

# **ECONOMIC CHANGE, TRANSPORT APPRAISAL AND RURAL AREAS**

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## **Abstract**

Rural dwellers and businesses trade the higher levels of accessibility they could experience in urban areas for other benefits of rural living. Sustaining rural economies therefore depends on a successful balance being achieved between transport and other advantages. Yet economic change and policy intervention often do not provide the mechanisms for all the partners in rural economies to work together to deliver better solutions, and balance the needs of all stakeholders. Transport appraisal tends to be isolated from community planning processes so this paper discusses how new approaches to accessibility planning can help to make the connections between these.

## **1. Introduction**

In a developed economy, the functional and economic relationships between communities control their ability to prosper or survive. Adequate transport infrastructure is a necessary precondition for fostering the development of more cohesive markets, and permitting greater exploitation of economies of scale. At a personal level, increased mobility and accessibility afford individuals wider employment, social and recreational choices. An efficient transport infrastructure is therefore essential for a prosperous economy.

Transport in rural areas is generally characterised by: low levels and densities of population, economic activity and traffic; long distances between nodal points, such as service centers; high unit costs for service delivery, operations, maintenance; and often difficult geographic and weather conditions. The relative importance of transport factors within economic development policies increases as remoteness grows. Remote areas also generally have more under-used economic resources and marginal economic activities and reorganisation of economic activity in favour of remote areas could result in positive distributional benefits of economic activity. In remote areas transport investment is often viewed as a major mechanism for economic development intervention by the public sector.

Accessibility, in addition to mobility, is particularly important in rural areas. People in general, but especially less mobile people such as non car owners or those with mobility impairments, suffer relatively low accessibility to essential services, employment opportunities and other desired activities or destinations. This is due to high transport costs (in cash, time, discomfort, reliability etc. terms) needed to reach the activities.

Appraisal of projects in these circumstances is often based very simplistically on issues such as:

- Anticipated increased success in the international and domestic tourism markets made possible by improved accessibility; or
- Overcoming practical transport hurdles to achieving inward investment by businesses, which would not have taken place without the region, local area, or even a specific site, being served by improved transport infrastructure.

Measures which help to create the right conditions for particular economic activities can result in net benefits to the local area, the region, or the country, depending on the availability of alternative locations at each level. The effects on various sectors of the economy will be mixed, since reorganisation by businesses and individuals works in at least two ways. On the one hand, the opening up of relatively protected markets in remote areas can damage some sectors within a local economy. On the other hand there will be potential for exploiting under-utilised resources.

Successful economic development policies rely on marrying exogenous approaches to rural development with endogenous approaches where communities lead in the solving of their own problems. The exogenous approaches emphasise promotion of inward investment, providing road access, and finding economies of scale. Endogenous models of rural development emphasise the enabling of localities to realise their own potential by building partnerships using local resources and access to capital.

Traditional approaches to appraisal concentrate on the exogenous factors. This paper discusses the benefits of also including the endogenous inputs within the appraisal process. Within transport in the UK the new approaches to community engagement and partnership working are being managed under the general theme of accessibility planning (SEU 2003, DfT 2004) as discussed below.

## **2. Rural Economic Trends**

Trends in rural economies affect accessibility to work, shopping, leisure and other purposes in many ways by changing the location of jobs and services and the costs and propensity of rural residents to reach them. Current trends in rural areas include (Winter and Rushbrook 2004, DHC 2003):

- A decline in agriculture and other land-based employment.
- Counterurbanisation and a growing rural population particularly in more accessible rural areas.
- Increasing service employment.
- Exposure to global markets.
- Competition with low wage countries creating pressure for footloose industrial firms to move from rural areas.
- Industrial firms becoming more flexible, service intensive and customer oriented and needing medium skilled labourers rather than unskilled workers.

- Increased levels of mobility and car ownership and the growth of dormitory settlements.
- More women in the workforce.
- Decline of rural service provision, particularly shops, post offices, schools, village halls.
- A higher proportion of micro businesses.

People from urban areas, often affluent groups, have moved to the countryside attracted by the high quality environment and way of life (DEFRA 2002). In some cases this has displaced less affluent groups in rural areas, often through competition for scarce housing. Improved transport links have enabled more commuting, and agriculture now accounts for less than four per cent of employment. In addition, as employment has continued to move from urban centres to suburban and peri-urban areas and smaller towns, the locations from which it is feasible to (usually car) commute, have widened to more nearby rural areas (DfT 2003a).

Technological developments have also been important, and the mix of industrial sectors in rural areas is now similar to that in urban areas, with the service sector being by far the largest employer. However, the service sector is very broad including skilled professionals such as surgeons and many low skill staff such as in call centres. Also, the make-up of the sector differs between locations with towns or other urban areas having more central government posts such as Job Centre Plus offices, and hospital staff even on a per capita basis (Countryside Agency 2004b, DEFRA 2004).

The growth of spending on leisure and recreation activities has significantly boosted the size and importance of the rural tourist industry. There have been major changes as a result of technological developments including new communications, which are yet to reveal long term trends but is already clear that business structures are changing and that the character of many rural areas is changing.

Despite this growth in diversity of rural areas, the rural policy framework, and much of the analysis of rural economies, is still sectoral and centralised e.g. the Common Agricultural Policy. This sectoral approach is no longer compatible even with agriculture, which is itself now highly differentiated (McQuaid 1997).

If rural economies are to develop more sustainably, transport and non transport investment need to be managed more coherently and this requires new planning and appraisal methods.

### **3. Accessibility Planning**

New accessibility planning approaches by transport authorities (SEU 2003, Scottish Executive 2003, DfT 2004) require a systematic audit of people's needs to reach opportunities for work, shopping, health and other purposes. Within these approaches interventions to deliver improved access can alter:

- Transport – changing services, infrastructure and costs of travelling between home and the opportunity.
- People – changing the capability of people to make the journey between home and the opportunity e.g. raising the travel horizons for a jobseeker.
- Opportunities – changing the location, or other characteristics such as opening times, where the services being accessed are provided.

To deliver accessibility planning therefore requires a complex mesh of networks: within businesses, between businesses, between businesses and local and non-local institutions and among institutions. Early successes with accessibility planning have concentrated on soft and complementary transport measures which have often been under-represented in past investment programmes (DHC 2004).

To deliver accessibility planning, effective partnerships between public agencies and between public and private sectors need to become the norm rather than the exception. The process of accessibility planning is providing a promising administrative framework for developing these partnerships but a culture change is needed within funding and decision making processes which will take many years to become mainstream practice (DfT 2004).

The new partnership delivery approaches involve a cultural shift for many professionals. A review of partnership building in the construction sector (Latham 2005) identified four types of attitudes amongst professionals which could threaten progress:

- People who have been doing a job for a long time and do not like change.
- People who see the potential benefits from new approaches do not like risks.
- People who say that they cannot see any problems with the current approach, so there is no need for change.
- There may be vested interests for certain individuals in the current approach.

As part of this culture change, the challenge for appraisal is to ensure that there is sufficient strength in the auditing and accountability mechanisms.

#### **4. Appraisal Context**

When working in partnership, the first essential thing to note is that different groups are motivated by different objectives. A pre-determined approach to appraisal, e.g. such as in Scottish Transport Appraisal Guidance (Scottish Executive 2003) is therefore unlikely to meet the needs of all parties.

Instead, each stakeholder needs to agree what factors would influence their willingness to commit resources to invest: whether for commercial reasons or to meet some social objective. The negotiation on appraisal between stakeholders also needs to ensure robustness within the approach. In particular it is of crucial importance when considering analysis and modelling needs to:

- Clearly identify who is affected.

- Use an appropriate level of detail and geographical coverage in the analysis.
- Ensure an accurate behavioural representation.

The first two issues require collective decisions by project partners to satisfy their needs as stakeholders. The final point is often the most challenging since travel behaviour is complex and is a function of many factors including the attitudes of travellers. For example, an economic development agency might consider that the threat by a business to close their operation if transport is not improved as the sole appraisal criterion. Stated and perceived needs are important, but the appraisal needs to be more systematic (Scottish Executive 2003) appraisal guidance considers needs in terms of:

- Expressed need as demonstrated through travel demand.
- Community need or social need.
- Comparative need or the distribution of impacts of investment.
- Stated or perceived need.

Community need, if calculated comprehensively, measures the full economic value of the investment (Simmonds et al 1998). The gap between the expressed need and community need is sometimes referred to as option value (DETR 2000). When considering the different dimensions of need it, it is important to ensure that double counting is avoided when making an overall assessment of benefits.

It is also important to segment the travel market appropriately. Traditional divisions (e.g. Standard Industrial Classification) have limitations in achieving this, and it can be more helpful to look at core elements of economic performance in terms of: innovation; enterprise; and competition. These can be considered in terms of the economy of production, including tourism, the labour market, the social economy, and public sector investment in remoter areas.

Organisational aspects are also important. The ability for a small rural business to supply goods and services often depends on their ability to tap into urban centric business networks e.g. major supermarkets. For individuals, networks can be more important in getting a job than skills and experience. Social networks are usually built around: family and friends, topics and interests, and roles and responsibilities (Lindsay et al 2005). Public agencies not only need to network amongst themselves but to help enable networks for others.

Impacts of infrastructure networks are complex and sometimes have unintended consequences since the impact on target people groups is less explicit than for many of the interventions to support rural economies. Physical infrastructure improvements can only deliver the full benefits for which they were intended if accompanied with complementary measures to manage behaviour change. Policy and appraisal need to ensure comprehensive solutions to achieve sustainable development.

## **5. Working with Stakeholders**

To deliver improved transport therefore requires partnerships to ensure that the right balance is struck between economies of scale and “economies of scope in

rural transport delivery. Lack of economies of scale may result in relatively low levels of service and high unit costs. In low-density rural areas fixed route and fixed schedule public transport normally cannot meet transport demand. However, economies of scope may be achieved through public transport operators joining together to provide combined public, school, health and social, e.g. for elderly or disabled people, transport services for a combination of clients or markets rather than having a series of separate services.

Similarly goods transport services may capture scope economies by combining together services to different customers, or goods with passenger transport, so as to improve efficiency. A system-wide, coordinated approach, using appropriate geographic boundaries, should improve the achievement of both economies of scope and scale in rural areas.

The main stakeholders for accessibility in rural areas are:

- Local residents and businesses - This group usually contribute the largest element to the costs of rural transport through car, van and lorry purchase, fuel, and fares. The key challenge is to ensure that the decisions of each individual or group do not have adverse effects on the decisions of others and preferably that they help to support the aims of others.
- Public agencies - Local and central government, economic development agencies, health authorities, environmental protection bodies, and tourist agencies are a few of the public agencies with a legitimate transport remit in remote areas. Each has public funding to deliver defined objectives. The key challenge is to identify where these objectives overlap and that the costs and benefits of projects make good use of scarce public resources.
- Transport operators - Bus, rail, ferry, and air operators and road, airport, port, and railway infrastructure providers receive varying levels of public subsidy in remote areas. There are few fully commercial activities and these usually relate to meeting longer distance travel needs to or from more densely populated areas.

There are, of course, other stakeholders such as visitors to rural areas. The public agencies have accountability constraints requiring more explicit appraisal. The largest funders and generators of trips are often health and education authorities. Not only are they usually the largest employers of staff, but patients and student travel needs greatly exceed those for the staff. In recent years there has been a centralisation of service provision, which has had the greatest impacts in rural areas. Rural school closures have been contested by local communities with transport costs being a concern, but more significant for transport demand has been the health changes with increasing number of treatments undertaken at more centralised specialist centres.

Despite these major transport impacts there has been very little study of the travel demand implications and the transport costs and benefits of the changes. Most health and education authorities will consider transport only in terms of the cost to their own budgets. Patient and school transport are significant costs, but it is rare for the health or education policies to drive the need for a transport change such as a new road or improved public bus service.

Perhaps the main reason why these major funders and generators of travel have paid so little attention to appraisal of the impacts is that there has been uncertainty about accountability (Halden 1996). The public accountability and costs of increased travel have generally rested with the transport agencies even though the mechanisms and budgets to be able to deliver better access have rested with the health and education authorities.

More generally, at a consumer level, the poor alignment of accountability and authority for delivery is even more apparent. People can purchase cars and bikes, and can influence when demand responsive transport such as taxis run, but, in general, when consumers have tried to change things such as the supply of roads, trains or buses, or the reliability services, or the ways of paying for buses and trains, they have faced a reluctance from transport providers to open decision making to a wider user community (Scottish Executive 1998, Sears 2004).

However, spending on transport by consumers exceeds that by public providers by a ratio of at least 10:1 (e.g. Family Expenditure Survey, Scottish Transport Statistics). Although there remains a perception that public funding can solve most the transport problems, in reality transport agencies will only be able to improve access if they can lever a higher percentage of consumer transport spending into infrastructure and service delivery.

For example many researchers have pointed out the conundrum that, at a theoretical level, transport planners can solve many of the current problems through efficient pricing of roads, but that at a political level consumers are very cautious about a transfer of power to government without clearer accountability to consumers that the benefits will exceed the costs (Progress 2004). To tackle this accountability gap accessibility planning is being used to manage stakeholder involvement:

*“accessibility planning will ensure that there is clear responsibility and **accountability** for identifying accessibility problems and deciding how to tackle them” (SEU 2003)*

Making the case for transport investment relies on identifying the ultimate beneficiaries. Perhaps more than any other sector, transport delivery is exposed to potential conflict and needs to recognise the different contributions:

- Between modes – walking, car, bus, rail, cycle, tram, and other modes all compete to provide the most efficient means of travel for people and businesses.
- Between sectors – private, public and voluntary sectors all deliver a mix of infrastructure and services.
- Within sustainable development - a sustainable economy relies on increasing competitiveness, and an inclusive society depends on travel benefits being available to all, but increased travel can threaten environmental sustainability.
- With other policies – transport is a derived demand so successful transport delivery needs to be linked with the sectors that create the demand.

- Between users and providers – transport provision has a major impact on the built environment and there are difficult trade-offs to be managed including how much space can be allocated to movement and how users should pay for internal and external costs.
- Between different users – those who own cars and those who do not, or those living close to public transport routes and those who do not etc.

There has been a tendency amongst transport planners to say that the profession has done its job by outlining the technical solutions and that politicians are simply not brave enough to implement it. However, as worldwide experience on controversial transport agendas shows (AA 1995), brave politicians can quickly become unemployed. A call for more brave politicians amongst transport professionals is little more than recognition of the failure of the profession to build public support for policies. Robust politicians are needed to present case for better transport, but the outputs from transport appraisal often fall well short of a coherent picture of the impacts of transport change on the economy, environment and society (CPRE 2001, House of Commons 2002).

The new policy framework for accessibility planning recognises that in the past cross-sector multi-stakeholder delivery has been too difficult, with no legislative, funding and administrative cultures to help practitioners overcome the inevitable obstacles delivering joint schemes. There are four main administrative structures within which accessibility planning is being managed and delivered (DHC 2004):

- Transport investment decisions by government.
- Development and land use planning policy delivery.
- Economic development and social inclusion agency responsibilities.
- The statutory community planning framework.

## **6. Accessibility Analysis**

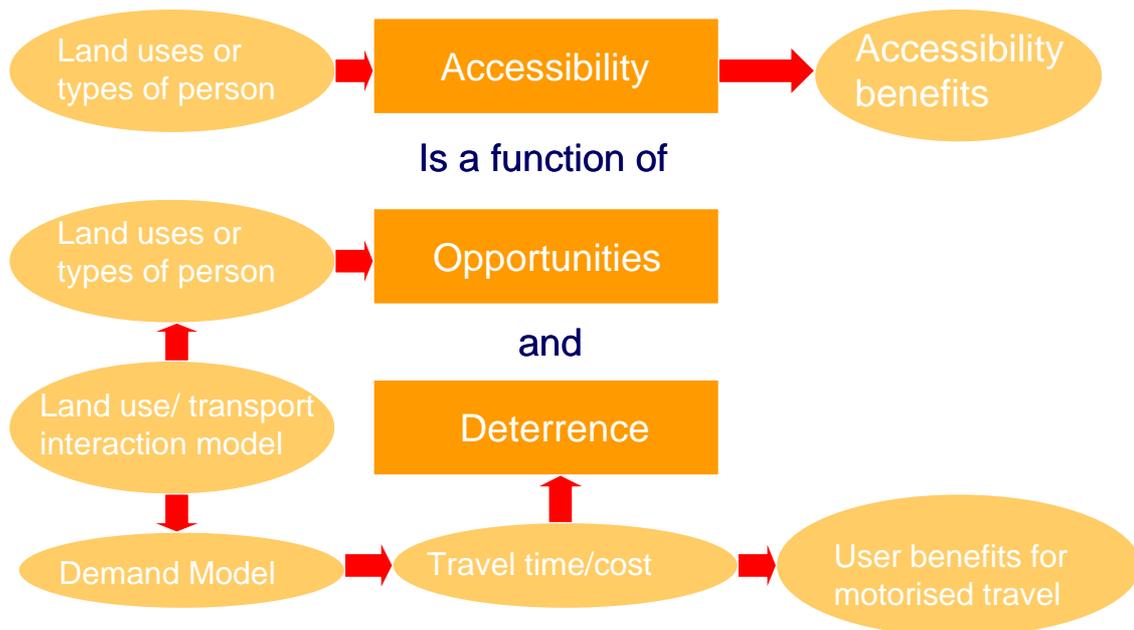
Accessibility analysis has been hampered by its perceived complexity and by the myriad of different ways of measuring and representing it. In recent years there has been an increasing standardisation of terminology and approach (DHC 2000, DfT 2004), which has helped to clarify nomenclature and practical techniques for calculating the various measures.

In defining the components needed for any accessibility measures, the starting point is to ask some questions:

- For whom is the accessibility being considered?
- What is the opportunity being sought?
- What options are available for the given individual or group of people to reach the opportunities, and are there any constraints on these options?
- How accurate does the analysis need to be?

Figure 1 shows how accessibility analysis sits alongside demand modelling. It is important to recognise that accessibility is a broader concept than travel demand and incorporates all of the user benefits normally considered within user cost benefit analysis (Simmonds et al 1998). The accessibility benefits cannot therefore simply be added to the user benefits but instead viewed alongside them within appraisal.

**Figure 1 – Integrated Analysis Framework**



Land use opportunities of interest include:

- Employment, Education and Training – Employment locations, schools, colleges, universities, training centres.
- Health and Social – Health centres, hospitals, social security offices, job centres, post offices.
- Shopping and Leisure – Shops/shopping centres, cinemas, theatres, sports centres, outdoor activity opportunities, centres for religious activity, pubs, clubs, locations of friends and relatives etc.

Types of person or traveller take account of:

- Mobility – car ownership, disability.
- Employment status – unemployed, economically active etc.
- Cultural – gender, race, etc.
- Age – retired, adult, children, etc.

In representing the transport system, the cost and time of travel are only the starting point for analysis. Modelling solutions need to explore other aspects of journey quality such as reliability, physical activity, safety, and information. Data collection and management challenges, to present a clear and comprehensive picture of the critical factors affecting accessibility, are therefore replacing data processing as the major challenges for modelling (DHC 2003).

## **7. Conclusions**

Relationships between transport and rural economies are defined by accessibility, and by the capacity and skills of people and businesses. A joint approach involving users and providers of transport can support the development of rural economies and use of transport to influence the key relationships affecting growth and sustainability. These accessibility planning approaches need to include:

- Infrastructure, people and knowledge networks
- Quality and reliability of service provision
- Skills and training
- Culture and expectations
- Legislation, administration and taxation.

Increasing the scope of transport planning and delivery in this way can benefit both rural and urban economies - but in rural areas the relative scale of the benefits is relatively greater.

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