

## Development Department

## Long Distance Commuting in Scotland

MVA Consultancy

The research by MVA Consultancy analysed the pattern and prevalence of long distance commuting in Scotland, using Scottish Household Survey (SHS) data, Census data, transport modelling techniques and focus group research.

### Main Findings

- Census (2001) travel to work data indicated that 23% of Scottish workers are long distance commuters (long distance commuting involves a single journey of over 15km). The average commuting trip length in Scotland was 12km. 80% of long distance commuters travelled by car, 8% travelled by bus and 7% by train.
- Generally, the data sources (Census, National Travel Survey Scotland and SHS data) indicate growth in long distance commuting in the 80's and early 90's, levelling off recently.
- Between 1991 and 2001, long distance commuting mode share for car drivers has increased from 66% to 71%; and train commuters mode share has increased from 6% to 7%. During the same period, mode share for bus long distance commuters has decreased by almost a third (12% to 8%); and car passenger mode share has decreased significantly from 11% to 8%.
- Amongst car-based commuters, the strongest variations in proportions of long distance commuting were the urban/rural classification of the respondents' home. For example, a much higher percentage of car commuters living in 'accessible rural' areas travelled long distances to their work (48% travelled further than 15km), than car commuters living in 'urban settlements' (18%).
- SHS (February 1999 to March 2005) indicates that of long distance car commuters, 37% were significantly less likely to claim to have the option of using public transport compared to 49% of short distance car commuters. Long distance car commuters living and working in urban areas were most likely to have a public transport option. Proportionately more long distance car commuters than short distance commuters stated that they did not use public transport because it 'takes too long', 'no direct route' or 'costs too much'.
- Most participants in focus groups felt that they would continue to be long distance commuters for the foreseeable future until something in their life changed (e.g. health problems, retirement, car taken away).

## Background

This Research Findings summarises the results of a study commissioned by the Scottish Executive to investigate long distance commuting in Scotland. Scottish Household Survey (SHS) data, Census data, transport modelling techniques and focus group research were used to investigate the pattern and prevalence of long distance commuting in Scotland.

The research and analysis is summarised in six main sections, as follows:

- understanding the current geographic pattern of long distance commuting
- understanding the impact of long distance commuting on the Scottish transport network
- investigating trends in long distance commuting
- understanding the long distance commuter – quantitative analysis
- understanding the long distance commuter – qualitative research
- conclusions and policy considerations

## Geographic pattern of long distance commuting in Scotland

Census (2001) travel to work data indicated the following:

- approximately one quarter (23%) of Scottish workers are long distance commuters (long distance commuting involves a single journey over 15km)
- the average commuting trip length per person in Scotland was 12km
- four-fifths (80%) of long distance commuters travelled by car, 8% travelled by bus and 7% by train.

Aberdeenshire, East Ayrshire and East Lothian produce relatively high levels of long distance out-commuting. West Lothian, Aberdeen City, South Ayrshire and Stirling attract relatively high levels of long distance in-commuting.

## Impact of long distance commuting on the Scottish transport network

The Transport Model for Scotland (TMfS) was used to assess, in detail, the impact on traffic related matters of the current level of long distance commuting in Scotland. The research suggests the following conclusions:

- the highest volumes of long distance commuting traffic are on the key trunk road routes (M8, M9/A9, Forth Road Bridge, M77/A77, M80, A92 etc)
- the proportion of long distance commuting vehicles relative to other vehicles tends to be fairly low (often less than 20%) within the main urban areas, while inter-urban routes and key trunk roads have significant percentages (often exceeding 50%) of AM Peak traffic comprising long distance commuter traffic.
- predicted changes in road speeds following the removal of long distance car commuters (if this was possible), indicate that the average speed on all Scottish motorways would increase by 7km/hr. In addition, significant increases (often exceeding 50%) in AM Peak vehicle speed, would be achieved within Edinburgh, Glasgow and Aberdeen city centres and on the Forth Road Bridge.
- the impact of completely removing long distance car commuters from the Scottish transport AM peak network (if this was possible) on vehicle emissions would be as follows: 34% decrease in Carbon Monoxide (CO); 27% decrease in Hydrocarbons (HC) ; 13% decrease in Oxides of Nitrogen (NOX); 10% decrease in Particulate matter (PM10S); 21% decrease in Carbon Dioxide (CO2).

## General trends of long distance commuting

Initial comparisons of the 1991 and 2001 Census datasets indicate slight increases in average commuting distance and percentages of long distance commuting. In 1991, 26.0% of out-commuting trips were long distance (greater than 15km). In 2001, 26.7% of out-commuting trips were long distance. This represents a 2.7% increase in the percentage of long distance commuting over the decade.

Generally, the data sources (Census, NTS Scotland and SHS data) indicate growth in long distance commuting in the 80's and early 90's, levelling off recently. It is noted that:

- National Travel Survey (NTS) results for Scotland indicate that there was steady growth in the average commuting distance in the 1980s and early 1990s (20% increase between 1985/86 and 1992/94), but this may now have levelled off, or started to decrease. Results indicate a slight decrease in the average commuting distance between 1995 and 2003 (1% decrease between 1995/97 to 2002/2003). The apparent slight decrease could well be the result of sampling variability.

- the NTS Scotland estimate of growth in the average commuting distance between 1991 and 2001 is higher than the estimation from the Census
- the SHS data suggests a slight decline in the average commuting distance since 1999 (4% decrease between 1999 and 2005).

Between 1991 and 2001, long distance commuting mode share for car drivers has increased from 66% to 71%. Over the decade, train commuters mode share has increased from 6% to 7%. During the same period, mode share for bus long distance commuters has decreased by almost a third (12% to 8%). In addition, car passenger mode share has decreased significantly from 11% to 8%.

TmFS forecasts small growth (0.3% per year) in the percentage of car long distance commuters, as a percentage of total car trips, over the next 10 years. This is broadly consistent with the recent historic trend (ie growth in the 80's and early 90's, levelling off recently).

## Quantitative analysis of SHS data

The analysis suggested that the mode used for commuting provided the most significant variation in the proportion of long distance commuting. 56% of train commuters travel further than 15km to work (i.e. are long distance commuters) and 33% of car commuters travel further than 15km to work.

Within the car-based commuter category, the strongest variations in proportions of long distance commuting were the urban/rural classification of the respondents' home. For example, a much higher percentage of car commuters living in 'accessible rural' areas travelled long distances to their work (48% travelled further than 15km), than car commuters living in 'urban settlements' (18%).

Our analysis suggested a significant gender difference in commuting distances. Even when variables such as income and car availability and number of children are taken into account, females commute shorter distance than males.

SHS (February 1999 to March 2005) indicates that of long distance car commuters, 37% were significantly less likely to claim to have the option of using public transport compared to 49% of short distance car commuters. Long distance car commuters living and working in urban areas were most likely to have a public transport option. Proportionately more long distance car commuters than short distance

commuters stated that they did not use public transport because it 'takes too long', 'no direct route' or 'costs too much'.

## Focus group findings

The following general themes relating to work and home location decisions emerged from focus group discussions:

- **near family/friends** – important at different life stages, often dependent on partners' requirements, or looking after elderly parents
- **rural location** – benefits of nice scenery and less stressful than city locations
- **house prices** - important in initial home location decision and prevents from moving house. It was agreed that house buyers get more for their money further from work
- **schools** - not major factor in initial home location decisions, but discourages relocation if the child is settled in a school
- **commuting** - not a major factor in initial location decisions. However, some participants considered commuting when purchasing a new home eg 'drove the route' to work at peak times or looked for houses within close proximity to a rail station

For some there wasn't an element of choice in where they lived as they had been in the local area all their life and it was more a choice **not** to move (eg financial constraints, lived in area whole life, commitments to extended family).

Group participants discussed a number of alternatives to their current commute. These included:

- car sharing - long distance commuters are often not near anyone with the same home and work locations
- working from home – there was concern about lack of face-to-face contact
- car users travelling by public transport – it was felt that public transport is often not tailored towards the long distance commuter (eg easy to get to city centre, but difficult to get to out of town workplaces). The train was preferred to bus commuting

Most participants felt that they would continue to be long distance commuters for the foreseeable future until something in their life changed (e.g. health problems, retirement, car taken away).

## Conclusions and policy considerations

The literature suggests that despite the numerous disadvantages of long distance commuting (fuel costs, environmental impacts, traffic congestion, 'wasted' time etc), there are considerable positive effects for families and communities. Long distance commuting enables workers to take advantage of lower property prices away from the city centre and provides economic links between urban centres and surrounding areas, enabling workers to take advantage of low-density housing, good schools, rural locations and low crime rates often found outside urban areas.

It is clear that it is more difficult to offer acceptable public transport alternatives to the car long distance commuter. It may therefore be more cost-effective to target other shorter-distance car commuter road users (who are more likely to have an acceptable public transport and walking/cycling alternatives).

If policy measures aim to encourage existing long distance car commuters to commute in more sustainable ways, then the greatest prospects may be through investment in the rail network, Park and Ride sites, car sharing schemes and encouraging home working.

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EH6 6QQ  
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Email: [socialresearch@scotland.gsi.gov.uk](mailto:socialresearch@scotland.gsi.gov.uk)  
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ISBN: 0 7559 6179 X