

# ***Low income motoring in Great Britain***

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*Prepared by:*

David Bayliss  
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**The Royal Automobile Club Foundation has commissioned a number of external experts to write a series of think pieces and occasional papers throughout the course of 2009/10. This paper is about Low Income Motoring in Great Britain and is report number 09/116.**

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**Royal Automobile Club Foundation  
89-91 Pall Mall  
London  
SW1Y 5HS**

**Tel no: 020 7747 3445  
[www.racfoundation.org](http://www.racfoundation.org)**

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## Introduction

This report examines the published data on motoring by people in low income households in Britain and assesses the extent to which it serves their mobility needs and how access to cars<sup>1</sup> affects the travel patterns and horizons of people in these households. It follows work done by Lucas and Jones for the RAC Foundation<sup>2</sup> and inevitably covers some of the same ground as in that report.

Collecting data on peoples' incomes presents particular problems, as questions on income often trigger a resistance to responding to surveys. Consequently direct evidence on income and travel behaviour and car use is limited. This means that approximations and judgements have had to be made. As far as practicable the text makes clear where there is a hard factual base and where subjective assessments and estimates are used.

The report sets out background trends in car ownership, identifies some of the key characteristics of low income households, presents information on transport and car use by these households and provides an analysis of spending by Low Income Car Owning Households<sup>3</sup> on transport and motoring.

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<sup>1</sup> This includes vans, 4WDs and other similar mortgaged transport available for personal use.

<sup>2</sup> The Car in British Society.

<sup>3</sup> Low income households taken as the lowest (Q1) and second lowest (Q2) income quintiles.

## Growth of Car Ownership

Car ownership and use have grown substantially since the end of the Second World War. Prior to then, motoring was largely the prerogative of the well to do. But, with the growth of car ownership since then, motoring has become the dominant source of mobility for a growing, and now major, proportion of the population.

Figure 1 shows how the total numbers of cars owned and number of cars per household since the resumption of growth in car ownership following the end of the Second World War. Despite the slackening of growth in times of economic slowdown, the trend has been firmly upwards to the point where there are now more cars than households, and 3 in 4 households own one or more cars.

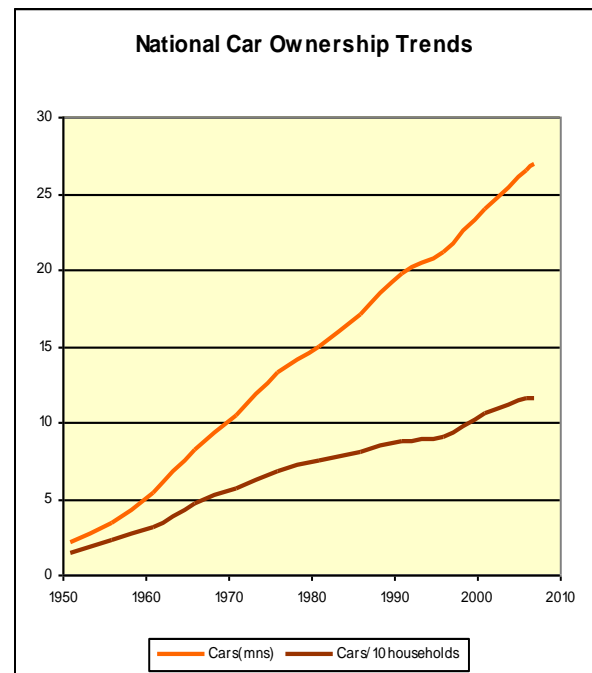


Figure 1: Growth in Car Ownership Since 1951.  
Sources: TSGB 2008, table 9.1 & Household Estimates and Projections Great Britain ONS table 401.

This growth has been as a result of a number of factors amongst which the most important are incomes rising faster than motoring costs and steady improvements in the quality and reliability of motor cars<sup>4</sup>.

Figure 2 shows how wages, retail prices generally and motoring costs changed between 1964 and 2008. Both retail prices and motoring costs have grown more slowly than wages. Since the turn of the century motoring costs have risen more slowly than prices overall. Despite this the proportion of households without cars has barely changed since the beginning of the decade but multi-car ownership has continued to grow<sup>5</sup>. Motoring is now approximately twice as affordable as in the early 1960s.

The Growth of Car Ownership in Low Income Households.

Figure 3 illustrates how car ownership has increased amongst the lowest quintile of households since 1960. The rate of ownership has increased from less than 5% in 1960 to 49% in 2008 – a near ten -fold increase. For the second lowest income quintile (Figure 4) the increase has been from under 10% to 54% - a more than fivefold increase.

<sup>4</sup> See for example, ‘Some Changes in Motoring Characteristics: A comparison of the late 1950s and today’ and ‘Report on Motoring 2008: 20 Years of Motoring 1988/2008’, Report 2.

<sup>5</sup> TSGB 2008, table 9.15 & NTS 2008 table 6.3.

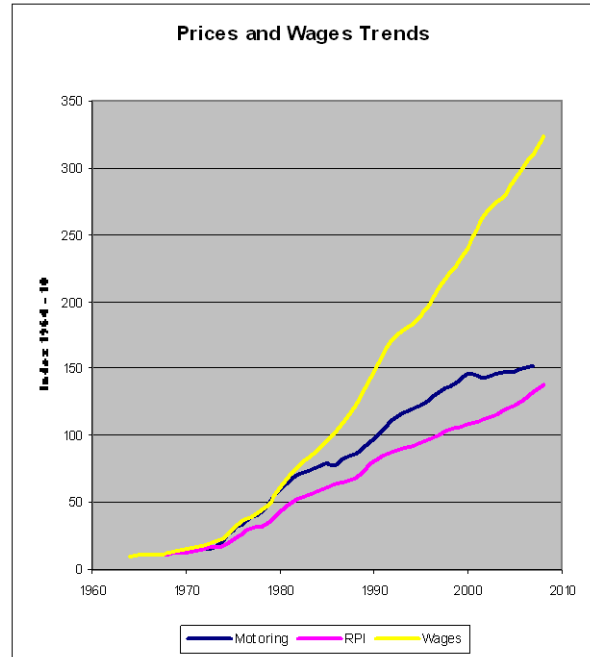


Figure 2: Changes in Motoring Costs, Retail Prices and Wages 1964 – 2008.  
Sources: TSGBs 1964-74 to 2008, Average Gross Weekly Earnings 1938 – 2007 & Annual Survey of Hours and Earnings -2008 Results.

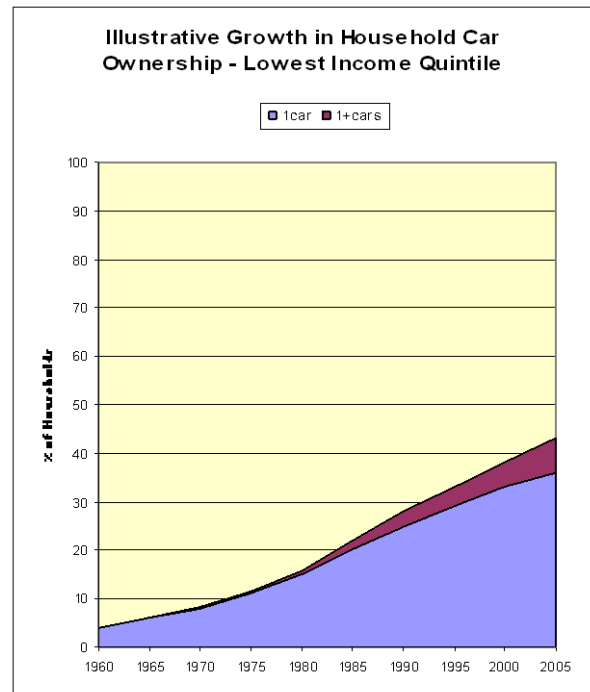


Figure 3 Schematic<sup>6</sup> of Car Ownership Growth – Lowest Quintile – 1960 to 2005.

<sup>6</sup> Based on limited data with interpolation to create a smoothed trend

Between 1960 and 2008 the increase in car ownership amongst all households has been from 29% to 75%<sup>7</sup> (2.6xs) so the increase in car ownership amongst lower income households has been much faster than in households as a whole and very much faster than wealthy households – where the increases have been mainly in multi car ownership.

However multi-car ownership is no longer confined to wealthy households with 10% of households in the lowest income quintile (Q1 households) owning more than one car and 18% of households in the second lowest income quintile<sup>8</sup> (Q2 households).

In 2008 49% of households in the lowest income quintile had cars and 64% of households in the second lowest<sup>9</sup>. If we take these together as representing low income households then it is more common for a low income household to have a car as not.

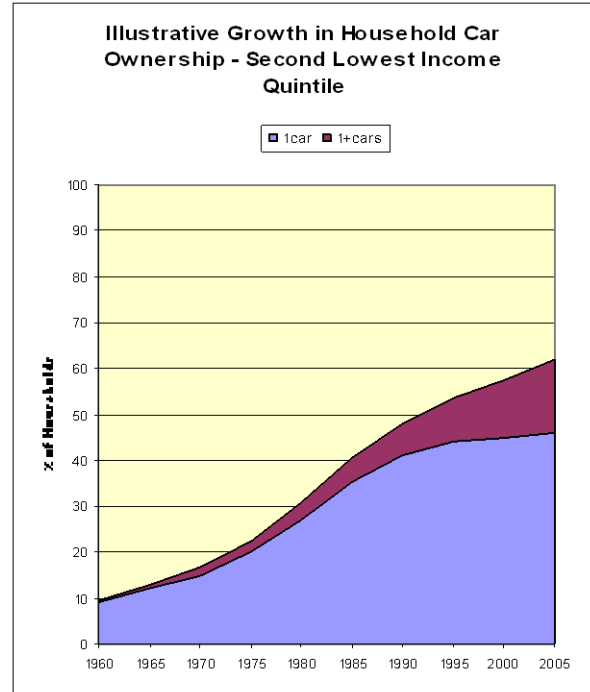


Figure 4: Schematic of Low Income Car Ownership Growth – Second Lowest Quintile – 1960 to 2005.

<sup>7</sup> Social Trends No 30, chart 12.5.

<sup>8</sup> NTS 2008, table 6.3.

<sup>9</sup> NTS 2008, table 6.3.

## Growth in Numbers and Mix of Car Drivers

The increase in car ownership has been accompanied by an increase in the numbers of people licensed to drive. Figure 5 illustrates how the number of car drivers has grown since the end of the Second World War and how the proportion of these who are women has increased. Also, as the propensity of each successive population cohort to take up driving has increased, the number of older drivers has grown. In the mid 1970s only 15% of men and 9% of women over 60 had driving licences<sup>10</sup>: today the figures are over 80% and over 50% respectively<sup>11</sup>.

However over the last ten years there has been a decline in the number of young people holding full driving licences<sup>12</sup>. The main reasons given for this are the costs of learning (especially amongst girls) the costs of insurance and the costs of buying a car<sup>13</sup>. The fact that costs are such an important factor in young people deciding whether to learn to drive must mean that young adults in low income households will be less likely to take up driving than their wealthier counterparts. This may be a factor in the recent stabilisation of the proportion of households without cars.

### Some Characteristics of Low Income Households

Low income households have a range of characteristics that reflect or contribute to their financial status.

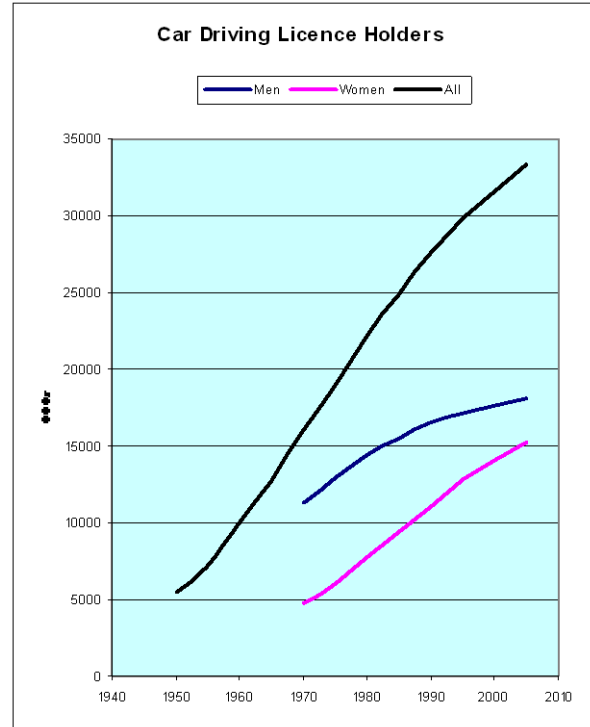


Figure 5: Schematic<sup>14</sup> of Licensed Car Drivers Trajectory 1950 – 2005.

Sources: TSGB 1964-1974, 1994 and 2008.

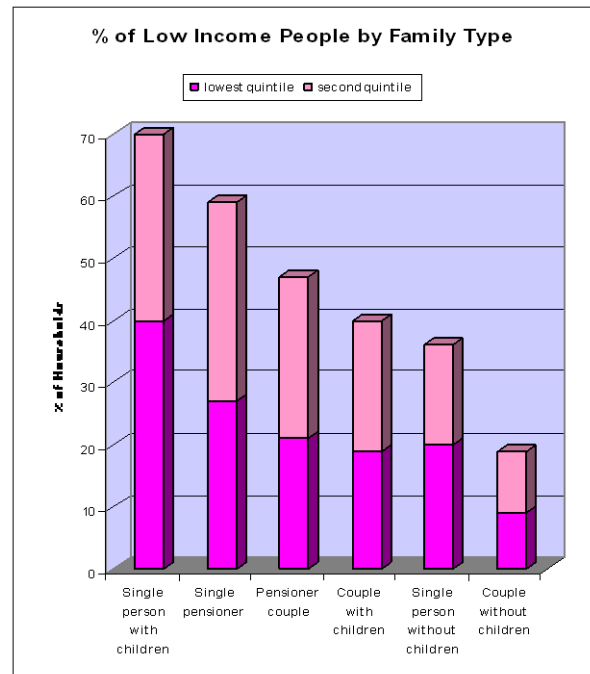


Figure 6: Proportion of People in Low Income Households by Family Type 2005/06.

Source: Social Trends No 38, table 5.15

<sup>10</sup> TSGB 1964-74, table 57.

<sup>11</sup> TSGB 2008, table 9.16.

<sup>12</sup> NTS 2008, table 2.3.

<sup>13</sup> Results from the ONS Omnibus Survey, March 2005, chart 3.

<sup>14</sup> Smoothed.

The following paragraphs describe some attributes that vary between households of different income status.

**Types of families.**

Figure 6 shows the *percentage* of people by household type in the two lowest income quintiles. Single parents and single pensioners are the two groups with the majority of their members in the lowest income quintiles. Being part of a couple and not having dependent children increases the probability of being in a higher income group. The picture changes somewhat when total numbers are considered because of the differing shares of the total population by people in different types of households. Figure 7 shows the *total* numbers of families by type in the low income categories.

This makes clear that a third of the numbers of people in low income households are couples with children. Single people without children, single parents and pensioner couples make up about 15% each with childless couples forming just under 10%. This results in children and pensioners being more likely to be in poorer households with 21% of pensioners and 22% of children living in households below 60% of median disposable household income<sup>15</sup>.

**Types of Housing**

Figure 8 shows how average incomes vary with types of housing. Although the proportion of low income households are not specifically identified, it is fair to

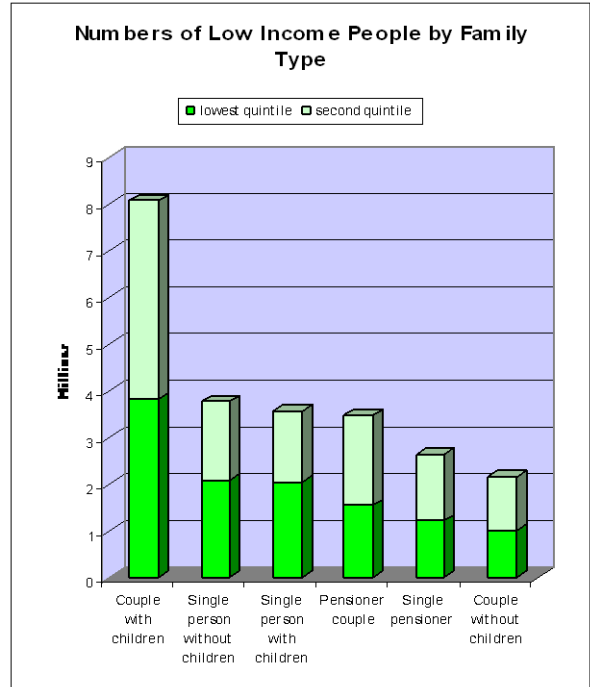


Figure 7: Numbers of Low Income People by Family Type, 2005/06.

Source: Social Trends N0. 38, table 5.15.

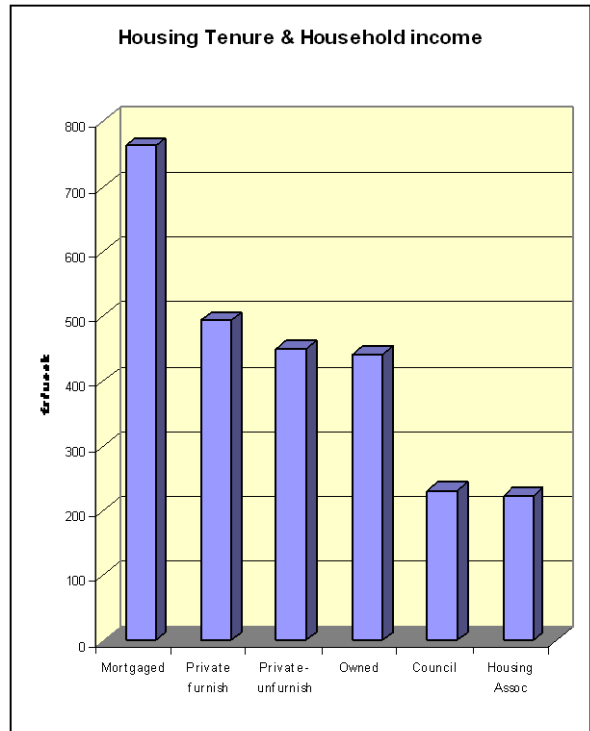


Figure 8: Housing Tenure by Income Level 2002

Source: Living in Britain 2002, table 4.9.

<sup>15</sup> Social Trends N0 38, figure 5.19.

assume that the lower the average income the greater the probability of a high proportion of low income households. Council and social housing will therefore have the highest proportion of low income households.

This is hardly surprising as these types of housing is usually allocated on the basis of housing need which takes in to account the ability of the family in question to pay for its own housing on the open market. Owned housing is the next lowest income category as this type of accommodation will contain a high proportion of people of pensionable age who have paid their mortgages off but are no longer significant wage earners.

Households in private rented accommodation come next up the income ladder. These types of accommodation house a broad mix of types of families including households which are not eligible for any kind of social housing and those saving to buy their own homes as well as a mixture of wealthy and, rather more, not so wealthy transients such as students and migrants.

Finally the wealthiest quintile comprises households with one or more wage earners with sufficient income to be eligible for a mortgage – more often than not a couple with children.

If the numbers of different types of housing tenure are taken into account then figure 9 shows that the owned and council houses are have the largest numbers of low income households in them.

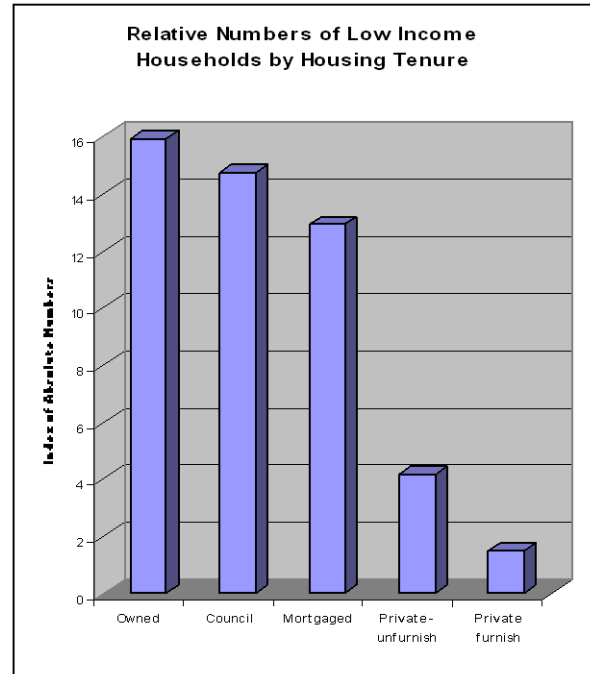


Figure 9: Index of Low Income Household Numbers by Type of Housing Tenure.

Source: Living in Britain 2002, table 4.9. (Numbers of unite divided by average income of occupants).

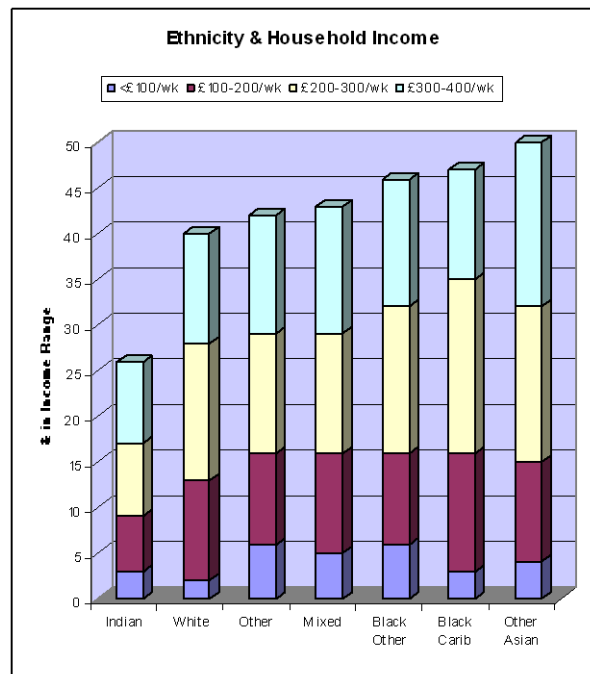


Figure 10: Ethnicity and Low Incomes 2007/08

Source: Family Resources Survey, table 3.7.



## Ethnicity

Figure 10 shows that some ethnic groups are more likely to be in low income households than others. The income range in the figures covers the 42% lowest earning households so is slightly broader than the two lowest quintiles used in other figures. The Indian community is clearly least likely to figure in low income households but the Other Asian groups are at the other extreme. Black households are also relatively poor on average, with Whites and Other (including Orientals) comprising the least poor after Indians. However the number of British Whites is much greater than any other ethnic group (see figure 11 which is an estimate) so absolute numbers of poorer households are predominantly from this ethnic group.

## Types of work

The number of wage earners and the types of work are clearly major factors in determining a household's income. The number of persons/household varies from 1.2 in Q1 to 3.1 in Q5<sup>16</sup>, so wealthier households will have more earners. The range of pay varies enormously between highly paid professionals, managers and successful business people at one extreme through to unskilled and routine occupations and part time workers at the other. The picture is complex as wages and salaries vary by industry and type of occupation (director, manager, administrative assistant etc.). However as a broad generalisation below average earnings are to be found in these occupations<sup>17</sup>:

<sup>16</sup> Family Spending 2008, table A8.

<sup>17</sup> Annual Survey of Hours and Earnings -2008 Results, table 14.1.

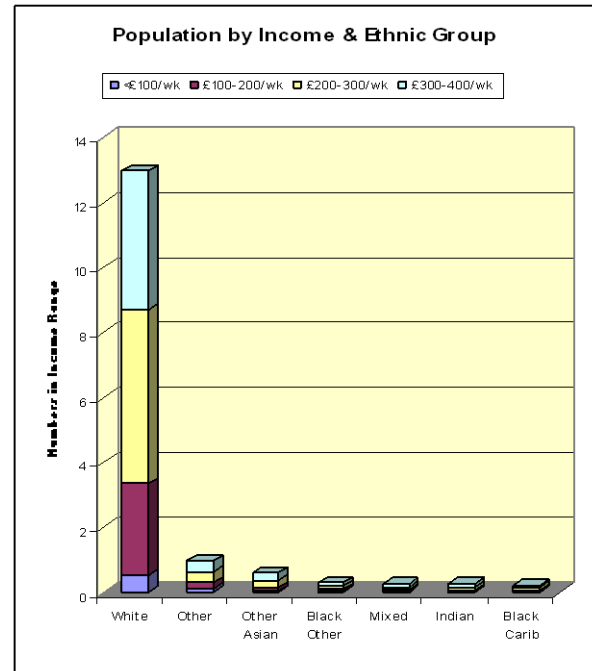


Figure 11: English Low Income Populations by Ethnic Mix mid 2007.

Source: Population Estimates by Ethnic Group Mid-2007 & Family Resources Survey, table 3.7.

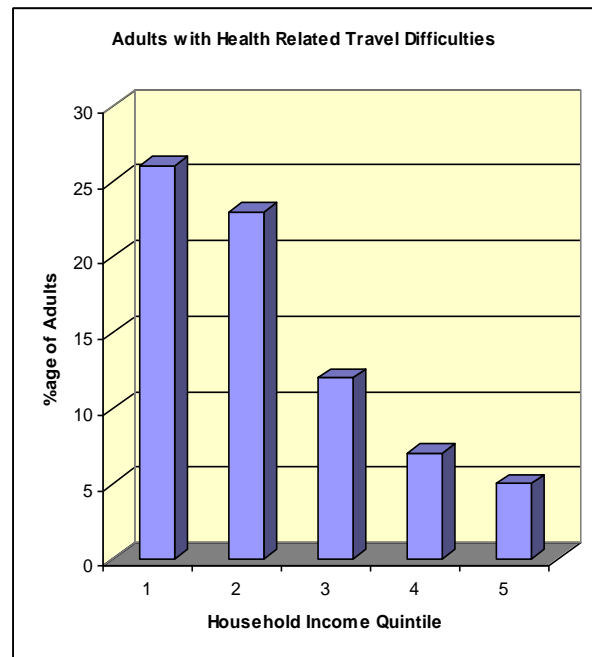


Figure 12: Adults with Health Related Travel Difficulties by Income Quintile, 2005.

Source: Health Related Travel Difficulties, Personal Travel Factsheet, Chart 3.

- Junior administrative and clerical
- Agricultural workers
- Textile workers
- Catering
- Carers, social services, health some other personal services
- Routine factory work and
- Retailing

### Disability

Disabled people are often on low incomes because of their impaired earning capacity. Figure 12 shows the extent of this. This partly reflects the high proportion of pensioners – who are more likely to suffer from some disability than younger people - in the lower income ranges, nevertheless the very strong correlation between low incomes and the probability of having a disabled person in the household is quite striking.

### Where people live

Figure 13 sets out income distributions by region. Wales, Scotland and the North East having the highest proportion of low income households with this reducing as one moves closer the wealthier South East. The main exceptions to this are the South West which has relatively few low income households and London which, despite average incomes being almost a third higher than the national average<sup>18</sup> still has a large proportion of poor families. The highest proportion of low income households are to be found in the provincial metropolitan areas (see figure 14) and, to a lesser extent other large urban areas.

<sup>18</sup> Regional Transport Statistics 2008, table 9.4.

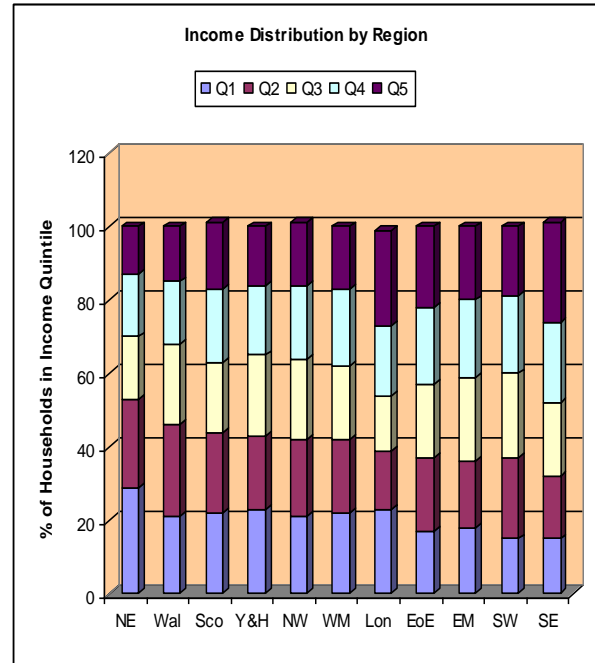


Figure 13: Income Distribution by Region 2002/03

Source: Focus on Personal Travel 2005, table 6.2.

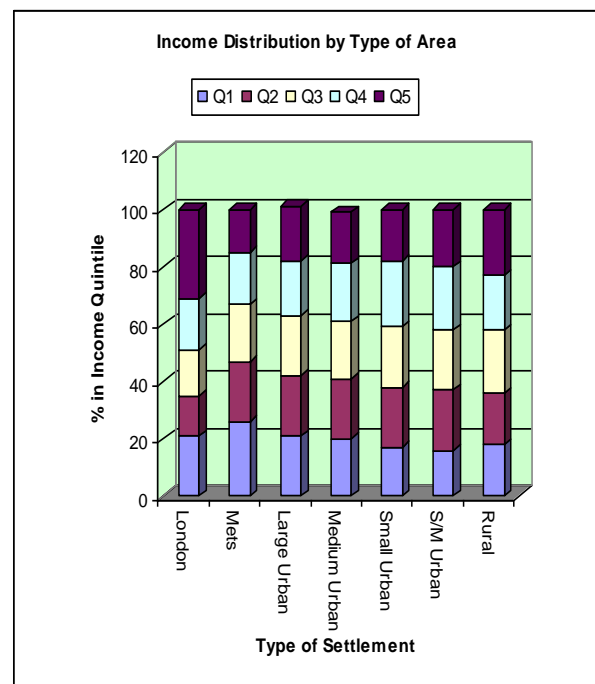


Figure 14: Income Distribution by Type of Settlement 1998/2000

Source: Focus on Personal Travel 2001, table 6.16.

These broad averages however mask local variations and substantial pockets of low income households are to be found in inner London and some remoter rural areas - where not having access to a car can result in isolation and a measure of hardship.

### The Impacts of car Ownership

Moving into car ownership has two substantial effects on household circumstances. Firstly it leads to a step change in mobility. A person in a household with a car makes a third more journeys than someone in a car-less household. The distance travelled increases even more markedly – more than doubling. As a consequence more time is spent travelling – but only a fifth, thus average travel speeds rise from 15½ kph to 29 kph with the transition to car ownership<sup>19</sup>. As a consequence of this access difficulties are reduced.

Figure 15 shows that difficulties of access to shops is cut by at least two thirds - which increases opportunities for comparative shopping and increased availability of choice and lower prices from supermarkets. Access to health facilities is twice as easy for people in households with cars and this is particularly important for the higher proportion of people in these households who are disabled or elderly.

Spending on transport also increases but by precisely how much is difficult to say precisely. A rough estimate suggests that in the low income households expenditure on transport is about 8 times higher for those with a car than those without<sup>20</sup>.

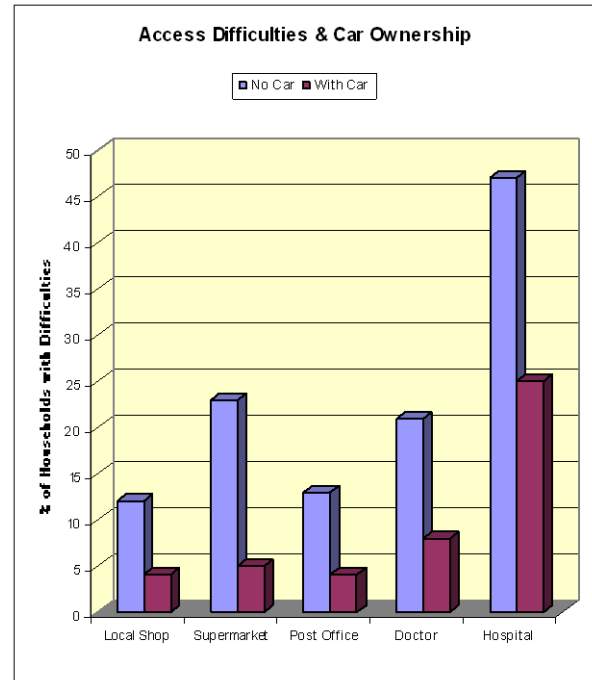


Figure 15: Access Difficulties and Car Ownership (2001/02).

Source: Transport Trends 2004, charts 4.14b & 4.15c.

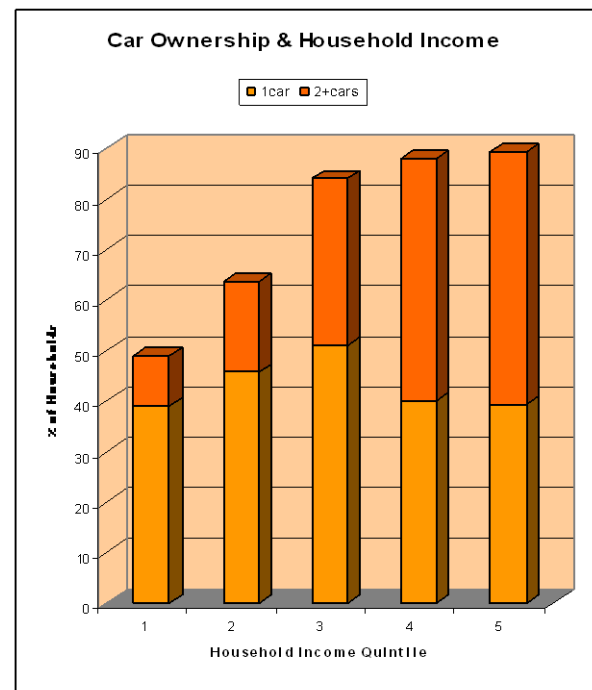


Figure 16: Household Car Ownership by Income Quintile 2008.

Source: NTS 2008, table 6.3.

<sup>19</sup> NTS 2006, table 5.1.

<sup>20</sup> See figures 36 & 41.

This reflects the fact that members of car owning households are much more likely to be employed and less likely to benefit from concessionary fares. The time use diary from the Omnibus Survey in 2005 showed that, on average a member of a car owning household spent 188 minutes a day in paid work – more than double the 95 minutes average in a non car owning household<sup>21</sup>.

The large difference in expenditure by car owning households compared to those without – even in low income groups – suggest that ‘financial affordability’ is often not the dominant factor in travel behaviour. The increased flexibility, convenience and ‘time affordability’ of car travel is such that even poorer households are prepared to substantially increase their transport spending to enable the much higher level of accessibility car travel provides.

### Car Ownership and Access in Low Income Households

#### *Income*

Figure 16 shows that whilst 49% of households in the lowest income quintile have one or more cars and 64 % in the second lowest, personal car access (figure 17) is somewhat higher at 57% in the lowest quintile and 71% in the second lowest. This reflects in part the fact that low income car owning households tend to be larger than non car owning households.

<sup>21</sup> Omnibus Survey 2005, table 13 (<http://www.statistics.gov.uk/STATBASE/ssdata.set.asp?vlnk=9509>).

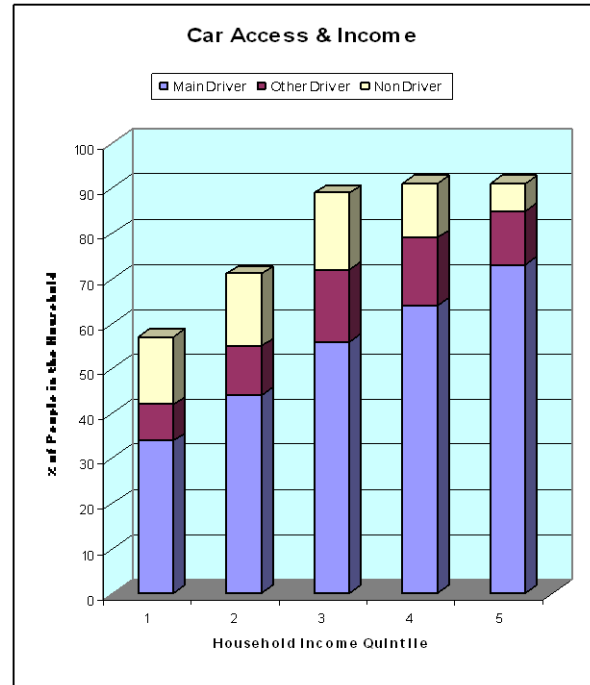


Figure 17: Adult Car Access by Income Quintile: 2008.

Source: NTS 2008, table 6.4.

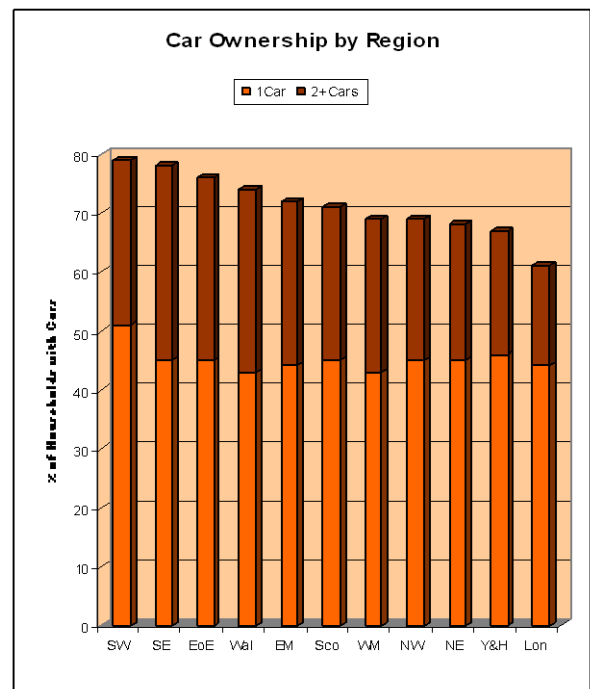


Figure 18: Car Ownership by Region 2006.

Source: Regional Transport Statistics 2008, table 1.15.

Multi car ownership is lower in low income CO families rising from an average of 1.17 cars household in Q1 to 1.35 in Q2 against an average of 1.55<sup>22</sup>.

Regional car ownership (figure 18) reflects relative income levels with the clear exception of London which has the lowest car ownership by a good measure. This is almost certainly a result of a combination of parking difficulties, traffic congestion, higher public transport service levels and higher densities which make access by public transport and on foot to local facilities a much more practicable option than in most of the rest of the country.

### *Ethnicity*

With their relatively small proportion of low income households it is to be expected that Indians and British Whites have high car availability (see figure 19). However Pakistanis and Other Asian groups have higher car availability than their income levels would suggest as a result of higher car availability for non-drivers. This could be as a result of larger families for car owners, a greater degree of lift giving and lower licence ownership among women.

### *Type of family*

Car availability by type of family (figure 20) largely reflects income distribution with lone parents and single pensioners having poorest car access (but in the reverse order from incomes) however people living on their own are less likely to have a car available than their income might indicate. This is probably to do with their environment and life style reducing the need for a car.

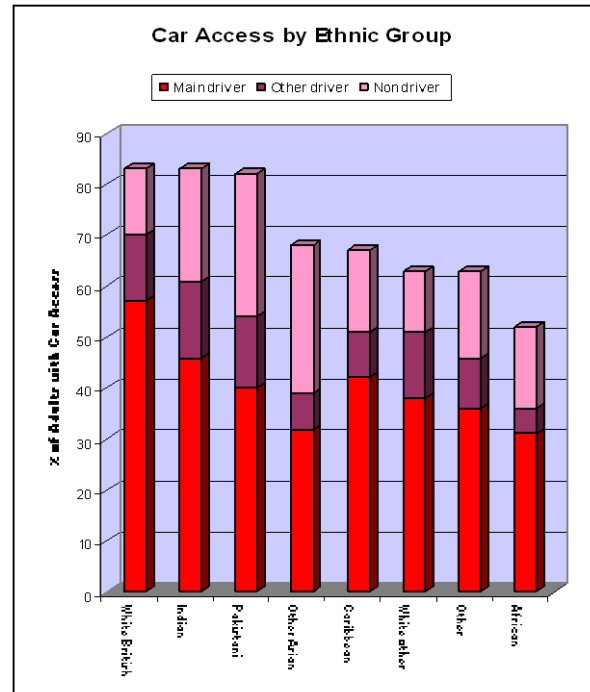


Figure 19: Adult Car Access by Ethnic Group: 2005-08.

Source: NTS 2008, table 6.6.

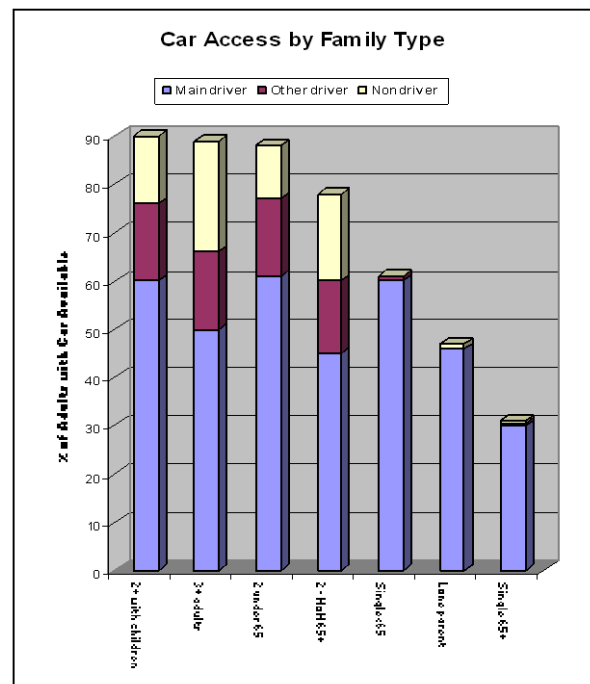


Figure 20: Adult Car Access by Family Type: 2005.

Source: NTS 2005, table 5.2.

<sup>22</sup> NTS 2008, table 6.3.

## Travel and Car Use by All Low Income Households

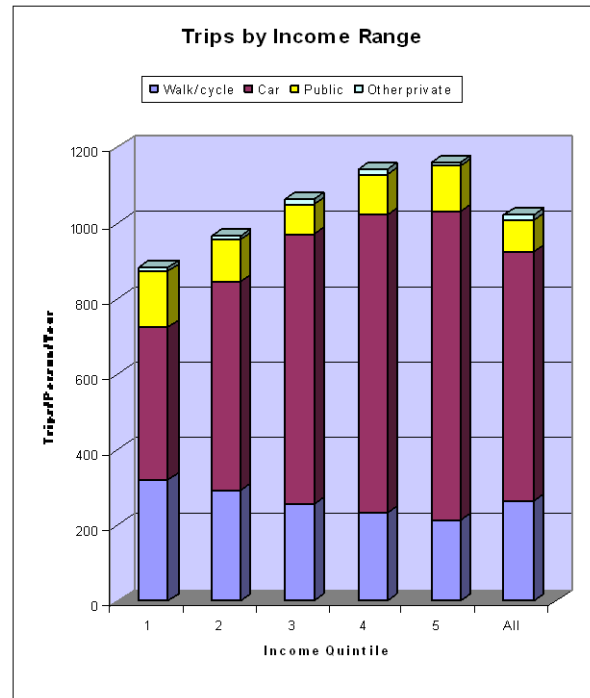
Members of low income households make fewer trips overall than average (15% for Q1 and 6% for Q2) and also fewer by motorised transport (24% and 9%). This is not much less than for wealthier households - despite the lower levels of car ownership. This suggests that increasing car ownership has a limited effect on the total numbers of journeys made with a doubling in the average numbers of cars in a household resulting in a 25% increase in overall trip rates. The additional car trips must therefore be partly as a result of substitution from travel by other modes.

Whilst members of low income households are relatively heavy bus users and make more journeys on foot than average they are light rail users with 57% using rail less than once a year<sup>23</sup>. Also there is little difference in cycle use between income groups - with low income households making slightly fewer journeys by bicycle.

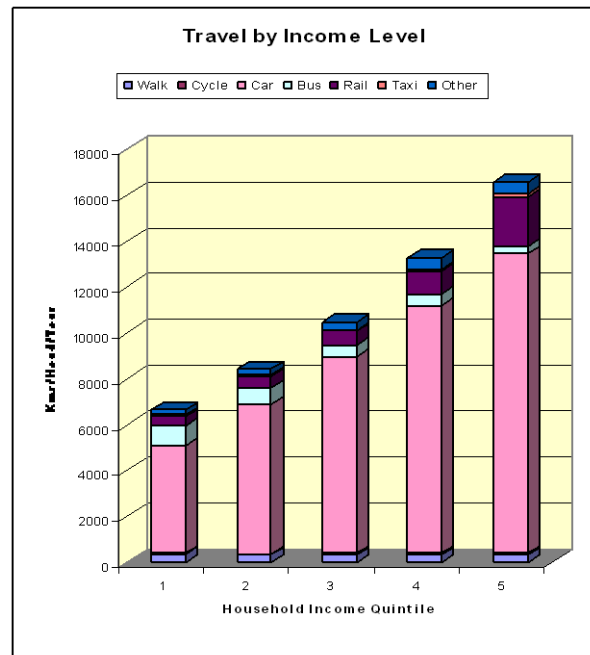
For travel distances the weight of walking and cycling shrinks substantially (figure 22) and the dominance of the car becomes even greater. Even for the lowest income quintile, over 70% of the annual distance travelled is by car and for the second lowest this increases to 77% - just short of the average for the population as a whole (78%). Even in London, where travel by public transport is much more commonplace, once household incomes rise above £20k/year cars become the dominant means of travel<sup>24</sup>.

<sup>23</sup> NTS 2007, chart 4.3.

<sup>24</sup> Travel in London, figure 9.6 and London Travel Report 2003, table 3.6.



**Figure 21: Annual Personal Trips by Household Income Range & Mode 2008**  
Source NTS 2009, table 6.6.



**Figure 22: Annual Personal Travel by Household Income Range & Mode 2008**  
Source NTS 2008, table 6.6.

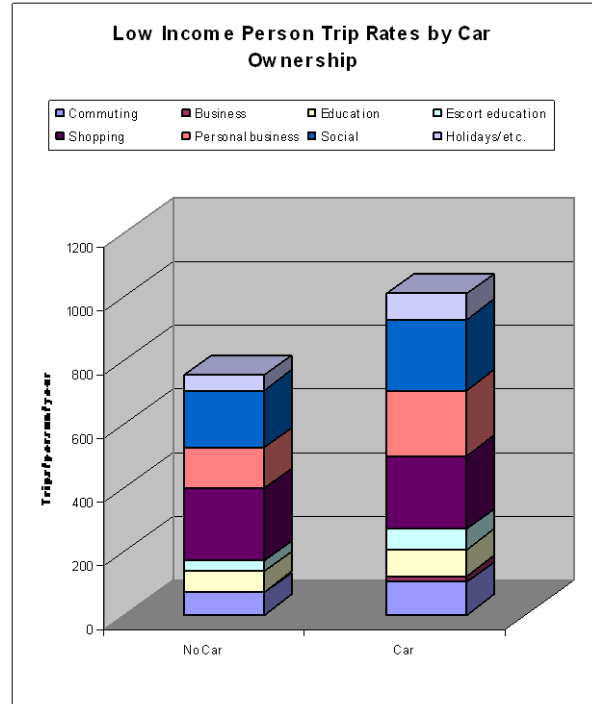
Travel and Car Use by Low Income Car Owning Households

***Travel by Purpose in Low Income Households***

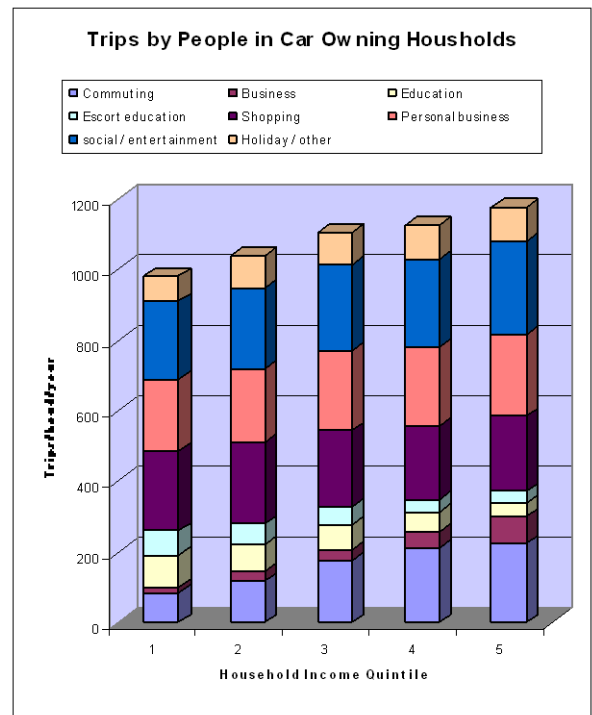
Car use by average households is not the same as car use of *car owning* households in the two lower quintiles; for the obvious reason that there are significant numbers of households in these income ranges that do not own a car. The scale of difference in trip rates for people in low income households with and without a car is shown, by purpose, in figure 23.

This variation in trip rates at one third is a result partly of differences in the composition of car owning and car-less low income households (commuting rates are almost 50% higher and business trip rates almost six times as great – reflecting a higher proportion of workers): and the increased mobility consequent on greater ease of travel by car.

Figure 24 shows trip rates of people in car owning households. Overall trip rates for people in Q1/Q2 *car owning* households are about the same as the average for the population as a whole, although they are 15% lower than the average for all people in car owning households. Trip rates of people in Q1/Q2 households are higher for education and education escort (reflecting the high proportion of families with children in this income range), little different for shopping but lower for personal business, social and holiday journeys - reflecting lower discretionary expenditure.



**Figure 23: Trip Rates by car owning & Car-less Low Income Households, 2002/06.**  
Source: ONS tabulations, August 2009.



**Figure 24: Trip Rates by People by Purpose in CO Households by Income Quintile, 2002/06.**  
Source: ONS tabulations, August 2009.

Distances travelled by members of low income car owning households however are significantly less than the average for all car owners (Q1 32% less and Q2 25% less). This is the case for all travel purposes but most particularly for commuting (57%), holidays (27%), and social purposes (20%). Shopping travel is only 10% less as a result of slightly shorter journeys rather than fewer; and education and education escort travel greater.

The increase in holiday travel should also be seen in the context that wealthier people take more holidays abroad. Over 80% of holidays abroad are taken by air<sup>25</sup> and 38% of the population generally flies abroad at least once a year compared with only 24% of people from low income households. For the wealthiest quintile this figure rises to 61%<sup>26</sup> so car ownership is probably proportionately more important to members of low income households for holidaying than the better off.

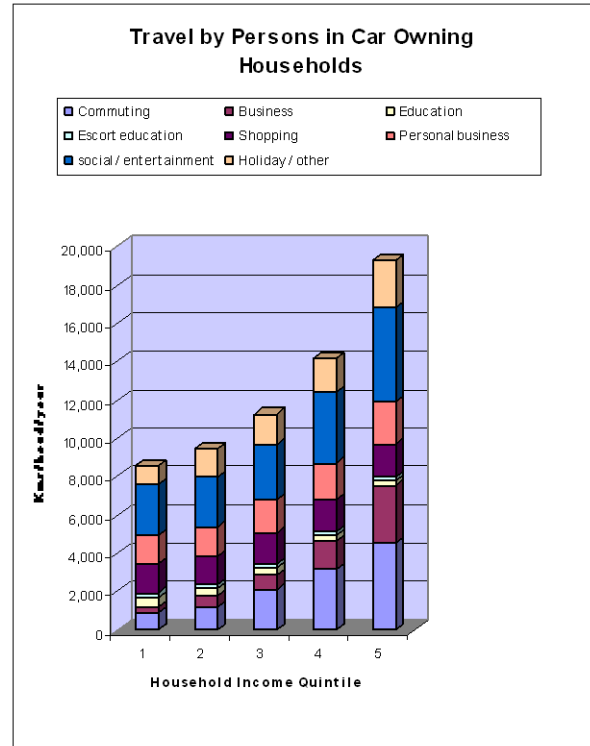


Figure 25: Annual travel by People by Purpose in CO Households by Income Quintile, 2002/06. Source: ONS tabulations, August 2009.

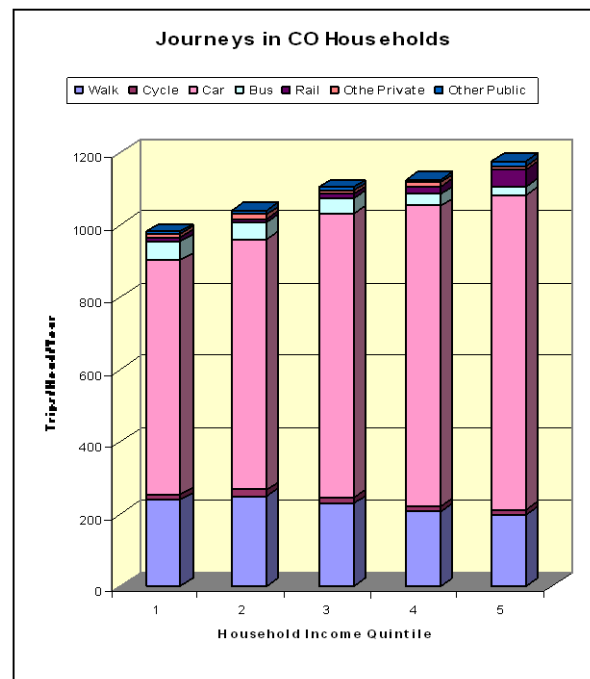


Figure 26: Trips by Persons in CO Households by Income & Mode 2002-06. Source: ONS tabulations, August 2009.

<sup>25</sup> Travel Trends 2008, table 3.07.

<sup>26</sup> NTS 2006, table 5.6b.



### ***Travel by Mode in Low Income Car Owning Households***

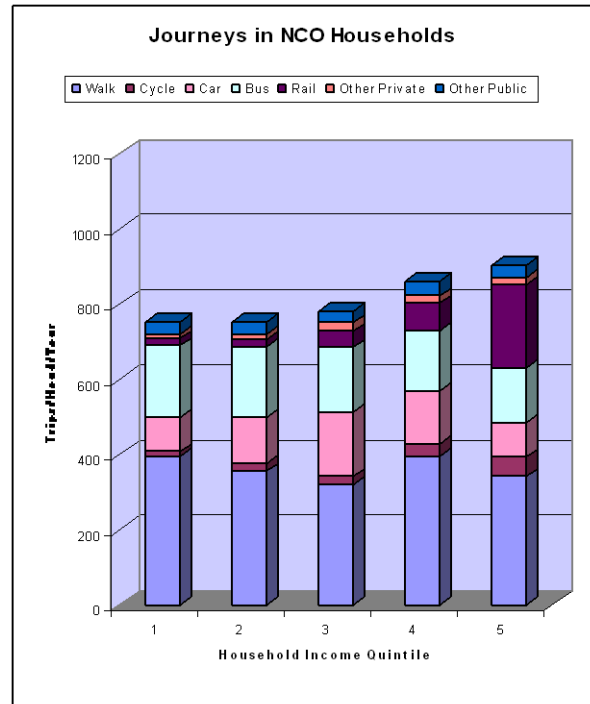
The availability of a car substantially changes the choice of means of travel. Figures 27 and 28 contrast the modal behaviour of persons in car owning (CO) and non car owning (NCO) households. The number of walk and cycle journeys in low income CO households is about  $\frac{2}{3}$  that in a NCO household ( $2\frac{1}{2}$  journeys per person a week) but the greatest effect is on taxi journeys which are three or four times more common for members of NCO households than for people with cars available.

Bus and rail use journeys by people in low income CO households are also about a third those in NCO households. On buses this means about  $2\frac{1}{2}$  journeys/week but for rail the average for members of both CO and NCO low income households is well under one journey a year.

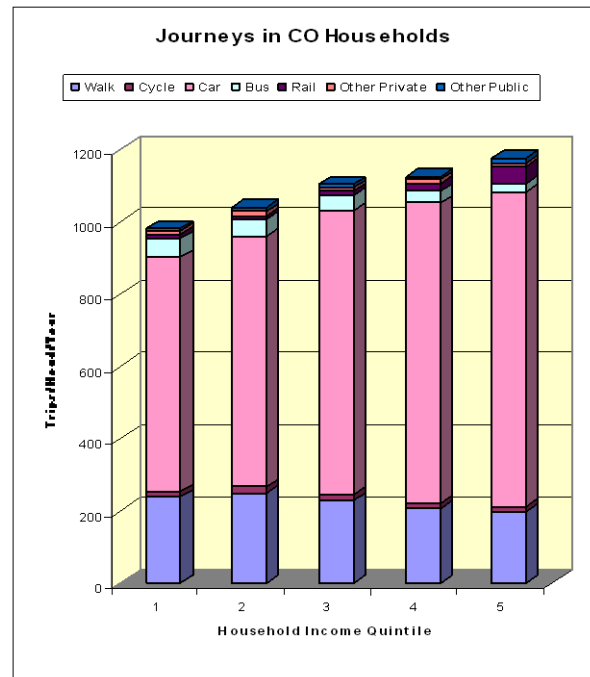
These reductions in walking and cycling (130 journeys/year) and public transport (170 journeys/year) are more than offset by the increase in car journeys (560 journeys/year).

Looking across the income spectrum the main effect of higher incomes is on the number of car journeys by members of car owning households rather than the overall use of other modes of transport.

Public transport personal trip rates change little between poorer and wealthier CO households, with lower bus use and higher rail use by members of better off households.



**Figure 27: Annual Journeys by Persons in CO Households by Income & Mode 2002-06.**  
Source: ONS tabulations, August 2009.



**Figure 28: Annual Journeys by Persons in CO Households by Income & Mode 2002-06.**  
Source: ONS tabulations, August 2009.

Walking reduces slightly with greater wealth (an 18% difference between Q1 and Q5) but cycling barely changes. Trip rates by car however do increase with higher incomes from 12½ trips/person/week for people in Q1 households to 16¾ for people in Q5 households.

The effect of car ownership on distance travelled is greater (figures 29 & 30), largely as a result of the distinctive mobility provided by cars. Persons in car owning Q1 and Q2 households travel over twice as far as their peers in households without cars; with car travel comprising 83% of their mobility compared with only 32% in car-less households. This results from both making more trips and longer average journeys.

Figure 31 shows average journey lengths by mode; and whilst car journey lengths sit in the middle of the range they are substantially (23%) greater than the weighted average and more than twice the weighted average of non car travel.

Whilst low income households make fewer car journeys (12%) than the average for CO households they also make shorter journeys as shown in figure 32. Average car journey length for persons in Q1 households is 20% below the average and for Q2 17%.

Their public transport journeys lengths are also shorter by 39% (Q1) and 34% (Q2) respectively. This reflects the greater use of rail for longer journeys by wealthier people.

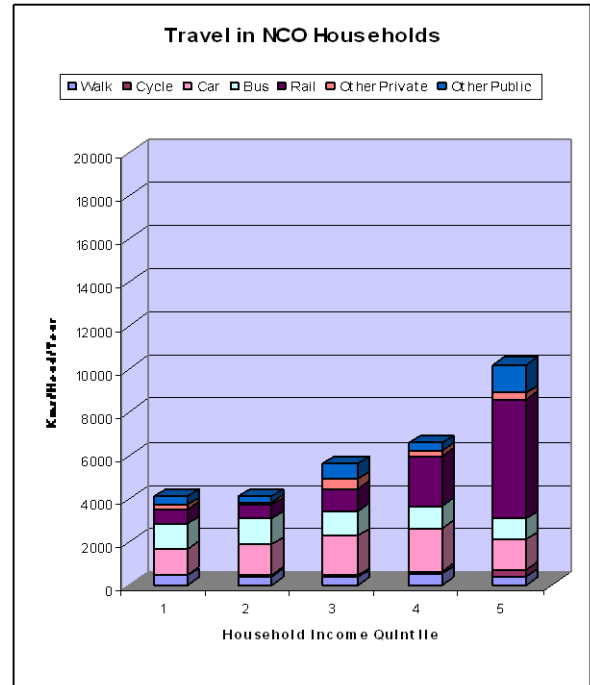


Figure 29: Annual Travel by Persons in NCO Households by Income & Mode 2002-06. Source: ONS tabulations, August 2009.

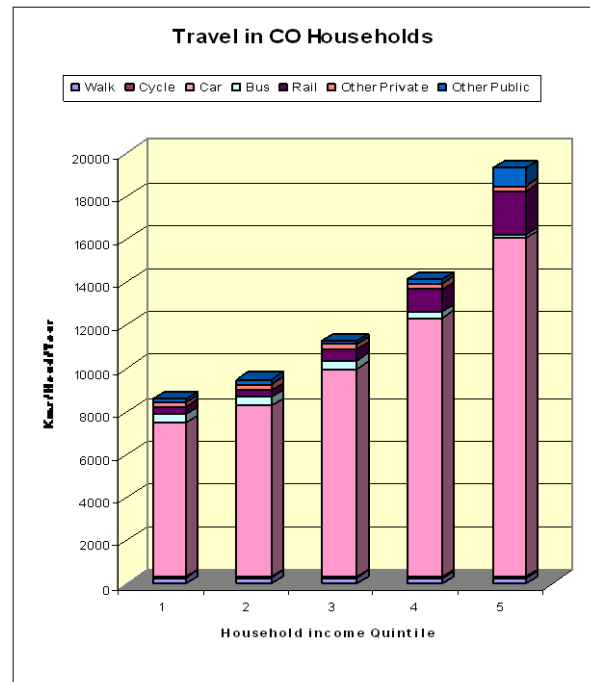


Figure 30: Annual Travel by Persons in CO Households by Income and Mode 2002-06. Source: ONS tabulations, August 2009.

### ***Car Occupancy and Lift Giving in Low income Car Owning Households***

Where car ownership is low it is usual to find a higher degree of lift-giving than in higher car ownership environments. This is most evident in developing countries where car occupancies are commonly substantially higher than in developed countries. In Britain the average car occupancy for people in households in the lowest income quintile was 1.9 in 1999/2001 compared with 1.59 for the population as a whole<sup>27</sup>.

However the amount of car passenger travel to car driver travel for this quintile was 1.28:1<sup>28</sup> suggesting that there was a substantial amount of car travel by people in this income range in cars and vans owned by households in other income ranges. On these figures about 20% of car travel by people in the lowest income quintile was in vehicles from households in higher income quintiles.

By 2004 car occupancy amongst low income households had fallen to 1.7 compared with an overall average of 1.59 and 1.37 for people in Q5 households. This is despite low income households being significantly smaller than average at 1.45 persons per household compared with the average of 2.4 and 3.3 for Q5 households<sup>29</sup>. This means that low income car owners vehicles are more productive than average.

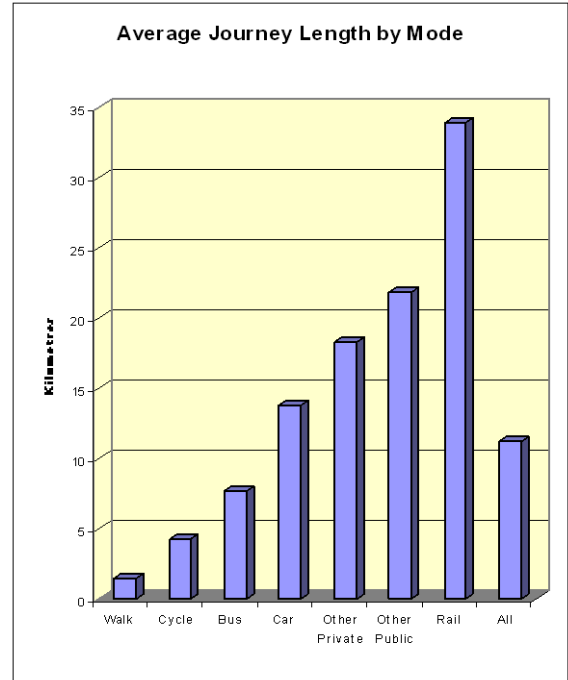


Figure 31: Average Journey Length by Mode, 2008.

Source: NTS 2008, table 3.3.

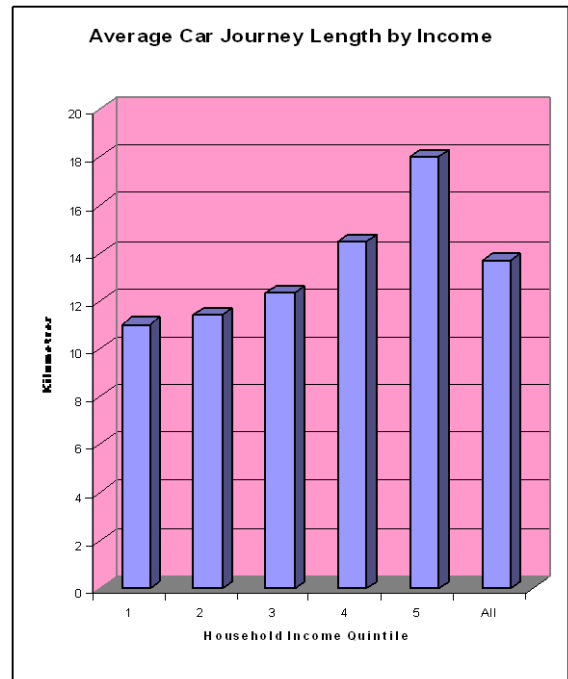


Figure 32: Average Car Journey Length by Income Quintile, 2002-02.

Source: ONS tabulations, August 2009.

<sup>27</sup> Car Use in Great Britain. Page 3 & NTS 1999/2000 Update table 5.2.

<sup>28</sup> NTS 1999/2001 Update, table 5.5.

<sup>29</sup> Family Spending 2008, table A8.

The available data does not permit the same calculation to be done for the second quintile but the ratio of passenger to driver travel would imply an occupancy of 1.8:1 so it seems probable that there is some ‘exporting’ of car travel to vehicles owned by households in higher income quintiles. This is supported by the fact that in 2007 wealthy drivers were more than twice as likely to give lifts as poorer drivers<sup>30</sup>.

The importance of increased car ownership to the mobility of non car owners is illustrated by the extent of lift giving to non household members. In 2007 it was found that about 60% of car passengers had received lifts from someone who did not live in the same household in the last month<sup>31</sup>. Figure 33 shows that, on average, car passengers get about three lifts a month from people outside their household with the rate falling slightly as incomes rise.

### ***Traffic Impacts of Increased Low Income car Ownership***

Since the turn of the century the amount of car driver travel by people in low car ownership households has increased by 28% or about 660kms/head for all people in these households. This amounts to about 8bn vkms of additional car traffic<sup>32</sup>. Over the same period car traffic generally has increased by only about 5% or 19bn vkms<sup>33</sup>. This suggests that the growth in low income car ownership is making a substantial contribution to traffic growth and consequently increasing congestion.

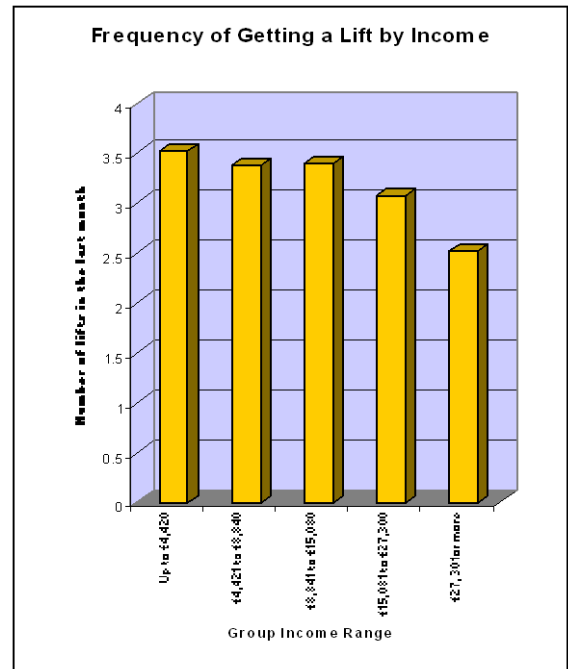


Figure 33: Frequency of Car Passengers getting a lift from Someone Outside their Household in 2007 by Income Range.

Source: Public Experiences of Car Sharing, table A4.

<sup>30</sup> Public Experiences of Car Sharing, table A7.

<sup>31</sup> Public Experiences of Car Sharing, table A4.

<sup>32</sup> Author’s estimate

<sup>33</sup> Road Traffic and Congestion in Great Britain Q3 2008.

## Spending on Transport & Motoring

### *All Household Spending on Transport*

Spending on transport has increased as a result of the arrival of mass motoring - doubling from 6% of household expenditure in 1953<sup>34</sup> to 8% in 1957 (a quarter of spending on food) to 16% currently (more than any other category) of this 14% is on motoring compared to only 2.8% in 1957<sup>35</sup>. The early analyses of household expenditure did not include breakdowns by income groups because of the small sample sizes employed. It was not until the late 1960s that the sample sizes used in the Family Expenditure Survey allowed this disaggregation<sup>36</sup>.

Figure 34 shows household spending on transport in 1974, at which time car ownership amongst low income families was quite low. The disparity in spending on transport between income groups was very marked with the bottom quintile spending being only one sixth the average and the second quintile little more than half.

By 2007 this picture had changed markedly (see figure 35). Transport spending by the lowest household income quintile had risen to a quarter of the average (Q2 over a half) and spending on motoring dominated in all income ranges.

The changes in relative expenditure between different income groups resulted mainly from the increase in car ownership in the lower income groups.

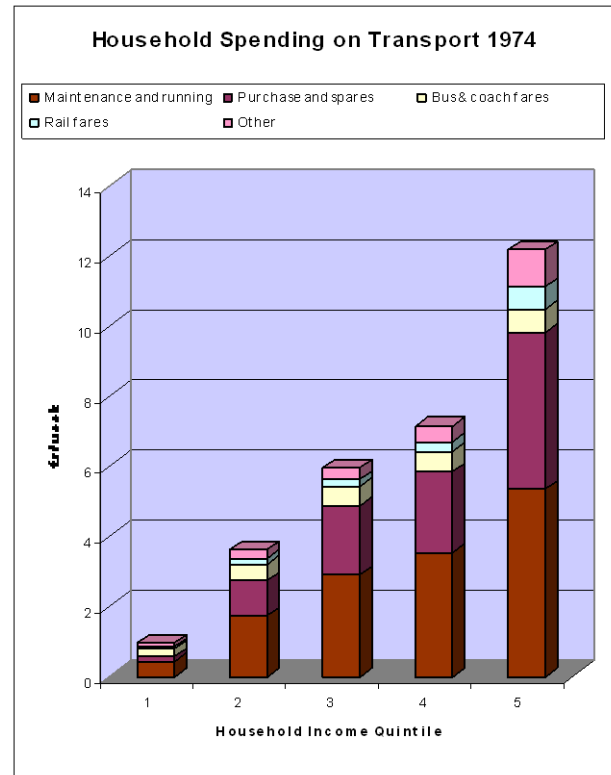


Figure 34: Household Spending on Transport by Income Level 1974.

Source: FES 1974, table 1.

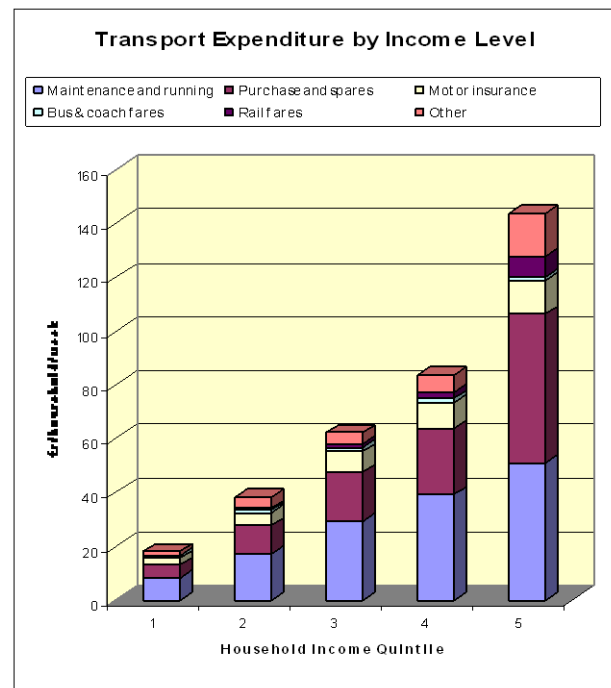


Figure 35: Household Spending on Transport by Income Level 2007.

Source: Family Spending 2008, table A8.

<sup>34</sup> Factors Affecting the Amount of Travel, table 1.

<sup>35</sup> Family Spending 2007, tables A & B.

<sup>36</sup> Sixty Years of Social Survey, page 38.

### Spending by Car Owning Households

Figure 36 shows that, amongst car owning households, the disparity between income groups is less - with the lowest quintile spending 40% of the average on motoring and the second lowest about 65%. As a consequence of this, the proportion of overall spending by car owning households in different income ranges on motoring is between 14% and 17%; with low income households spending more than average.

However the types of motoring expenditure vary between different income levels. This can be seen from figure 37 with poorer households spending proportionately more on running their cars (fuel, insurance and maintenance) than wealthier households<sup>37</sup>.

Not only do these households spend proportionately more of their motoring expenditure on *running* their cars but they spend a higher proportion of their overall outgoings on this (over 9%) than average (8½%) and much more than the wealthiest quintile (6¾%).

Whilst the level of spending on purchase and spares grows steadily with higher incomes it falls as a proportion of all spending except at the highest level where spending on purchases and spares is more than double the average and even the fourth income quintile. This is as a result of multi-vehicle ownership, newer cars and the purchase of a higher proportion of luxury and high performance vehicles.

<sup>37</sup> This may be slightly overstated as car ownership in the lower quintile can be expected to be slightly skewed towards higher incomes.

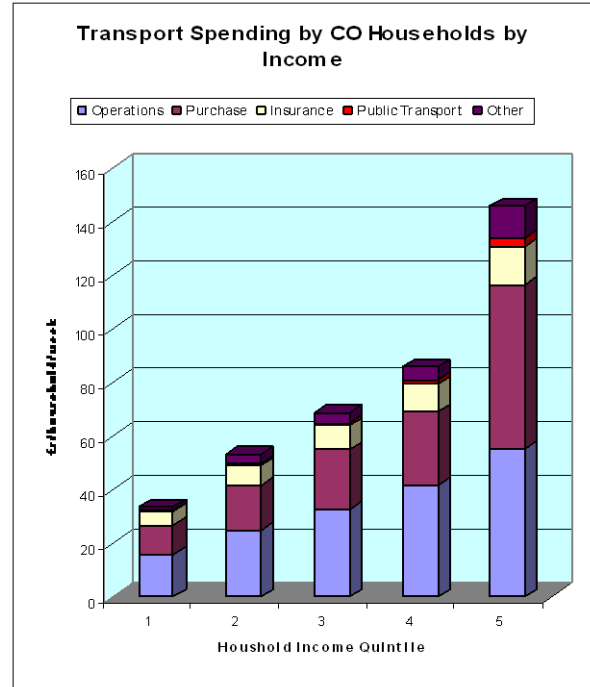


Figure 36: Transport Spending by CO Households by Income Quintile 2007. Sources: FES 2008 & NTS tabulations August 2009.

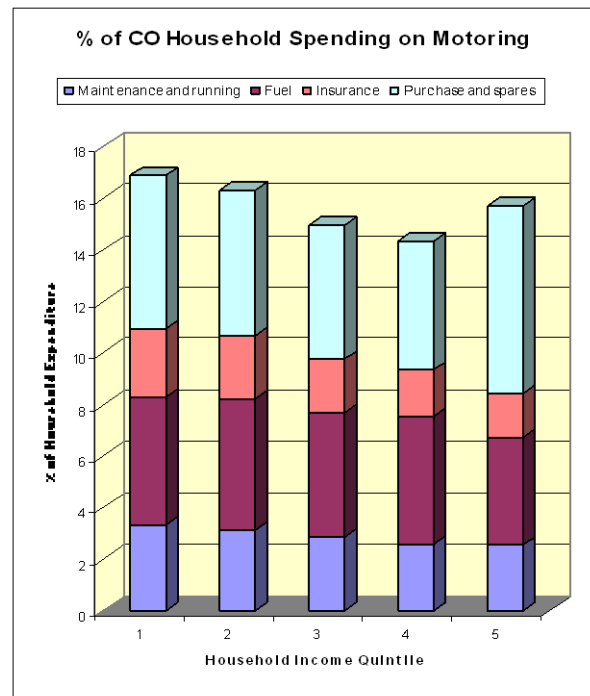


Figure 37: % of Expenditure by Car Owning Households on Motoring in 2007. Source: FES 2008, tables A8 & A6 and NTS 2007, table 4.1.

It is evident, if not surprising, that low income households gain entry to the car market by acquiring relatively cheap (and probably mostly used vehicles) and in so doing incur much lower (a third and a half for the two lowest quintiles) ownership costs than average. Whilst their running costs are also lower (in absolute terms) this is not to the same extent being (45% and 70% respectively).

Figure 38 shows how vehicle size, measured by engine capacity, varies with household income. Cars owned by households in the two lower income quintiles are, by this measure, smaller than those owned by wealthier households. However the difference from the average is not very large being only 18% more likely to own a small car and 30% less likely to own a large car.

Poorer households own fewer new cars and more elderly vehicles than their wealthier counterparts (figure 39). The lowest quintile has only 15% of cars less than three years old compared with an average of 24% and 33% for the wealthiest. The figure for the second quintile is 19%. The rapid rate of depreciation of cars with age means that this factor alone means that poorer households will pay significantly less for their cars. It is not uncommon for new cars to lose half their value after three years so, by concentrating their car buying in this 'used' sector of the market, lower income households save significantly on purchase costs.

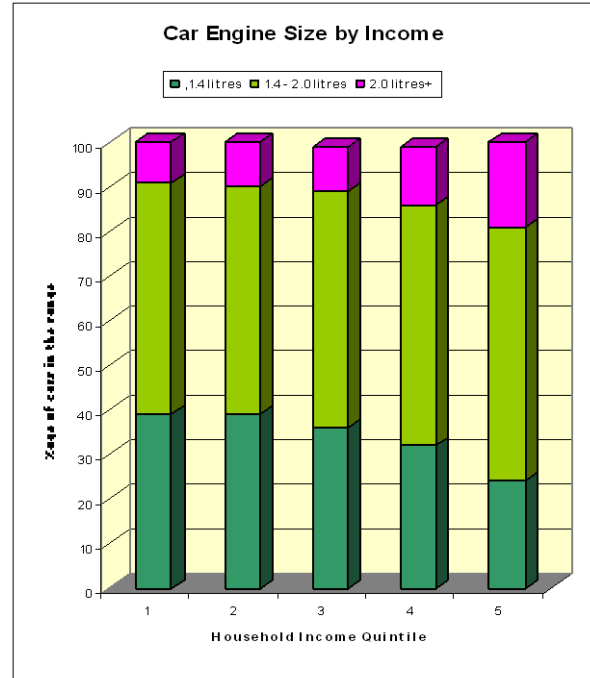


Figure 38: Car Engine Sizes by Household Income Quintile 2007.

Source: NTS 2007, table 7.3.

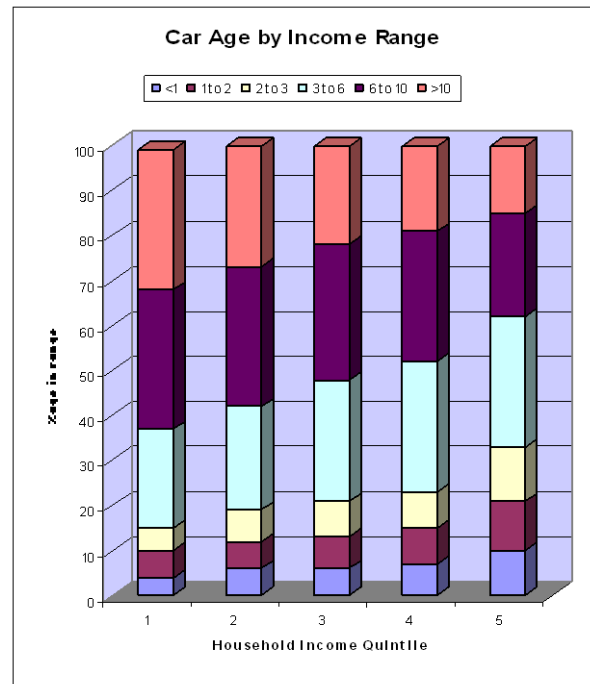


Figure 39: Car Ages in Relation to Household Income 2007.

Source NTS 2007, table 7.4

Together with buying smaller cars and cheaper brands this results in the two lowest quintiles spending about a fifth as much on buying cars as average and little more than 7% of the wealthiest quintile. Of this expenditure, low income households spend about a quarter on new cars compared with the average of over a half<sup>38</sup>.

This does not appear to be the case in respect of running costs. Older vehicles require more attention and replacement of worn parts. Poorer households cover less distance than average and consequently fixed costs (e.g. VED) are spread over fewer kilometres. Also poorer households live in less expensive areas and are less likely to have off street garaging/parking which can mean higher insurance costs. Indeed figure 37 shows 2½% of low income (car owning) household expenditure going on car insurance compared with the average of 2% and only 1⅓% for the wealthiest households.

Figure 40 shows that the variation between running costs rates is quite small with poorer households as a whole paying slightly more than average. Of the two lower income quintile the lowest pay just (2%) under the average with the second lowest paying 9% above.

### *Spending by non Car Owning Households*

Because about 85% of transport spending goes on personal transport (including car insurance) spending by households without cars is much lower than that of car owning households. Figure 41 sets out an estimate of what this was by income quintile in 2008.

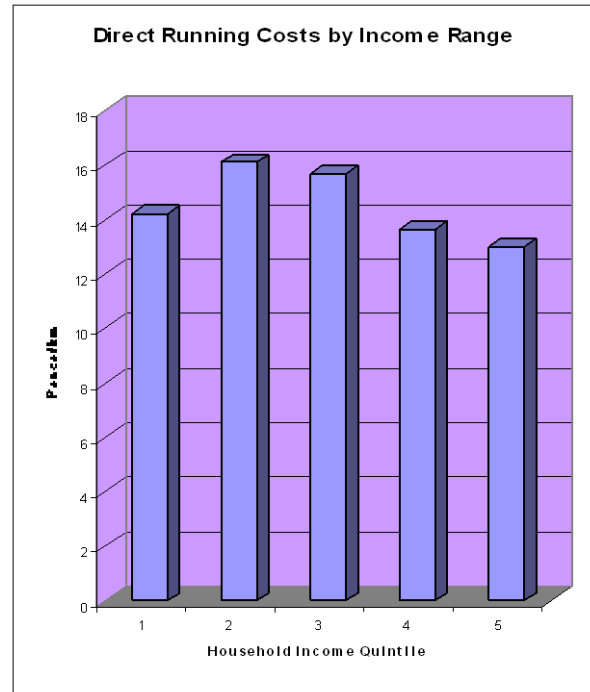


Figure 40: Direct Car Running Costs (pence/km) by Income Quintile, 2006.

Source: Author's estimates.

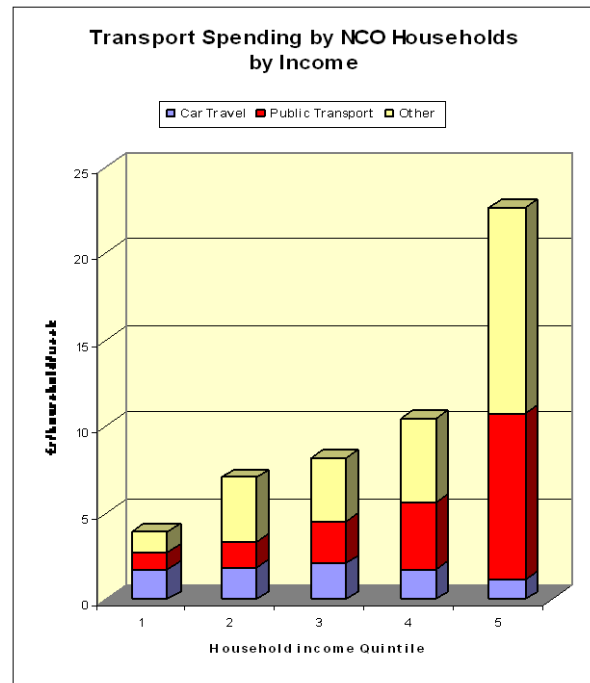


Figure 41: Estimate of Weekly Transport Expenditure in 2008 by NCO Households by Income Quintile.

Source: Authors estimates.

<sup>38</sup> FES 2008, table A8, 7.1.



The low level of spending on public transport in Q1 and Q2 income ranges is a reflection of concessionary travel on public transport for pensioners and people with disabilities, reduced fares for children and limited use of the railways. ‘Other’ expenditure includes taxis and private hire cars, air travel, hiring and leasing of cars, vans and bicycles, school travel, ferries and other personal travel and transport services.

The large difference in outgoings on transport can be seen by comparing figure 36 with figure 41. Entry to the car ownership ‘club’ comes at a high price with average spending by low income car-less households of being between £5 and £6 per week compared with over £40 for low income car owning households.

### Motoring Tax Impacts

As motoring is a highly taxed activity this raises the question of relative taxation rates for the different levels of income of car owning households. Figure 42 is based on VAT on non fuel and oil expenditure at 15%, insurance premium tax at 5% and taxes on fuel (fuel duty and VAT) amounting to 70%.

Because low income car owning households spend a higher proportion of their budgets on car use motoring taxes for these households are clearly regressive. This is supported by an analysis carried out for the AA and the United Kingdom Petroleum Industry Association that concluded that increase in petrol prices would have the highest impact on car owners with low incomes and in poorly paid occupations<sup>39</sup>.

<sup>39</sup> The effect of fuel prices on motorists. figures 10 & 11.

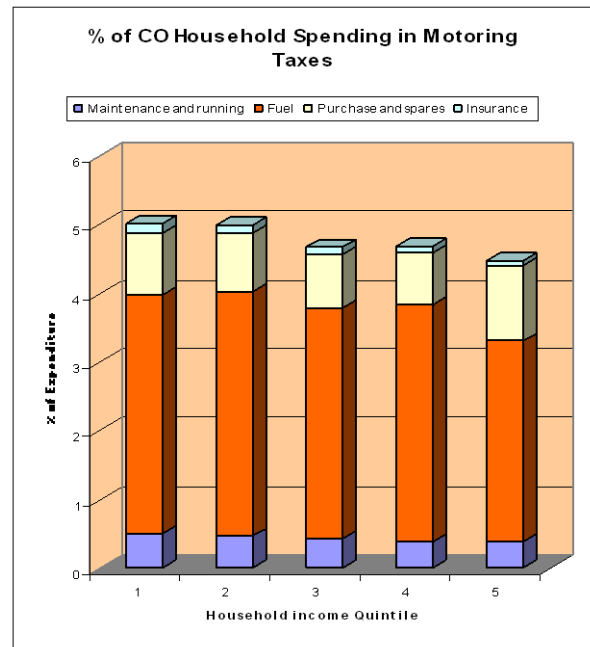


Figure 42: Percentage of Car Owning Household Expenditure in Motoring Taxes 2007.  
Source: Authors Estimates.

If motoring costs are increased the ability of low income car owning households to cope with such increases is much less than wealthier households. They have less chance to save by reducing multi-car ownership and much less opportunity to ‘trade down’ to smaller older cars.

If cost pressures are increased then the most significant means of coping with these for poorer households would be to drive less, share more or reduce their insurance cover which could be counter productive. Loading any cost increases on distance driven rather than ownership would increase the scope for lower income car owning households to change their behaviour to cope with these. There is also some evidence that increased motoring costs would bear disproportionately on women<sup>40</sup>.

<sup>40</sup> Women and Cars, secs. 8.5 & 8.6.

## Summary and Conclusions

### *Car Ownership and Access*

Prior to the Second World War motoring was the privilege of the wealthy, but this changed in the nineteen fifties and nineteen sixties with the rapid growth in car ownership and its spread to the middle classes. Between 1950 and 1966 the number of cars increased fivefold and the proportion of families with cars more than trebled. Motoring was becoming more affordable and was starting to become within reach of poorer families.

In the mid 1960s about one in ten low income households (here taken as the 40% poorest) had a car and this has steadily grown to more than half; and a quarter of these have more than one car. Car access is even higher with almost two thirds of people in the two lowest income quintiles having access to a car.

Increased car ownership has meant more people driving and today over 70% of adults can drive compared with 15% in 1950. This increase includes many more women and elderly drivers with 63% of women now having driving licences and over 50% of the over seventies. Access to cars has increased by 40% amongst women over the last thirty years compared with 30% for men.

The make up of low income households differs in a number of respects from the average. They are more likely to:

- be lone parent families and pensioners;
- live in council or housing association accommodation;
- be Pakistani, Bangladeshi or Black;
- be in routine, retailing, agricultural, catering or social service occupations;
- live in Wales, Scotland or the north of England and
- include a higher than average number of disabled people.

However the absolute numbers are rather different with:

- couples with children, single people without children, single parents and pensioner couples;
- white families and
- people living in owned council and mortgaged houses;

each making up to about four fifths of the low income households by type of family, ethnic group and type of housing.

To some extent car ownership and access reflects income – but not entirely so. Blacks, Orientals and non British Whites have low availability but non-Indian Asians (Indians have the highest car availability) – especially Pakistanis - have higher car availability than their incomes would suggest. Lone parent families (31%) and single pensioners (47%) have the lowest car availability followed by other single people (61%).

People working in junior administrative and clerical occupations, agricultural, textiles, catering, caring, social services, routine factory work and catering tend to earn less than average and disabled people are disproportionately represented in low income families; partly as a result of the higher proportion of elderly people and partly because of the reduced earning power of many disabled people.

### ***Travel by People in Low Income Households***

People in low income households make 13% fewer journeys and travel 37% less distance than average (of which they are, of course, an important part). They make 29% fewer journeys by car and travel 40% less distance by car. They walk (but not cycle) more frequently (17%) but do not travel greater distances than average by these means of transport – principally because they cycle less than people in better off households.

Whilst these households use public transport 50% more than average they do not travel further by these means, as they use buses for short journeys more, but trains for longer journeys less; consequently the distance they travel by public transport is 30% less than for all households. As with the rest of the population, people in low income families travel more by car than any other form of transport.

### ***Travel by People in Low Income Car Owning Households***

People in low income *car owning* households travel rather more than their peers in car-less households. Their average trip rate is a third higher than that of low income non car owning households and much the same as for all households. This greater mobility is not uniform between journey purposes. Car owning households make markedly more journeys on business, escorting children to and from school, holidays and personal business. Shopping frequency is barely affected.

The distance travelled by low income car owning households is over twice that of members of low income households without cars, although significantly less than for the average car owning household. The higher mobility that comes with car ownership is, not surprisingly, almost all by car with cars providing 83% of their travel compared with only 32% in car-less households. Bus and rail usage by people in low income car owning households is about half of that of their car-less peers, walking and cycling about a third less, but taxi use substantially greater.

Travel by people in low income car owning households is about 38% less than the average for those in all car owning households. The main reasons for this are fewer car journeys (15%), shorter car journeys (20%) and less travel by rail (60%).

However the spread of car ownership amongst low income groups has meant that the growth in car travel amongst these households has made a significant contribution to increased road traffic and congestion.

### ***Car Ownership and Accessibility***

Being in a car owning household substantially increases accessibility. In half an hour, car travel can provide access to an area of about 1,200km<sup>2</sup>, rail 940km<sup>2</sup>, bus 175km<sup>2</sup>, cycle 100km<sup>2</sup>, and walk 19km<sup>2</sup>. This means that car ownership substantially reduces access problems. Difficulty of access to shops is cut by at least two thirds compared with people in households without cars - which increases the opportunity for comparative shopping and greater availability of choice and lower prices from supermarkets. Access to health facilities is twice as easy for people in households with cars and this is particularly important for the higher proportion of people in these households who are disabled or elderly.

Lift giving by car users to friends and family is an important element of mobility. Car driver escort travel is more than that by local bus. Higher car occupancy and getting lifts amongst low income households suggest that getting a lift is particularly important for these sections of the community.

### ***Spending on Transport and Taxation***

Spending on transport has increased from 8% of all household expenditure in 1957 to 16% today. The proportion of this on motoring has grown from 60% to 85%, so spending on motoring as a proportion of all family spending has increased by over 150% over the last fifty years. This varies between the different income levels. Currently low income (Q1/Q2) households spend just under 12% of their weekly outgoings on transport whilst the wealthiest quintile (Q5) households spend 17%.

Despite using public transport more, low income households do not spend more than average on bus and train fares. Their make-up is such that they enjoy more benefits from concessionary fares schemes and make fewer rail journeys - which on average cost £4.50 compared with under £1 on the buses.

Low income car owning household however spend much more than their car-less peers, with 15% higher spend on motoring alone – more than the average amount spent by all low income households on all forms of transport. Consequently they spend a higher proportion of their outgoings on motoring than average car owning households.

The balance of expenditure of motoring costs differs between the income quintile levels. Low income car owners spend 55% less on buying and maintaining their cars, 46% less on fuel and 38% less on insurance than average. These saving are achieved by buying older, smaller vehicles and probably by avoiding the more expensive marques. Overall low income households spending is 48% lower than average so, whilst they 'save' on purchase and maintenance, they pay relatively more for fuel and insurance.

Lower multi car ownership and greater ownership of low value vehicles means that low income motorists have less scope for absorbing motoring cost increases than their better off counterparts. High taxes on road fuels mean that motoring taxes bear more heavily in relation to expenditure for low income car owning households.

### *Conclusion*

Car ownership brings considerable benefits and substantial costs for low income households. It more than doubles mobility, reduces accessibility problems and provides an increased range of choice and value in shopping and recreation. Often members of low income families suffer from some form of mobility, economic or social disadvantage and access to car transport can significantly mitigate these. The financial costs however are high and low income car owners have to use a higher than average share of their spending on motoring. Even this requires them to buy older and smaller cars and to make fewer and shorter journeys than their wealthier peers. One consequence of this is that, coupled with high motoring taxes, low income motorists pay a larger share of their outgoings on motoring taxes than wealthier motorists and are especially vulnerable to motoring tax increases - unless these are carefully designed.

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