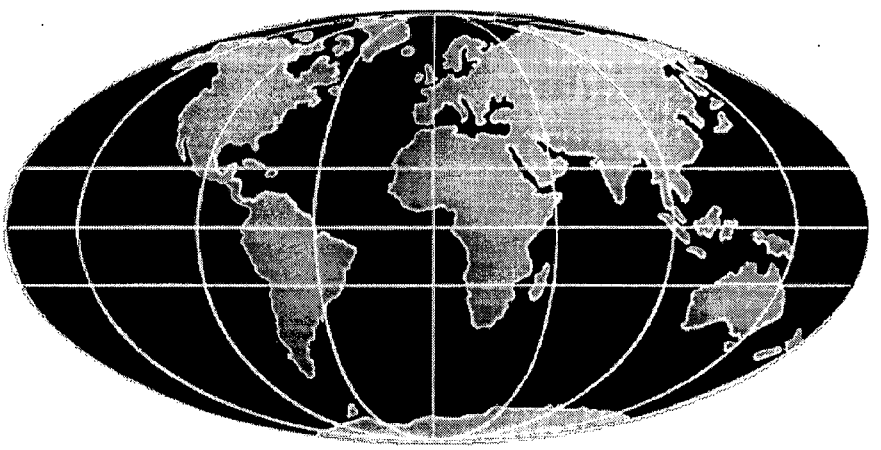
TRANSPORT RESEARCH LABORATORY

DFID Department For International Development

TITLE: Developing strategies to meet the transport needs of the urban poor in Ghana

by: E A Kwakye, P R Fouracre and D Ofosu-Dorte



Transport Research Laboratory
Crowthorne
Berkshire RG45 6AU
United Kingdom

PA3330/98

PA3330/98 KWAKYE, E A, P R FOURACRE and D OFOSU-DORTE.
Developing strategies to meet the transport needs of the urban poor in Ghana.
World Transport Policy and Practice, Vol 3, No 1.

Developing strategies to meet the transport needs of the urban poor in Ghana

E.A. Kwakye
Director of Planning, Ministry of Transport and Communications, Ghana
P.R. Fouracre
Urban Transport Adviser, Ministry of Transport and Communications, Ghana.
D. Ofosu-Dorte
Director, TDP Consult, Accra, Ghana

Keywords
Urban transport, urban poor, accessibility, quality of life.

Abstract
An efficient and effective urban transport sector is a means to both promoting urban development and providing adequate access and mobility to the urban dweller. In this context, in 1993, the Government of Ghana initiated its first Urban Transport Project (UTP) with the express aims of increasing and sustaining the quality and efficiency of urban transport services and making their delivery more equitable across all income categories. This improved transport, resulting in increased mobility and access to employment, markets and other centres, as well as job opportunities is of prime importance because the accessibility of the poor to these facilities is a measure of their quality of life. This paper presents the transport development strategy which has been adopted under the country's first Urban Transport Project, and assesses what the likely impacts towards poverty alleviation will be.

1 Introduction

By the end of the 1980s, Ghana's per capita income placed it among the world's poorest countries. Ghana continues to have high dependence on a small range of exportables (principally cocoa, gold and other minerals), low domestic savings, low aggregate investment and a low level of private investment. It is generally estimated that even with the improved economic performance since the launching of its Economic Recovery Programme (ERP) in 1983, real growth has only been about 5% per annum, with per capita income rising at about 2% per annum. At this rate, it was estimated that the average poor person in Ghana would not cross the poverty line for another half century.

In 1993, as a logical sequence to the ERP, Ghana in association with the World Bank, launched its Accelerated Growth Rate and Poverty Reduction Programme. This aims to consolidate and build on the earlier economic achievements in order to further advance the goal of poverty reduction in the country. Ghana needs to strike for faster growth through policies that will create opportunities and tangible change for the poor. The anticipated accelerated growth is expected to go hand-in-hand with poverty eradication (World Bank,1993). Ghana's national planning document, Ghana-Vision 2020 (Government of Ghana, 1995), foresees Ghana attaining the status of a middle income country over the next 25 years. Initiatives like the Gateway Programme, creation of Free Enterprise Zones and the encouragement of private sector capital investment are being promoted in support of this objective.

As the World Bank has noted, cities of the developing world are major engines for economic growth (World Bank, 1996), and as a result, more attention is being focused on urban development as an important part of the national growth process. Furthermore, the alleviation of urban poverty has been identified by the World Bank as one of the three priorities for urban development in the 1990's (World Bank, 1991).

An efficient and effective urban transport sector is a means to both promoting urban development and providing adequate access and mobility to the urban dweller. In this context, in 1993, the Government of Ghana initiated its first Urban Transport Project (UTP) with the express aims of increasing and sustaining the quality and efficiency of urban transport services and making their delivery more equitable across all income categories. It is expected that as a result of

Kwakye, Fouracre & Ofosu Dorte: 'Developing strategies to meet the transport needs of the urban poor in Ghana'
World Transport Policy & Practice 3/1 [1997] 8-14

Kwakye, Fouracre & Ofosu Dorte: 'Developing strategies to meet the transport needs of the urban poor in Ghana'
World Transport Policy & Practice 3/1 [1997] 8-14

the UTP many of the urban poor will benefit from improved transport, resulting in their increased mobility and access to employment, markets and other centres, as well as job opportunities. This is of prime importance because the accessibility of the poor to these facilities is a measure of their quality of life. Improvements will also enhance their productivity and contribution to the national economy.

This paper presents the transport development strategy which has been adopted under the country's first Urban Transport Project, and assesses what the likely impacts towards poverty alleviation will be. Reference is made mostly to Accra, the main city of Ghana, but the conditions described apply equally in the other large cities, Kumasi, Takoradi, Tema and Tamale.

2 The Urban Poor

In Ghanaian cities the existing urban poor communities are not confined to inner or outer areas of the city. For example, in the Accra Metropolitan Area some of the communities, particularly those of the original or indigenous Ga settlers, are very centrally located within the city while others are some 20 km from the Central Business District (CBD). However, it is evident that new urban poor settlements are springing up on the periphery of the city, and that these are likely to accommodate an increasing proportion of the city's poor over time. This will have a longer term impact on travel patterns, thereby placing an increasing burden on the existing inadequate public transport services.

Most of the poorer communities have developed as squatter settlements on less favourable residential land with poor drainage which is often subjected to flooding after heavy rains. Almost all are built-up areas with little room for expansion. Conditions are generally deplorable with inadequate supporting social and engineering infrastructure. Buildings are of poor material and structural quality with low maintenance levels. Most houses cannot be accessed by motorised transport. However, there are some lanes between buildings which are used for pedestrian access, but also serve as drainage channels.

Overcrowding in the houses is common with the indigenous areas of Accra having an average of 3.6 persons per room and 29.5 persons per house whilst the non-indigenous areas have 3.1 persons per room and 30.4 persons per house (APDP, 1990). In some poor communities household occupancy rates have been recorded as high as 8 persons per room. Fluctuations in household size, which result from more open boundaries of family membership, are also apparent (Grieco *et al.*, 1996).

In the very poorest communities of Accra, almost 70% of personal incomes were below the 1992 Accra average monthly earnings of ¢24,691 (about US$40 in 1992 prices). There is evidence, however, that some middle and higher income families continue to live in these depressed areas. This may be partly out of choice to remain within ones traditionally or indigenous '*accepted community*' and partly because of the high rents charged in other areas within the city.

3 Transport availability

3.1 Vehicle ownership

Motor vehicle ownership for the whole of Accra was 35.7 per 1000 population in 1993, with an average annual growth rate of 4.1% between 1987 - 1993. The distribution of vehicle ownership by income category is not known, but it can be expected to be highly skewed towards the high income households.

Statistical data on bicycle ownership are not known with any certainty. However, from a survey of travel in the poorer communities of Accra, it has been estimated that per capita ownership levels of bicycle range between 30 and 120 bicycles per 1000 persons (TDP, 1992b). Even if these figures are realistic, it is clear from traffic counts and general observation that cycles are not widely used in daily travel.The higher bicycle ownership levels recorded in some areas reflect the fact that these communities have a marked '*cycling culture*' which is associated with their ethnic origins such as those from the Northern half of the country (Grieco *et al.*, 1995). The survey also indicated that for every bicycle owner there were another 1.5 persons who had access to the use of the same bicycle..

Table 1. ESTIMATED TAXI AND TROTRO OPERATIONAL FLEET IN ACCRA

	Shared Taxi	Trotro	Total
Vehicle fleet in use	6,500	3,200	9,700
Seat capacity	26,000	48,000	74,000
Vehicle per 100,000 pop	42	21	63
Seats per 100,000 pop	169	312	481

3.2 *Public Transport*

In the main, public transport services are provided by shared taxis and '*trotros*' or minibuses (Fouracre *et al*, 1994). Taxis have a legal seating capacity of four passengers, while the trotros range in size from 12 to 30 seats. There are limited numbers of bigger buses; those in use are mainly operated by industrial companies for use by employees. A range of services are offered by these vehicles, including chartering, point-to-point ('*dropping*') and fixed route sharing or '*joining*' (Grieco *et al.*, 1996). The estimated operational fleet strengths of shared taxis and trotros are shown in **Table 1**.

Access to public transport from the depressed areas seems reasonable though the terminal facilities are poor. Fare levels on taxis tend to be about twice those on trotros for any given trip length. There is no obvious differentiation in fares between services to higher and lower income communities. However, there are differences in service quality between richer and poorer communities. For example, trotros serving the squatter settlement of Tsui-Bleoo in the Teshie area of Accra are very old and in poor state of repair. Their drivers avoid using the main roads of Accra for fear of police arrest.

Figure 1: Trip length distibution for each mode

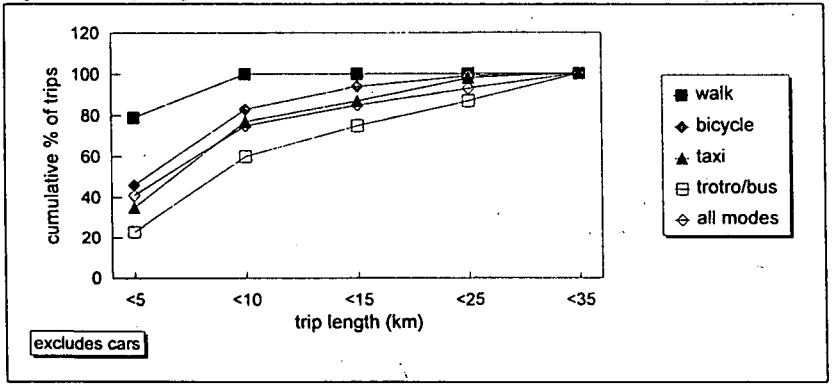
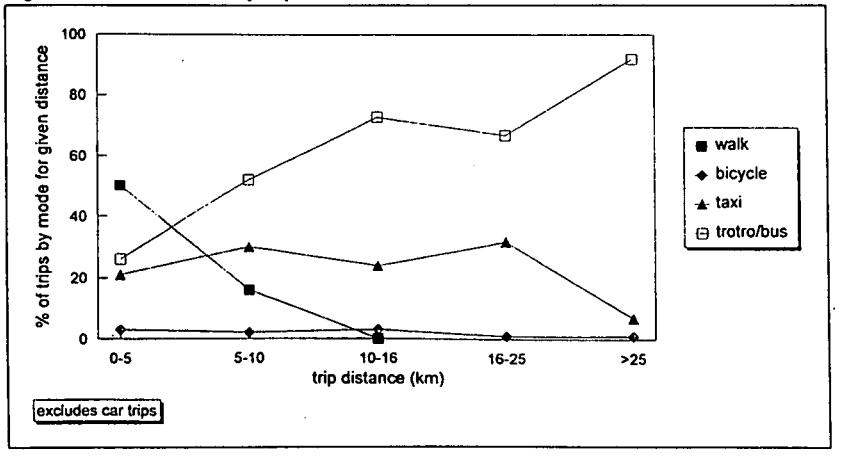


Figure 2: Mode choice by trip distance



Fares also vary with the type of service provided (Grieco *et al.*, 1996).

Average waiting times at terminals are very variable with some high recorded maximum values; passengers often have to struggle for the few available seats. Taxi waiting times between terminals are one third to half of those of trotros. This should be expected because taxis are far more numerous and are thus likely to be operated at higher frequency with resulting lower waiting times. Taxis are also more highly utilised than other public transport vehicles. They cover 240 km per day as against 160 km for trotros and 90 km for big buses (Ofosu-Dorte, 1994).

3.3 *Roads*

The road conditions within the depressed areas are for the most part poor. Almost half of the road lengths have no engineered surface. Even then some of these poor roads are being used by vehicles since there are no alternative roads leading into these poor areas. Although, over a quarter of the roads have surface dressing, these have an extensive degree of deterioration with only one third being in good condition. There is lack of pedestrian walkways, coupled with the hazards of open drains. Where walkways do exist they are often used for street trading.

By contrast, the road network in the high income areas of the city are generally of a higher standard. They are more likely to have a properly engineered surface, and are maintained to the highest level possible.

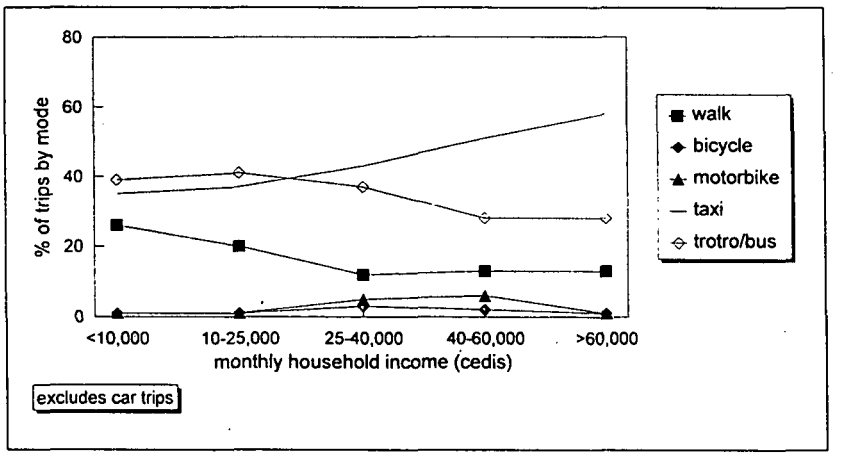
4. Travel characteristics

The distribution of trip lengths from the depressed areas has been established by sample survey. Figure 1 shows the cumulative distribution of trips for each mode by trip length. Forty per cent of trips by all modes are less than 5 km, while 75 per cent are less than 10 km.

Modal choice is strongly associated with trip distance, as is shown in Figure 2. There is a marked increase in the proportion of trips undertaken by the trotros with increasing trip distance. For non private-car trips in excess of 25 km, which constitute about 5% of all trips, over 90% are undertaken by trotros. The majority of short distance trips which are less than 5 km are undertaken by walking. The proportion of trips undertaken by taxis are relatively independent of trip distance. Taxis carry about 20 - 25% of all trips on distances up to 25 km. Beyond this distance the taxi share drops to below 10%.

Use of shared taxis and trotros is strongly associated with income, status and gender. The higher a travellers' income and, in all likelihood, status the more likely the use of taxi, and the less likely the use of trotro. This is shown in Figure 3. Taxis are not only convenient to use but also more comfortable to ride in because of the fewer number of passengers they carry and the low floor clearance compared to the size of the trotros. Comparatively, the trotros are big, uncomfortable, and in some cases difficult to access by women when they are carrying loads or babies. Women, especially those in the middle and higher income groups, are probably more likely to use taxis in preference to trotros, though there is no substantive data in this report to support this. This is due not only to the convenience of the taxis, but also to the nature of the

Figure 3: Mode choice by income category



Ghanaian society, whereby women are more conscious of their dress when they are travelling than their men counterparts and also due to their status in the society.

Mode choice is also a particular consideration for female traders, as has been powerfully demonstrated in the work of Grieco *et al.*, (1996). This group, which plays an important role in the Ghanaian economy through ensuring local availability of goods, has the need for diversity and flexibility in choice of modes. They 'both adapt their transport behaviour to the poor quality and low reliability of existing informal transport systems and creatively adapt the local informal public transport system to their business needs' (Grieco *et al.*, 1996).

Expenditure on transport as a proportion of total daily expenditure is broadly correlated with income levels. In general, higher income earners spend less on transport as a proportion of total daily expenditure. Table 2 shows the transport expenditure patterns for a sample of workers in different earning categories. The very low income earners spend less, as a proportion of income, than the next category. This probably reflects the fact that wage earners with very low incomes cannot afford to use even the cheapest public transport on a regular basis. Transport for this poorest category is largely by walking.

Travel speeds in Accra are poor and are constantly, over the years, getting worse. In the central areas, average peak hour speeds declined by about 12.5% in the three year period between 1987 and 1990. Since then there has been continued decline and current evidence suggests that speeds in the CBD are below 10 kmph.

Table 2. EXPENDITURE ON TRANSPORT BY WAGE EARNERS

Earnings ¢ per month	Transport cost as a proportion of total daily expenditure
0 - 10,000	13.7
11,000 - 25,000	24.2
26,000 - 40,000	12.0
41,000 - 60,000	11.6
> - 60,000	4.3

5. Improving the mobility and accessibility of the urban poor: design of the urban transport project.

In order to improve upon the mobility and accessibility needs of the urban poor in the country, the Government of Ghana approached the World Bank for assistance. This culminated in the negotiation of a World Bank sponsored Urban Transport Project (UTP) in 1993 for the five major cities of the country namely, Accra, Tema, Sekondi/Takoradi, Kumasi and Tamale at a total cost of US$87.6 million. While the World Bank is providing US$76.2 million, the Government of Ghana is financing the remainder from its own resource as counterpart funds.

5.1 Outline of the Urban Transport Project (UTP)

There are five main components in the UTP. These are:

1. Road rehabilitation in Accra and Sekondi/ Takoradi;
2. Traffic management improvement and accident reduction measures;
3. Lorry parks and bus terminal rehabilitation;

4. Construction of non-motorised transport facilities and access roads to low-income areas;
5. Technical assistance to central and local government agencies for policy development; project preparation and implementation, and institutional development.

While it is expected that all the components of the project should have a positive impact on the accessibility and mobility of the urban poor in the country, some of these measures are particularly targeted at the urban poor areas, especially in Accra as their specific circumstances dictate.

5.2 *Bus terminal rehabilitation*

The UTP includes improvements to the surfacing, drainage, access control, lighting, and the provision of shelter, sanitary and refreshment facilities to selected terminals in all the five main cities of Ghana. Bicycle storage facilities are also to be provided to complement the non-motorised transport components and to encourage people to cycle to and from terminals in the manner of a '*park and ride system*'.

5.3 *Non-motorised transport facilities*

In support of the Government's policy to provide balanced development of transport modes in the urban areas, the project makes provision for the construction of around 50km of dedicated cycle paths connecting low and middle income residential areas to commercial and business districts in Accra. Cycle lanes and tracks have also been incorporated as part of the road rehabilitation designs for Accra. In the proximity of markets, these tracks and lanes will be wide enough to accommodate the manually pushed trolleys which are widely used to transport goods between the markets and the terminals/ lorry parks for the traders.

These 'pilot' paths will form the initial phase of an integrated bike path network for Accra and eventually for other cities and metropolitan areas of Ghana. A study will be undertaken to produce a master plan for the development of a comprehensive bike path network for the whole of Accra.

Seven low-income areas in Accra, identified as having the worst access problems, namely, Teshie old Town, Chorkor, Russia, Sukura, Sabon Zongo, old Nungua and Abeka will be connected to the main arterial routes with basic surfaced roads, thereby reducing the operating costs of public transport which in turn will help reduce the transport burden of the urban poor living in these areas. Access to selected markets is also to be improved through the construction, or designation, of dedicated tracks or lanes between lorry parks and markets for non-motorised transport, such as hand-carts.

5.4 *Policy support*

Specific Urban Transport Policies are to be developed which will focus on the following issues:

1. Regulatory options for improving the quality and quantity of public transport;
2. Management of bus terminals;
3. Management of parking in the main cities;
4. Options for private sector participation in the Government owned bus companies,
5. Restructuring of the Vehicle Examination and Licensing Division and the National Road Safety Committee in order to minimise road accidents and their effects on the society especially in the poor communities.

The general aim of this set of policy-related studies is to develop an operating environment in which an effective and efficient public transport service will flourish. This should be for the benefit of the urban poor who depend so heavily on public transport for accessibility and mobility. Policy development will be within a general framework of trying to achieve a self sufficient sector in which the '*user pays principle*' is followed.

5.5 *The expected benefits and impact of the Urban Transport Project*

The project is designed to improve the efficiency and increase the capacity and safety of urban public transport and road network operations in Ghana. It is expected to reduce traffic delays and congestion in the five urban areas by better organising and controlling the flow of buses, other motor vehicles and non-motorised transport. It will improve access and circulation, reducing passenger and freight transport costs, and hence improve the performance of the urban economy.

While a broad cross-section of Ghana's population will benefit from improvements in the urban transport system, many of the urban poor will particularly benefit from improved transport from their homes to

markets and the main roads. This is expected to result in increased mobility and accessibility to job opportunities brought about by improved taxi, trotro and bus services, safer pedestrian pathways and increased bicycle usage.

6 Status of implementation of the UTP

The UTP has been in progress for almost three years. The access roads to the depressed areas of Accra have been designed, and work has started on implementation. The Department of Urban Roads (DUR), the executing agency for this work, has laid great stress on the public presentation and discussion of the designs with the local communities involved. Apart from generating local goodwill, this participation is to ensure that designs meet community needs.

The DUR is also using public participation exercises, or so-called user platforms' to help in the development of the designs for the non-motorised paths, which are currently being formulated. The originally conceived pathways have been modified as a result of these consultations, and the result is that the paths which will be constructed are more closely aligned to the existing main areas of cycle use. An innovation in the design work has been the use of a sociologist and an experienced non-motorised transport expert, to help identify how best the communities can be served by the paths, what design features will improve their acceptance, and how best to promote the use of the paths, given the existing behavioural patterns of cyclists, and the attitudes towards cyclists by other road users and the community at large (Turner *et al.*, 1996).

The designs for the public transport terminal improvements have also been completed, and will similarly be presented by DUR for public acceptance. An important aspect of the rehabilitation work is the need to put in place an efficient and sustainable management system which can maintain continuing high standards of operation at the terminals. The Ministry of Transport and Communications (MOTC) is putting in place the institutional arrangements for supporting the Metropolitan and Municipal Assemblies (MMAs) who have the responsibility for running the terminals. Management of the terminals will be contracted out to the private sector on the basis of an open tender competition.

The MOTC and DUR are also collaborating in giving more general support to the MMAs to develop their technical capacities to plan for traffic and transport. The MMAs have a weak technical capacity in this field, which is now receiving attention as part of a wider policy of decentralising the powers of central government. The DUR, which is a central government agency, has already developed Roads Units within the five main MMAs. These Units initially have the role of road maintenance within the MMAs, but their responsibilities will gradually be developed to include more major road works, traffic management and public transport monitoring and control. This process of expanding the role of the Roads Units has started under the UTP, through the creation of *Traffic and Transport Units* (TTUs)'. The TTUs are being formed to oversee the management of the public transport terminals, and to implement the policy initiatives towards urban parking, which have been developed by MOTC.

MOTC is centrally involved in the institutional and policy development aspect of UTP, and has set up an Urban Transport Unit (UTU) as a dedicated cell to handle its programmes (Kwakye and Fouracre, 1996). The UTU has been developing the institutional framework through the creation of an Inter-Ministerial Committee, which functions at various levels by bringing together all interested parties on a regular basis. It is through the UTU that MOTC has been working directly with the MMAs to create the necessary organisational and management structures required to manage effectively traffic and transport in the cities. The UTU is also trying to promote, through training programmes, the development of an urban transport planning expertise in the Agencies concerned.

7 Conclusion

Transport plays an important role in city life, not least for the urban poor who largely rely on the provision of public transport services on which they spend a large proportion of their income. The importance of transport issues in the life of the urban poor can be seen in the findings from a survey of community improvement projects. The up-grading of roads and drainage ranked second in depressed community priorities, ahead of such other worthwhile schemes such as the provision of health centres, schools and markets.

While transport improvements cannot by

themselves solve the problem of poverty, they can contribute to a more efficient urban organisation, and a higher quality of life. A key feature of Ghana's Urban Transport Project is therefore to promote projects which will have a specific and positive impact on the lives of the urban poor. Furthermore, in order that these projects can be sustained, the UTP has stressed the need for public participation and consultation, as well as the development of institutional structures which can carry the process of development forward at the end of the current project.

Ghana's UTP is still in progress and some of the important components have still to be realised. However, it is clear that the original project conception was well founded, and that a significant and positive impact is being made on transport development in the main cities. Urban transport is at last being given the support it deserves, and the urban poor will be major beneficiaries.

References

APDP (1990) Housing needs assessment study (Accra Planning and Developing Programme)'. Report to the Ministry of Works and Housing, Accra.

Fouracre, P.R., Kwakye, E.A., Silcock, D., and Okyere, J.N. (1994) Public transport in Ghanaian cities - a case of union power.' Transport Reviews, Vol.14, No.1. pp 45-61.

Government of Ghana (1995) Ghana-Vision 2020.' Presidential Report to Parliament on Co-ordinated Programme of Economic and Social Development Policies. Government of Ghana, Accra.

Grieco, M., Turner, J., and Kwakye, E.A. (1995) A tale of two cultures: ethnicity and cycling behaviour in urban Ghana.' Transport Research Record 1441, Washington, DC.

Grieco, M., Apt, N., Dankwa, Y., and Turner, J. (1996) At Christmas and on rainy days: transport, travel and the female traders of Accra.' Avebury, Aldershot.

Kwakye, E.A. and Fouracre, P.R. (1996) The contribution of institutional development in the implementation of Ghana's Urban Transport Project.' Paper presented at CODATU VII Conference on the Development and Planning of Urban Transport in Developing Counties, New Delhi. CODATU Association, Paris.

Ofosu-Dorte D. (1994) Transportation Sector Energy Audit, Phase III.' Report for the Ministry of Energy and Mines, Accra.

TDP Consult (1992a) Assessing the transport and mobility needs of the urban poor.' Report to the Ministry of Transport and Communications, Accra.

TDP Consult (1992b) Urban transport project - addendum to urban poor mobility needs study.' Report tothe Ministry of Transport and Communications, Accra.

Turner, J., Grieco, M., and Kwakye, E.A. (1996) Subverting sustainability? Infrastructural and cultural barriers to cycle use in Accra.' World Transport Policy and Practice, Vol.2, No.3, pp18-23.

World Bank (1991) Urban Policy and Economic Development: An Agenda for the 1990's.' Washington, DC.

World Bank (1993) Ghana 2000 and beyond. Setting the stage for Accelerated Growth and Poverty Reduction.' Washington, DC.

World Bank (1996) Sustainable transport: priorities for policy reform.' Series: Development in practice. Washington, DC.