E-SUPPLEMENT SEVEN: TRANSPORT INFORMATION

This E-Supplement accompanies Chapter Twelve on Transport planning and provides information on transport terms, statistics, funding, management and facts and figures.

TRANSPORT JARGON AND TERMS

A few key pieces of jargon need to be explained in respect of transport policy, much of which came from the USA from the 1960s. In this emphasis on technical terminology, we must not lose sight of the people involved as drivers, passengers, pedestrians and residents. It has to be stated that there is often a train spotter mentality in the male-dominated field of transport, which can ignore the human element and be obsessed with technical and mathematical factors that do not take human considerations into account. Many transport professionals have an engineering, rather than sociological background, and some of the policies proposed can come across as quite judgmental towards ordinary human beings struggling to live their lives and get to work by car, because no other viable or easy alternative exists.

Firstly, it is useful to consider what we mean by the word ‘transport’ Do some people’s journeys and modes of transport ‘count’ more than others? Traditionally transport policy has been car-centered and focused on the ‘journey to work’, with a particular emphasis upon the middle class male ‘breadwinner’ undertaking his journey to work from the suburbs to his office in the city centre. Such journeys have been seen as mainly radial direct journeys in the rush hour from the suburbs to the city centre. This approach has marginalized the journeys of all those who are employed in other local areas, such as part-time women workers and male working class, industrial workers whose workplace might be on the edge of the city. Transport planning has tended to focus on motorized forms of travel - anything with an engine, be it car, train or truck. Other forms of travel, such as walking or cycling often appeared to be seen as a nuisance or just something for children and leisure time. Non-car journeys were not even counted as ‘transport’ in the past, because according to the Department of Transport in the 1970s ‘Transport is something you get into’ Thus, walking was excluded from many surveys despite the fact that walking comprises 40 per cent of all local journeys is some areas (Greed,2011b).

One key technical concept used in transport planning is the ‘modal split’. This refers to the way in which people travel, for example by car, bicycle or walking. On a particular journey an individual may combine several of these modes, for example parking their car at the ‘park and ride’ car park at station, getting the train and then walking to their final destination. Modal split also refers to the proportions or percentages of people who use different modes of transport, especially the breakdown between public and private means of transport. ‘Origin and destination’ studies relate to the route of the journey taken and its purpose and therefore the type, volumes and routes of the traffic generated. For example, many commuter journeys are from originate at home and are destined for the workplace perhaps in the city centre.

There is a danger in dividing up journeys and often separating pedestrians from drivers; it should be remembered that a pedestrian could well be a person who has got out of their car or bus in order to walk. So the ‘pedestrian-vehicular’ divide is not as stark as it may seem. But it is generally accepted that if more people travel by public transport then the roads can accommodate more journeys more efficiently. For example, whereas in the 1960s, incredibly, a bus was calculated to be the equivalent of three ‘Passenger Car Units’ (PCUs), a figure which was based upon the length of a bus compared with that of a car, today it is acknowledged that one bus might be the equivalent of around 70 PCUs, based upon the number of passengers and thus on the number of car trips saved.

‘Origin-destination’ surveys do not just relate to car journeys but can be applied to pedestrian behaviour as well. People on foot tend to look for the fastest route and are happy to cut off corners, trampling over landscaped features, if it gets them there quicker. ‘Desire lines’ map the network of pathways and journeys that people make, and such research generally shows that pedestrians have little time for meandering paths, diversions down pedestrian underpasses, or zebra crossings that are too far down the road from their direct route. So they will take their chances with the traffic and cross where it is quickest for them. Likewise car drivers are always looking for the most direct route and do not like being diverted, so human nature is a major factor to take into account when undertaking transport planning. The competition between different road users often resulted in ‘pedestrian-vehicular conflict’ with the car usually winning.

Information is regularly gathered by the government on a whole range of transport related matters as a basis for policy making. For example, the National Travel Survey is carried out regularly by the Department for Transport, and the table below (Table 12.1) illustrates some of the points made earlier by showing journey patterns by mode and distance.

**Table 12.1 Journeys by Mode and Distance**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Under 1 mile | 1 – 2 miles | 2 – 5 miles | 5 – 25 miles | Over 25 miles |
| Mode: |  per cent |  per cent |  per cent |  per cent |  per cent |
| Walk |  79 | 32 | 5 | 0 | 0 |
| Cycle | 1 | 3 | 2 | 0 | 0 |
| Car | 18 | 56 | 77 | 83 | 81 |
| Local bus | 2 | 6 | 12 | 7 | 1 |
| Rail | 0 | 0 | 1 | 6 | 12 |
|  |  |  |  |  |  |

Source: Department for Transport (2012). The data applies to personal travel only in Great Britain during 2010.

MOTOR CAR USE

In 2012 there were 28.6 million cars and a further 5.7 million other vehicles licensed for use on the roads in Great Britain (Department for Transport, 2012a). 75 per cent of people over 17 years of age have a driving licence. Whilst around 75 per cent of households own at least one car, and over 25 per cent own two or more cars (ONS, 2012; ESRC,2012), it does not follow that everyone in the household will have equal access to a car. Also there are large concentrations of households without cars, particularly among the elderly and poor. Anyone under 17 is not allowed to drive and remains dependent on walking,, public transport, cycles and ‘Mum and Dad’s taxi service’ to ferry them around . So overall around 40 per cent of the UK population still does not have regular access to a car. There are considerable differences in transport needs of people in respect of their age, gender, income, disability, mobility, and ethnicity (I’DGO,2009). Over 88 per cent of males and 65 per cent of females hold a driving licence, and this gender difference is increasingly becoming more equal among new car drivers (Uteng and Cresswell,2008). But it is still estimated that only about 20 per cent of women have access to a car during the day time.

Over 75 per cent of all journeys in the UK are not by car, that is they are by foot, bicycle and public transport, especially the myriad of short local walking-based journeys (RTPI,1991; ONS,2012). But it is estimated that less than a quarter of car journeys in the UK are work related. But that does not mean they are any less important, or should be classified as unnecessary ‘leisure journeys’. Non-work journeys are no doubt seen as essential by the drivers concerned, with the school run, the trip to the supermarket, and to increasingly decentralized hospitals, all constituting the trips that keep the world going round. Gender-wise over 70 per cent of all car journeys are still made by men. In fact many journeys by women are shorter, and are not lone journeys but comprise cars full of children, teenagers, and/or shopping. In comparison, most Americans go to work by car, car use is very widespread, and roads are designed accordingly (Photo I.12.3, in the illustrative material on the web for this chapter). For example, 80 per cent of all work journeys are undertaken by car in Los Angeles as against 78 per cent being undertaken by public transport in Tokyo. But overall work journeys in the USA comprise less than 10 per cent of total journeys, such is the aversion to walking for any journey! In comparison, there are 100,000 million cars in the world but 250 million of these are in the United States. China is catching up with approaching 1000 million cars (which constitutes less than 20 per cent domestic car ownership), and another third of the total are in the six main industrialised countries including Britain. Globally only 4.4 per cent of all cars are in Britain, and for comparison 6.9 per cent in Germany. But, less than five per cent of the world's population own or have use of a motorcar (Burdett and Sudjic, 2011).

RUNNING THE TRANSPORT SYSTEM

The Highways Authority

Whilst in the transport chapter we highlighted the role of central government and its ministries as the shapers of transport policy priorities, in this E-Supplement we identify the roles of those bodies responsible for running the transport infrastructure. At central government level, the Highways Agency is responsible, nationally, for motorways, trunk roads and related infrastructural development needs to liaise with county councils to make sure their proposals tie in with local road programmes. Thus the Highways Agency is responsible for operating, managing and improving what is known as the strategic road network in England, which is around 4,300 miles of motorways and trunk roads (Highways Agency, 2012). The Highways Agency has to liaise with the local highways authority to make sure their proposals tie in with local road programmes and plans for new development. The government will identify specific schemes that it will fund; these usually include ‘improvements’ to the motorway network, such as the widening of the M25 around London or measures to increase the capacity of major interchanges, such as the M4/M5 at Almondsbury outside Bristol or improvements to motorway junctions. These actions are usually needed to tackle congestion and keep the traffic moving. However more capacity normally results in yet more vehicles using the road, so the problem is only addressed in the short term.

The Department for Transport and the Highways Agency are constantly looking for ways to enable more traffic to use the same amount of road space more efficiently. Traffic management measures such as managed motorway schemes allow drivers to use the hard shoulder for certain periods of time as a way of increasing capacity without road widening. Other initiatives include variable speed limits and real time information. It has not been government policy to use financial measures to deter vehicle use on the country’s major roads. Unlike countries such as France, there are no tolls to be paid for using the motorway, though in 2003 the M6 toll road was opened, which was an early form of public-private finance initiative. The road takes traffic around the north of Birmingham and is 27 miles in length. The government awarded a 50 year contract to the private sector operator to design, construct and maintain the road and collect the tolls, then in 2053 the road will be handed back to the government to manage. While this may sound like the Turnpike Trusts of the 18th century there are not many examples of toll roads in Britain, though tolls are charged to use bridges and some road tunnels. These are mainly ways of raising revenue to cover the costs of construction and maintenance rather than to deter the use of roads. There is only one example of this being done in the UK; that is the introduction of the congestion charge in the central area of London, which commenced in 2003. A 2007 Transport for London study estimated that there had been a 30 per cent reduction in car use as a result of the introduction of this policy (TfL, 2008). In summary, various governments have sought to improve and expand the motorway and major roads network and have not directly sought to discourage its use by cars and by freight; instead, to varying degrees, the use of alternatives have been encouraged, particularly that of rail which we will now examine.

In addition to people-related road transport (public and private) the carriage of freight on our roads by lorries, trucks and vans is a major contributor to overall traffic volumes and infrastructural demands. This creates conflicts between ‘goods and passenger transport’ vehicles. Britain has always been a maritime nation dependent on overseas trade and both imports and exports are likely to come in container ships, with the containers being offloaded on to large lorries, which have to fit on our narrow roads. Many lighter goods such as out-of-seasons fruit and vegetables, but also electronic components and high value items come in by air, and both the passenger and freight aspects of air travel have grown vastly creating further transport planning pressures .The growth of increasingly large lorries, combined with the often questionable routes offered by the ‘sat nav’ (satellite navigation devices), have resulted increasingly in HGV drivers attempting to use short-cuts through village roads that were never intended for such modern vehicles. Whilst many people commute into cities each day, there is a completely different pattern of goods vehicles many of which traverse the country on the motorway system, or carry out highly complex journey itineraries delivering goods to city centre shops, industrial units, out of town business parks and home deliveries.

Congestion is caused not only by the numbers of vehicles on the road but also by conflicts between all the different types of vehicles and the pressures for freight deliveries, as well as for car parking places, and double yellow lines. Freight seems almost invisible in some policy perspectives. In past railways moved a good deal of the freight nationally as well as people. Just 8.4 per cent of all freight was moved by rail in 2010, so there is room for improvement. Passenger journeys by rail have increased steadily since the 1990’s, with a marked increase in more recent years, as can be seen in the table below (Office of Rail Regulation, 2012b). Use of rail as a means of travel has become more popular; there appears to be a genuine demand for more and better provision at a national and local level (see Table 12.2).

**Table 12.2 Passenger Journeys By Rail**

|  |  |  |
| --- | --- | --- |
| Year | Passenger Journeys | Miles travelled |
|  | Millions (Approx.) | Millions (Approx.) |
| 1990 | 800 | 34,000 |
| 1995 | 725 | 29,000 |
| 2000 | 950 | 40,000 |
| 2005 | 1,050 | 45,000 |
| 2010 | 1,260 | 54,000 |
| 2012 | 1,480 | n/a |

Source: Office of Rail Regulation, June 2012 (The data has been rounded up and applies to England, Scotland and Wales only).

Network Rail

The railways were taken into state ownership (nationalised) in 1948 by the then Labour Government and were run by British Rail. In 1993 the Conservative Government of John Major sold off (privatised) the railways to the private sector and introduced the basic model that we have today; that is a split of functions and responsibilities, with the basic physical infrastructure (the track, signals, stations, etc.) being run by one organization (originally called Railtrack but since 2002 this has been Network Rail) and a number of train operating companies who successfully bid for government franchises to operate certain routes over a set period of time.

Network Rail was set up by the government in 2002 and took Britain’s rail infrastructure back into a form of arms-length state ownership. Network Rail itself is an independent organization, set up as a not for profit company; that is any surplus it does make has to be invested back into the railways and not issued as dividends (as there are no shareholders under this model). Instead there are members, including the Department of Transport, who play a key role as they provide much of the organization’s funding, particularly for capital projects. Other income comes from the train operating companies and through borrowing. Network Rail operates under a license from the Department of Transport which is overseen by the Office of Rail Regulation (ORR); their task is to ensure that Network Rail meets the requirements of its customers and funders (Office of Rail Regulation, 2012a). In 2012 Network Rail had responsibility for maintaining some 20,000 miles of track and associated infrastructure, 40,000 bridges and tunnels, 17 major stations and 2,500 other stations which were leased to the various train operating companies (Network Rail, 2012).

Network Rail is a major land owner and the land and buildings they own are often strategically located in the heart of many of our towns and cities. From a land use planning perspective their land needs to be considered in local plans, particularly if its use is likely to change over the plan period. There are often large tracts of land that were once railway sidings or goods yards that are no longer in use: these can play a key role in regeneration plans and projects. The stations themselves can also provide opportunities for wider regeneration schemes, especially where they are located in city centres. Liverpool Lime Street station is a good example. The station itself was upgraded in the early 2000s and in 2007 a major project commenced to redevelop the station and its immediate adjoining areas. The project involved the removal of some low quality 1960s buildings immediately outside the entrance to the grade II listed station and the construction of an improved frontage and a new area of public space that creates a clear sense of arrival to the city. Known as the Lime Street Gateway Project it was completed in 2010 and was a partnership between the City Council, Network Rail and other organisations in the city, and was funded by the ERDF (European Regional Development Fund), English Partnerships, the Northwest Regional Development Agency, and the Railways Heritage Trust (Liverpool Vision, 2010).

A similar, though much larger, project commenced in Birmingham in 2010. This is the redevelopment of the 1960s Birmingham New Street station. The project will completely revamp the station and will cost around £600 million; again using a partnership approach between Network Rail, the City Council and other key organisations. The project also involves the creation of new public space, a new shopping centre with a John Lewis anchor store and a new tram link and should be complete in 2015. To facilitate the project the City Council needed to use its compulsory purchase powers. This is another good example of how national and local transport and planning policy dovetails to achieve new infrastructure provision and wider regeneration benefits despite the very complex set of organisations and funding involved.

Network Rail and the train operating companies will often work with local highways authorities and other partners on a wide range of other, smaller projects which help support local economic development and promote more sustainable forms of transport. These could include opening lines that were closed in the 1960s, upgrading or opening new local stations, or working with local communities through Community Rail Partnerships. These Partnerships bring together local people with rail providers and local authorities to encourage greater use of local rail routes by improving bus, cycling and walking links to local stations and through promotion of the services to the local community (Association of Community Rail Partnerships, 2012).

Cross Rail and Transport for London

Major new rail infrastructure in being developed in London by Crossrail Ltd, a company owned by Transport for London, and is expected to be completed in 2018. It will create a new rail link from the west of London to the east. The route will start in the west at Maidenhead and will link up Heathrow airport, Paddington station and the City to Canary Wharf and on through two routes to Brentwood and Dartford to the east of London. 21 kilometers of the route will be in tunnels underneath the centre of London. It is expected to cost around £2.3 billion. High Speed 1 (HS1) is the renamed rail route from St Pancras to the Channel Tunnel: the tunnel was opened in 1994 and the high speed line introduced later. The Coalition Government announced its intention to proceed with High Speed 2 (HS2) in 2012. This will entail the construction of a new high speed route from London initially to Birmingham, and then further north to Manchester and Leeds and ultimately on into Scotland. There was much local opposition to plans for the London to Birmingham route when public consultation took place on the proposals in 2011. Arguably it would be better to spend the money on upgrading existing routes and improving transport links to local feeder stations in the first place (Photo 12.2 in the book, and Photo I.12.4 in the illustrative material on the web for this chapter). The government indicated that a number of revisions would be made to the plans, but that it would press ahead, with parliamentary approval likely in 2013 and the route itself completed by 2026.

Overall Funding

The sums spent by government on transport are vast, for both road and rail. For example, for the five year period between 2011 and 2015 the government decided that the Department for Transport (DfT) should spend £63.3 billion, an average of nearly £13 billion a year. Of this, £18 billion was identified for spending on rail investments, including major projects such as Crossrail; £4 billion on Highways Agency schemes and road maintenance; and £6 billion was earmarked for local transport projects and road maintenance. A new £560 million local sustainable transport fund was set up for local authorities outside London to bid for projects that promote more sustainable forms of travel (Department for Transport, 2010). Much government funding is channeled through local government using funds such as this; the transport authorities have to submit bids to government on a regular basis to access this funding. Local Transport Plans have to set out strategies for dealing with transport in their area and these form the basis of making bids to government for funds.

Buses

Along with trains, buses provide a major component of public transport. Until the late-1960s most local bus services were provided by privately owned, local bus companies or by companies run by the local authority, particularly in the larger towns and cities. The 1968 Transport Act nationalized much of this provision and created the National Bus Company, which operated through a number of local subsidiary companies. The Traffic Commissioners were responsible for allocating routes and the setting of fares was also regulated. In 1985 the then Conservative government effectively privatized and deregulated much of this system. Bus operators became free to devise their own routes (that would be market responsive) and to set their own fares, within a framework of public policy and limited regulation. Local bus services were defined in the 1985 Act as being a service provided by one or more Public Service Vehicles for a journey length of up to 15 miles. Such services have to be registered by the Traffic Commissioners, who can impose certain standards on the operator, such as safety and punctuality. Failure to meet these standards can lead to the imposition of fines or in extreme cases the loss of their registration. The intention behind these changes was to open up the system to competition but in fact what happened was that many of the smaller companies set up following privatization merged with other bus operators or were taken over by the larger companies, resulting in a situation where by 2009/10 the five largest operating companies had a 70 per cent share of the local market in the UK excluding Northern Ireland and London (Competition Commission, 2011). As a result the Competition Commission carried out an investigation into this situation which showed that there was limited competition on individual bus routes and there were high levels of what they termed ‘concentration’ in most parts of the country, i.e. each of the big bus companies were nearing a monopoly of provision in particular parts of the country. This lack of real competition at the local level is often cited as a reason behind poor services or high fares.

Under this deregulated system the local transport authorities have limited powers but are responsible for setting broad policy for transport in their area and they can channel government and their own capital funding into local transport projects. They can also subsidize certain routes that the bus operators do not think are commercially viable. These are known as *supported* services and are routes which the local authority believes are socially beneficial, for example certain routes that link areas suffering from deprivation to large employment areas, or to health service facilities or schools, or routes which run in the evenings or into the night. Around 22 per cent of all local bus mileage was supported in this way in 2009/10 at a cost of £462 million to the local transport authorities in the UK, excluding Northern Ireland and London.

As a general principle, public transport, which is so essential to weaning people away from their cars, is not normally under the direct control of local planning authorities. There are some exceptions, such as in the Greater London Authority which has its own integrated planning and transport powers (under the 1991 London Road Traffic Act and subsequent London Development Plan regulations). However, in some local planning authorities an agreement may be reached with public transport operators to provide bus services for a new residential development, for example through a Section 106 agreement for improved bus services, as a form of ‘planning gain’ as a condition of a major planning permission (see Chapter Three), now being replaced by CIL (Community Infrastructural Levy). But overall the lack of planning control over public transport has been the cause of many problems, particularly since the privatization of train and bus operators. As indicated in several other chapters, CIL is seen as a very promising way of funding not just roads for new housing development, but also maybe improved broadband, as well as local libraries and other social, as well as physical, infrastructural benefits. The CIL system is tied into the new Local and Neighbourhood Planning system (see Chapter Two) and those areas that have already produced Neighbourhood plans are likely to receive higher percentages of uncapped CIL than others. But, as stated elsewhere CIL is a complex issue which is still being hammered out as to who gets what, so check the Planning Portal. (My aim is to introduce you to CIL, to point you in the right direction, as it would take another whole book to explain it!)

Ports of All Sorts

Other major modes of transport and related infrastructural developments, that come under the category of ‘transport planning’ include airports, marine passenger ports, and freight and container ship terminals. Decisions on these matters are generally not the responsibility of the local planners alone, because they are of national, if not international significance. Therefore the previous government set up the Infrastructure Planning Commission to deal directly with applications for such schemes, after the very slow progress on getting Terminal 5 at Heathrow Airport approved and built. Subsequently the Coalition government abolished the commission and handed its role to a new section of the Planning Inspectorate (see chap 3 dev control.). When such major schemes are proposed they are subject to a higher level of Environmental Impact Assessment, as well as an evaluation of the effects on surrounding settlements, noise, disturbance and long term implications for the connecting road system and employment. Britain is basically a set of islands just off the coast of Europe, but with a vast range of trade and business links with the rest of the world, and therefore sea and accessibility are still extremely important. However, some environmental groups are quite opposed to air travel, especially to the proliferation of cheap package holidays. The Government has introduced a system of environmental levies, that is payments to be made by airlines, and passed on to passengers, to counteract the environmental damage done by air travel. Of course many hard-hit working class holiday makers see this as just another typical government tax. The 2011 Growth and Infrastructure Bill was introduced to further reduce delays, and by-pass normal local planning authority-level powers of appeal, on developments of national significance, such as airports, ports, major rail schemes such as HS2 and power stations. The Coalition is keen on investing on infrastructure including rail schemes, but whether the money is being spent in the right places is another matter, given than many existing intercity and commuter routes suffer high levels of overcrowding and poor services.