

Getting the measure of transport poverty

Understanding and responding to the UK's hidden crisis

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EXECUTIVE SUMMARY

As the largest single cost for millions of households across the UK, understanding the financial burden of transport is critical to decreasing poverty. In the year to March 2020, transport made up the largest portion of weekly household expenditure in rural areas, excluding mortgage payments, with the average home spending £114 per week on transport. In urban areas, transport was second only to housing costs, with average households spending £76 per week.

Transport poverty – which we define as being experienced when the total costs of private and public transport drive a household into poverty – keeps millions of individuals in substandard living. While metrics exist and are publicised that track the cost and accessibility of housing and energy, no metric is currently in place to track similar issues related to transport.

In this report, we try to fill that gap, developing a measure that shows the causes, locations, and depth of transport poverty. We then use that metric to analyse different policies that contribute to or alleviate the problem of transport poverty.

We have developed a first-of-its-kind metric to measure transport poverty in the UK

To calculate our transport poverty metric, we modelled households' expenditure on cars, buses and trains based on inputs that include region, income, and rural-urban classification. We then subtract this modelled spending from household income for each income decile in each neighbourhood (lower super output area) to calculate how many households are below the poverty line as a result of transport costs.

This metric tracks the *affordability* of transport to different types of households, prioritising that over measuring accessibility or the range of options. Our priorities here have been to capture geographic variation at the local level, and to identify the depth of transport poverty. In doing so, we avoided analysing local transport options due to the simplifications which would be required of complex issues. For similar reasons we use a household's actual expenditure rather than modelling behaviour, as modelling would require applying paternalistic assumptions based on a person's social or demographic characteristics that may not reflect their preferences. Throughout the process, we tried to make the metric as comprehensible as possible to promote public discussion.

The costs of transport keep over 5 million people in poverty

We estimate that 5 million individuals across the country are caught in transport poverty, with transport costs pushing them below the poverty line.

This means that 8% of the British population is mired in poverty due to transport costs alone. A further 8 million are already in poverty before accounting for transport, and see their poverty exacerbated as a result. The costs, however, are not evenly distributed, and tend to fall disproportionately on the poorest households.

In absolute terms, the North West has the most individuals in transport poverty (800,000), though a higher proportion of people in the North East (12.5%) and West Midlands (11.9%) are affected. London has the lowest transport poverty in the country, though even in the capital over 300,000 individuals are in transport poverty accounting for 3.5% of the population.

Cars are the most expensive mode of transport, costing the median British household over £5,740 per year in upfront costs, upkeep, fuel, and additional fees. The average cost of a car trip is over £6, compared to just £2.41 for a single bus ticket. And the further the distance required, the more a household pays.

A lack of public transport options forces households into paying high costs for motoring. For every 10% decrease in public transport speed relative to motoring in any area, the average household pays over £400 more for transport each year. This also tends to affect the most vulnerable populations who are particularly impacted by transport inaccessibility, including women, the elderly, and the disabled. As public transport lines are cut or rendered unreliable, more households will be forced to pay high motoring fees to reach their destinations.

Fuel duty freezes have done little to alleviate transport poverty

Fuel duty, an excise tax levied on petrol and diesel, has attracted disproportionate political attention despite making up a relatively small proportion of transport costs. Since 2011, the rate of fuel duty has been frozen and reduced under exaggerated claims of its benefits to motorists. The cumulative impact of those policies over the past dozen years is to have saved the median UK household just £13 per month, and a household in the lowest decile just £7.20. Although driving is expensive, less than 20% of that expense is caused by government taxes and charges.

In 2019, a typical UK household spent £460 per month on motoring, meaning fuel duty freezes have saved them less than 3% of their vehicles' running costs. As a result, these decreased poverty by just 0.3 percentage points.¹

However, even this modest decrease in poverty must be balanced against the opportunity cost of foregone duty revenue felt through cuts to benefits and public services. Since 2010 freezes and cuts to fuel duty have cost the exchequer over £100 billion, projected to rise to £180 billion by 2028.² Every pound spent on these policies has locked in revenue decreases and left less funding available for services and benefits without significantly decreasing transport poverty.

Recommendations

Adopt, refine, and report on our metric to track the geographic and demographic distribution of transport poverty and use its findings to target policy interventions

- The Department for Transport should begin tracking transport poverty, using the metric we have delivered.
- This metric should be complemented by implementing an acceptable rating or cost ceiling beyond which households are considered in need of support, with the long-term goal of eliminating transport poverty entirely.

Recognise that freezes to fuel duty have failed to decrease transport poverty, and allow the rate of fuel duty to rise or replace it with road pricing mechanisms

Recent fuel duty measures have reflected misplaced priorities when it comes to decreasing transport poverty and have cost over £100 billion, which can be better spent to support those in need through interventions supporting public transport and electric vehicles.

- Policymakers should allow fuel duty rates to rise or replace fuel duty with road pricing to provide a stable source of funding.
- Funding should be redirected to public transport, which is a more efficient way of supporting those in transport poverty.

Develop a credible public transport plan to be implemented in such a way as to mitigate existing transport poverty by enabling a shift in transport modes for travellers

Public transport is cheaper and more environmentally efficient than private transport but is currently not available or not sufficiently reliable for use for the majority of the British public outside of London. This costs households dearly: for every 10% increase in the speed of transport relative to motoring, the median household saves over £400. Planning should therefore use transport poverty metrics to direct funding to where it will be most effective at decreasing poverty.

- In the short term, policymakers should focus on rebuilding bus networks cut over the past 10 years to allow modal shift for shorter journeys.
- In the long term, policymakers should invest in the UK's passenger rail system to encourage modal shift to rail for longer journeys.
- This will require new funding and devolving decision making over transport to the local level. Funding should be allotted based on its projected ability to decrease transport poverty.

Introduce policies to increase access for electric vehicles

Due to their cheaper running costs, electric vehicles (EVs) have the potential to decrease transport poverty by as much as 850,000 (though some of these gains would be reversed by a switch from fuel duty to road pricing). However, the relatively high upfront costs are likely to impede access for those who could most benefit from the resultant savings.

- Dedicated policies towards the take up of electric vehicles should be targeted towards those income groups most impacted by transport poverty.
- These policies could involve decreasing upfront costs through a direct tax subsidy akin to consumer subsidies offered in the United States through the Inflation Reduction Act.
- Alternatively, policymakers may decrease upfront costs through a social leasing scheme similar to that now offered in France.

CHAPTER ONE – INTRODUCTION

Our travel has costs. Whether we are filling up on petrol, paying a monthly car lease, buying a rail ticket, or tapping onto a bus, the money we spend on transport reduces our disposable income. Those of us who spend so much of our income on transport as to be pushed into poverty as a consequence are considered in transport poverty.

The link between mobility and poverty was made overt in 2003 after the government commissioned the Social Exclusion Unit to write a report on the issue of transport and social exclusion. The report, “Making the connections,” showed how unequal mobility affects access to jobs and services.³ At the time, the authors explained how:

“Problems with transport provision and the location of services can reinforce social exclusion. They prevent people from accessing key local services or activities, such as jobs, learning, healthcare, food shopping or leisure. Problems can vary by type of area (for example urban or rural) and for different groups of people, such as disabled people, older people or families with children.”

The report went on to blame poor administration and management for this historic failure. “Historically, nobody has been responsible for ensuring that people can get to key services and employment sites.” At the time, councils were under no obligation to undertake accessibility planning, and so paid insufficient attention to the issue.

This changed in 2004, when local authorities were obligated as part of their local transit plans to assess accessibility to key services with particular attention to those with low mobility and without cars. Authorities were then required to produce a plan to fill existing gaps, especially through public transport being made widely available and reliable. However, funding for these plans was not guaranteed, and their poor implementation has left many mired in transport poverty, with no single level or branch of government focused on its alleviation.

The idea of measuring poverty which results from transport costs is analogous to measuring poverty that results from domestic fuel consumption. When the Fuel Poverty Review by John Hills was published by the Department of Energy and Climate Change it encouraged government to invest in a metric to measure and track domestic fuel poverty. This has since been used to set benchmarks for local authorities and government to decrease energy consumption, and has been used to promote the benefits of interventions like the 2022 Energy Price Guarantee which saved the median household almost £2,000 pounds and likely kept many out of poverty. As Hills described,

“Improving measurement can focus attention on the core problem of being faced with getting by on a low income while being locked-in to unreasonable costs, including those where people, because they are on low incomes, end up paying the highest prices.”

Despite the high bill transport puts on household budgets, government has not yet introduced a metric to define and track transport poverty similar to how it tracks fuel poverty. Improving these measurements can help policymakers plan investments and refocuses attention on core problems. Further, as the largest single source of greenhouse gas emissions representing 31% of the UK's total output, understanding transport poverty will be key to developing a just transition.⁴

The transport poverty metric outlined in this report is designed to do just that – measure the core problem of transport poverty in order to motivate and evaluate responses. It was designed following a series of roundtables with academics, civil society organisations, researchers, and politicians who were involved in the transport poverty space.

It should be acknowledged that transport is expensive and is likely to remain disproportionately so for those in rural and sparse areas. However, there are ways these costs can be mitigated. This will require investments in alternative modes of transport, which can enable cost-savings for households and decarbonisation through a shift to buses, rail, and electric vehicles. Such investments will not be cheap, but given the hundreds of billions of pounds British households are spending annually on transport, they should be considered a prudent cost-cutting measure whose benefits can be analysed by a transport poverty metric.

CHAPTER TWO – METHODS

Defining transport poverty

There are different, competing definitions of transport poverty which measure different things. These can be divided into accessibility, mobility, and affordability measures.

- **Accessibility poverty** occurs when certain households are unable to access key services. For example, a bus may be unavailable in a person's neighbourhood or fail to provide reliable service to their destination.
 - Accessibility poverty metrics often use a 'gravity model' showing the distance a person can reach from their household, such as the one designed by Benevenuto and Caulfield in 2020.⁵
- **Mobility poverty**, on the other hand, results from a lack of transport options, and is less common in the literature. Tao et al. (2020) use mobility poverty to analyse the choices individuals make when choosing a vehicle and note the constraints on these choices in certain areas, as some may be forced to choose cars if a bus is unavailable.⁶
- **Affordability poverty** metrics track whether a population can afford the services available and how much transport to key services might cost. A person would be in affordability poverty if transport to their destination was available and reliable but cost too much to be considered affordable.

To accommodate the multiple dimensions of transport poverty, some use composite metrics which may include multiple variables. Some, such as Sustrans (2012), generate combined indicators which add individual indicators together to create a single number representing the risk of transport poverty. Others, such as Lucas (2016), use conditional indicators which consider a person or area in transport poverty if one of a set of conditions are met. Examples are listed below.

Table 1: Examples of composite transport poverty metrics

Author (year)	Publication	Combined or conditional	Transport poverty exists if:
Sustrans (2012) ⁷	“Locked out: transport poverty in England”	Combined	<ul style="list-style-type: none"> • The area has low income • The area has a significant proportion of the population living more than 1 mile from nearest public transport • The area is more than one hour away from essential services without a car/van
Lucas (2016) ⁸	“Transport poverty and its adverse social consequences”	Conditional	<ul style="list-style-type: none"> • Individuals lack physical infrastructure responsive to their needs • Individuals have a poor quality of life resulting from transport inaccessibility • Individuals have residual income below the poverty line after accounting for transport costs • Individuals need to invest excessive time in daily journeys • Individuals need to travel regularly in unsafe conditions
Lowans et al. (2021) ⁹	“What Is the State of the Art in Energy and Transport Poverty Metrics?”	Conditional	<ul style="list-style-type: none"> • Transport is inaccessible • Transport is unaffordable • Transport is unavailable
European Parliament (2022) ¹⁰	“At a glance: understanding transport poverty”	Conditional	<ul style="list-style-type: none"> • Individuals lack adequate transport necessary to access basic services • Individuals are unable to pay for transport to these services

Why we have avoided a composite metrics

We have avoided using a composite metric for two reasons. The first is practical: they often require data which is unavailable or unreliable, at least in the UK. For instance, National Travel Survey (NTS) data in England does not track the cost of each journey, which complicates analyses that try to combine affordability and accessibility indicators. This often means researchers must simplify their variables in order to combine them into a single indicator. For instance, Sustrans' (2012) report used a composite metric which included affordability and accessibility indicators. However, the report measured affordability as "areas of low income" and accessibility as "areas where a significant proportion of residents live further than a mile from the nearest or railway station." This affordability metric fails to account for the local costs of travel, while the accessibility metric fails to account for the reliability and frequency of buses/rail or the walkability of the route to the station. This is not to say that such metrics are invalid, but they often require significant simplifications that limit their validity.

Secondly, accessibility and mobility indicators demand researchers define what qualifies as 'adequate' transport, which can be subject to arbitrary or paternalistic judgements. For example, researchers must decide how close a bus stop should be to be considered "accessible", usually decided as the distance in miles from someone's home or the time it takes to reach the stop by walking. Acceptable thresholds range from thirteen minutes (as measured in the NTS until 2013) to twenty minutes (as suggested by the Chartered Institution of Highways and Transportation) or as a measure of meters from someone's home.¹¹ Beyond the arbitrary nature of these thresholds, setting a universally acceptable rate is limiting given the role our identity plays in our travel behaviour. Women are less likely to feel comfortable walking long distance due to safety concerns, and are also impacted by external factors such as the lighting on the route at night. The elderly and disabled require shorter walkable routes than the rest of the population. Travel data is particularly sparse when trying to account for disability and health. Here again, composite metrics must simplify complex variables in order to include them all in a single indicator.

Throughout roundtables with civil society and government personnel, the need for simplicity was reemphasised in order to encourage uptake in government policy and move the public conversation forward. As such we followed the model of fuel poverty metrics. While the metric itself can be complex with multiple variables, as the Energy Performance Certificate rating system is, the concept behind it should be intuitive and explainable to encourage public conversation.

Our definition

The goal of this transport poverty metric is:

- To measure the geographical breadth of transport poverty.
- To measure the depth of poverty in which transport poverty places households.
- To reflect the expenditure of households on different transport options by mode, including public transport.
- To be as intuitive as possible to allow for public understanding while maintaining usefulness and validity.

To do so we decided to avoid amalgamating multiple complex variables by instead focusing our attention on a single one: affordability. This report and its associated metric define transport poverty as affecting those households whose income is pulled below the poverty line due to transport costs. The focus on affordability allowed more precise data measurements with easily applicable findings. As such this definition avoids mobility and accessibility indicators, though its findings have implications for accessibility and mobility analysis.

Data

Datasets

This project was designed to measure and track transport poverty across the United Kingdom. To ensure that our transport poverty metric can be easily implemented, we used pre-existing administrative data with which the government already has access and is familiar. However, such analysis is made trickier by the fact that each devolved nation has its own separate transport datasets.

In England, the National Travel Survey (NTS) gathers data from households to understand their transport usage, attitudes, and preferences. In 2019, 6,894 households participated.¹² It contains a travel diary, in which a household representative records details of each individual trip they have taken in the past week. While Scotland lacks its own distinct travel survey, a travel diary similar to the one used in England is distributed through the Scottish Household Survey and was used in analyses related to Scotland. Wales, however, ended its affiliation with the National Travel Survey in 2013 and while a Welsh iteration is now planned, data is not yet available for analysis. As such, data on Wales is up to date regarding expenditure; however, transport behaviour relies on a dataset gathered six years prior to Scottish and English comparisons. As travel behaviour, such as modal choice and journey times, did not change significantly during this period, the data serves as a good representation of current travel patterns. However, any conclusions on Wales should be made with caution. Northern Ireland was excluded from analysis due to a lack of data on travel behaviour.

These travel surveys do not, however, collect data on the cost of transport. The Living Costs and Food Survey (LCFS) was therefore used for all data related to spending. This survey asks households across the UK on their annual spending and asks residents to complete an expenditure diary for two weeks. Characteristics like income, wealth, and household makeup are also recorded.¹³ As the LCFS covers the entirety of Great Britain, we can use a single source for England, Scotland and Wales.

Table 2: Data sources and applications

Data	England	Wales	Scotland
Transport behaviour	National Travel Survey (NTS)	National Travel Survey (NTS)	Scottish Household Survey (SHS)
Transport expenditure	Living Costs and Food Survey (LCFS)	Living Costs and Food Survey (LCFS)	Living Costs and Food Survey (LCFS)

Source: NTS, LCFS, SHS, SMF analysis

Measuring at the household or individual level

There is a debate in the literature on whether transport poverty should be measured at the household or individual level. Our metric tracks poverty at the household level. This was partly a matter of data availability, as the LCFS measures expenditure by household. Further, an individual's income and transport behaviour are often decided at the household level. For instance, a parent driving their children to school might be unemployed but might also safely rely on a high-earning partner for their income. A measurement based on individuals would mistake this parent as being in transport poverty due to their low individual income despite their wealthy partner. Measuring by the household allows us to include for such a situation.

Analysis

Modelling costs

Our metric models cost by finding the average expenditure on transport for each household based on three variables: its region, its income decile, and its rural-urban classification. For instance, our metric shows how much the average household in Wales spends if it is in the lowest decile and in a rural area. To understand how these costs break down by vehicle, we found separate averages for motoring, busing, and rail, and added them together to find a household's total transport expenditure.

Motoring Expenditure

Motoring expenses were split into two categories based on their LCFS classifications: operational and fixed costs. These are outlined below:

Table 3: Breakdown of motoring expenses

Operational Costs	Fixed Costs
Car/van accessories	Cost of new car/van outright
Car/van spare parts	Cost of second hand car/van outright
Motorcycle accessories	Cost of motorcycle outright
Petrol (including fuel duty)	Loan / HP purchase of new car/van
Diesel oil (including fuel duty)	Loan / HP purchase of second hand car/van
Other motor oils (including fuel duty)	Loan / HP purchase of motorcycle
Car / van servicing	Motoring fines
Car / van other work	Net vehicle road tax (payments – refund last year)
Motorcycle servicing	
Motor organisation fees	
Garage rent	
Parking fees	
Driving lessons	
Cleaning materials	
Hires	
Car leasing	
Insurance	

Source: Office for National Statistics and SMF analysis.

Fixed costs were estimated based on the average expenditure in each region, income decile, and rural-urban classification using the LCFS. For instance, we found the average expenditure on fixed costs for motoring for households in the North East which are in the third decile and in an urban area.

This is valid for fixed costs. However, operational costs increase with greater mileage. For instance, a motorist who drives further distances in a year will spend more on petrol and servicing than one who needs to drive less. As such, we needed to find a household's mileage and then multiply it by the operational costs per mile.

We determined cost per mile by dividing the annual average motoring expenditure, available in the LCFS, with the annual average mileage, available in the NTS or SHS. Directly multiplying total expenditure with mileage would double count fixed costs, so it was multiplied by the ratio of operational to fixed costs. This isolated the average operational cost per mile, showing an additional £0.577 was required on average for every mile driven. It should be noted this is a simplifying assumption – in practice, it is cheaper to make longer journeys which require less fuel per mile.

We then found the average annual mileage for households in each region, income decile, and rural-urban classification. This provided, for example, the average annual mileage for a household in the highest income bracket in an urban area of London. We then multiplied this mileage by the average cost per mile to find a household's operational motoring costs. This was summed with fixed costs to find the total motoring cost for a household in each category.

Bus and coach expenditure

Bus and coach expenditure was estimated by multiplying a household's average number of bus trips with the average fee for a local bus in each area. The average number of annual bus trips were found for households in each region, income decile, and rural urban classification. Regarding cost, the government does not currently collect data listing the local cost of bus or coach fares. As such, fare data was taken from the TAS partnership National Fares Survey, which shows the average rural and urban bus fare for a single adult ticket in each region including Scotland and Wales.¹⁴

This allowed us to multiply two variables to accurately reflect local realities. For instance, the average number of annual bus trips were found for a household in the North West in the fifth income decile in a rural area, and we multiplied this amount by the average adult single fare for a rural North Western bus. It is possible this undercounts bus expenditure, as individuals may purchase single tickets or benefit from concessionary fares, such as for children or seniors in the household.

Rail expenditure

Rail fares vary drastically depending on a multitude of factors such as time, area, and demand, which means we could not mimic the same method used to measure bus and coach expenditure. As such, we used the LCFS to calculate average annual expenditure in a given region, income decile, and rural-urban classification. For instance, the average annual rail expenditure was found for a rural West Midlands household in the second income decile.

Modelling income and applying costs

In our discussions with policymakers, researchers, and other stakeholders, the importance of finding data on a local level was emphasised as a key priority to reflect the distinct experiences of different areas. As a result, we have applied modelled costs to the lower layer super output area (LSOA) level in England and Wales which contain on average 1500 people or 650 households (with the equivalent in Scotland known as Data Zones). Each LSOA was assigned its respective region and rural-urban classification.

To apply the appropriate expenses based on income deciles, we modelled income distribution in each LSOA. However, this data is not currently published, so we had to estimate it ourselves. What we do have is the distribution of individual earnings (from Nomis) and the median household income (from the ONS) in each local authority. We combined these by calculating the ratio of median individual earnings to the average individual earnings in each decile, then multiplying median household income by that ratio in each decile. For instance, if an individual in the lowest decile in Bristol made 40% of the median wage in Bristol, the household income for the lowest decile was calculated as 40% of the median household income.

Before subtracting modelled costs from income, we observed how many deciles in each LSOA were below the poverty line. The poverty line was calculated based on those on relative low income, set at 60% of the median income according to the House of Commons library.¹⁵ We used ONS data to find the median household income in 2019 was £29,600, and multiplied this by 0.6 to determine the household poverty line at £17,760.¹⁶ The number of deciles with incomes below this poverty line were multiplied by one-tenth the LSOA/Data Zone population to show the number of individuals in poverty. For instance, if an LSOA's population was 1750 in 2019, and three deciles were observed to be in poverty, the number of households would be calculated as 1750 multiplied by 0.3 equating to 525. This shows 525 individuals in poverty before account for transport.

A separate calculation was then run which included the modelled transport costs in each LSOA. This was done by taking the modelled income for each decile in each LSOA, and subtracting the modelled costs of motoring, bussing, and rail. The number of people below the poverty line now included those who are poor as a result of transport costs.

The difference between the number in poverty before accounting for transport costs and after accounting for transport costs represents the total population in poverty as a direct result of transport expenditure.

Potential insights

The result allows us to better target interventions and to measure how potential policies meant to tackle the issue of transport poverty could affect households. By measuring transport poverty at the local level, we can observe the locations where households are most likely to experience transport poverty based on their current expenditure and income. Further, by measuring transport poverty based on costs and affordability indicators, we can observe how deep each household is likely to be in poverty and how much they stand to gain should transport poverty be better addressed.

This further allows us to model potential policies and to better understand how existing policies affect poverty on the ground. In the next chapter, the effects of fuel duty freezes and their potential to impact transport poverty are reassessed. The metric also allows for the analysis of public transport and its relationship with transport poverty. Finally, the effect of the transition to electric vehicles on transport poverty can be measured, as well as its effect on motoring costs.

The effects of these interventions are measured in the next chapter. However, alternative policies can also be analysed, such as targeted welfare assistance or the effect of new technologies.

Limitations

Using actual expenditure instead of ideal behaviour

Our measurement of transport usage is based on actual expenditure. An alternative method is to predict individual behaviour through modelling, as was suggested by Najmi et al. (2023).¹⁷ This would identify personal factors such as whether they feel more at ease when motoring and combine these with societal factors such as their income and location. This could potentially be used to model transport expenditure by socioeconomic group and what would be required to lower costs for each group.

This method would avoid certain risks that result from basing our analysis on actual expenditure. Estimating transport poverty using actual expenditure risks overestimating spending by including those households who drive recreationally or who prefer motoring regardless of the extra costs. On the other hand, it might undercount those who would be healthier or happier if they were to travel but, due to the high costs of transport, choose to stay home, known as suppressed travel demand.

Modelling, however, also comes with biases. How households travel can be highly personalised and difficult to predict. Further, personal choices may not be reflective of one's wider region or identity and might change over time, making extrapolations difficult. These factors led academics at transport poverty roundtables to favour using actual expenditure data which would be better able to represent current transport poverty.

Excluding other modes of transport

Cycling and other modes of active transport were excluded from this analysis due to data availability limiting information on three key factors.

- The first is demographic, as it is difficult to know in each local area how many individuals are capable of active travel and how many may be incapacitated due to age or disability.
- The second is geographic, as some topographies will lend themselves more easily to active travel and therefore better incentivise modal shift.
- The third relates to costs. Without knowing the demographic or geographic inputs related to active travel, it is difficult to know who might be capable of modal shift, which households would benefit from such a shift, and how much money they would save.

Thus, even though active travel is a positive way to reduce costs for and improve local health, its inclusion in this report was not possible.

Community transport schemes, which provide transport services to the elderly and those in need, often fill gaps in transport services and help to mitigate transport poverty. However, data is currently sparse on where these operate and their reliability. Therefore, while it is probable that such schemes decrease transport poverty where they operate, applying them in this analysis was beyond the scope, and they have been excluded.

Applying a universal poverty line

In the UK, a household is considered to be in poverty when it receives 60% of the median household income, or £17,760 in 2019. A household would be considered to be in poverty if their income fell below this, and considered in transport poverty if their income had not been below this before accounting for transport costs.

This approach has two limitations. The first is that a household's poverty line is generally considered with reference to household size, with larger households requiring higher income. However, the travel surveys we use do not contain data on household composition, meaning we are not able to 'equivalise' (i.e. account for household size).

The second issue with using a flat poverty line is that it does not allow for geographical variations in living costs – a problem particularly apparent in London, where housing costs are highest. This likely leads us to underestimate transport poverty in inner London, where costs are greater. As such, we have used two models, one with a flat poverty line across regions and one with a higher poverty line in the capital set at 60% of London's median income.

CHAPTER THREE – FINDINGS

Our approach to measuring transport poverty involves first estimating overall poverty in the UK. Using the standard benchmark of classifying households living on less than 60% of median income as being in poverty, we find that 14 million individuals live below the poverty line before housing costs, or 22% of the population in England, Scotland and Wales. These findings are largely in line with other estimates, such as the Joseph Rowntree Foundation, which found 13.4 million people in poverty (20%) across the UK.

To go from this number to transport poverty, we calculated the number of households that would move out of poverty if their transport costs were eliminated, using our modelled estimates of their transport costs.

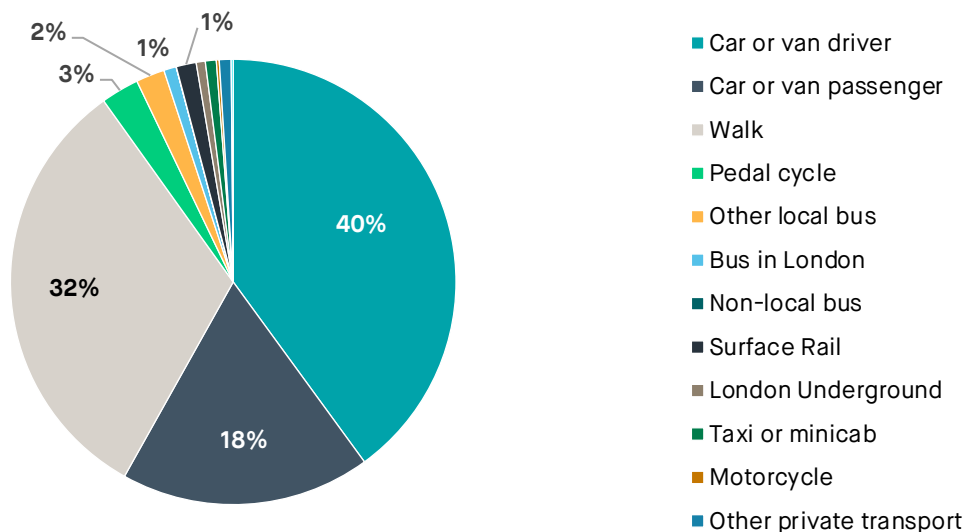
Overall transport poverty findings

Of the total in poverty, our metric indicates that 5 million people are caught in transport poverty, or 8% of the population. These are individuals who live in households where overall transport costs are greater than the gap between the household’s income and the poverty line. Put another way, these are individuals who would likely not be in poverty were it not for the costs of transport. For those already below the poverty line, their poverty is ‘deepened’ – their living standards are worsened – by transport costs.

The median British household in each LSOA spends, on average, £5,944 on transport each year, including motoring, bus and rail. 97% (£5,740) of this expenditure is on motoring costs, with just £87 on buses, and £121 on rail.

The outsize cost of motoring can be attributed to two factors. The first is the higher use of driving. Motoring constituted the main mode of 58% of all trips in the UK in 2022, compared to just 4% by bus or coach, 2% by rail, and 2% by bicycle. The remaining 34% was done by walking (31%) and other modes (3%). Measurements by distance are even more stark, with motoring making up 78% of travelled kilometres in 2022.

Figure 1: Trips by mode in 2019-2020 (England)



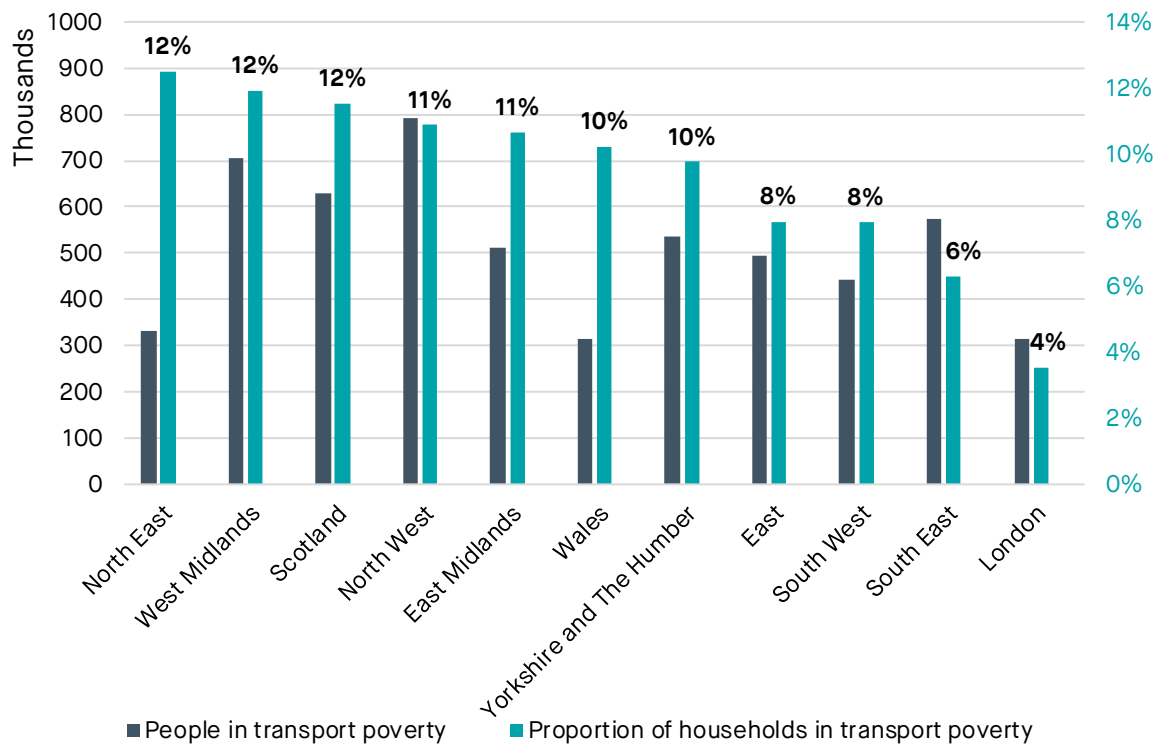
Source: NTS and SMF Analysis¹⁸

This is compounded by the fact that driving is more expensive than other modes. The average car journey costs £6.20, compared to just £2.41 for the average single bus fare. Further, unlike bus fares, which are usually flat, driving for longer costs more in fuel. While the per mile costs of driving a long journey are cheaper than a short journey due to fuel efficiency, those in areas which must consistently drive longer distances tend to spend more annually. For rural villages whose inhabitants have to travel longer distances and where public transport is less available, the share of car trips increases to 72%, and average transport costs rise to £9,200. Here, motoring costs constitute 96% of overall transport expenditure, with the remainder split between busing (1.9%) and rail (1.7%).

Some might be tempted to see the relative cost of driving as the consequence of the supposed ‘war on motorists’. This is a mistake. Fuel duty and other taxes play a relatively minor role in the expense of running a car. Fuel duty represents just 17% of a typically motorist’s weekly costs, which are driven more by material or market costs that are outside of the government’s control. These include a car’s upfront costs (34%), operational costs like servicing and repairs (14%) and insurance (13%). Overall, the proportion of a motorist’s expenditure going to the public purse constitutes less than 20% of their costs. This is covered in more detail below.

Regionally, the North West has the most individuals in transport poverty with 792,000, followed by the West Midlands with 704,000 and Scotland with 630,000. However, this is partly due to overall population levels. When measured on a per capita basis, other regions are worst affected, led by the North East where 12.5% are in transport poverty, which is then followed by West Midlands with 11.9% and Scotland with 11.5%.

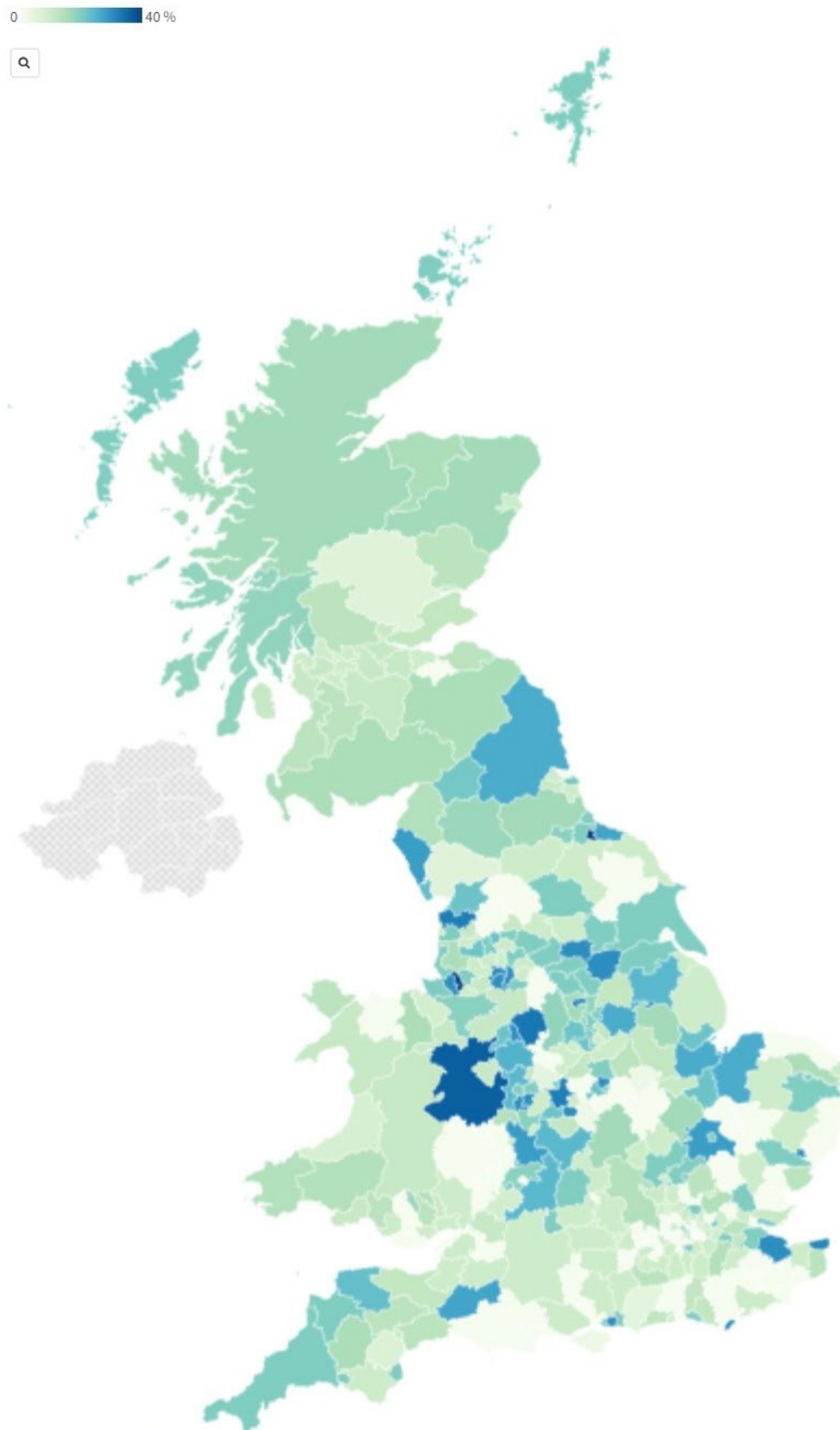
Figure 2: Transport poverty by region (2019)



Source : NTS, SHS, LCFS, SMF Analysis¹⁹

However, these high-level numbers mask significant differences within regions. Rural households are more likely to experience transport poverty than those in urban areas, with 12.3% affected. Such discrepancy is also not the result of incomes, as households in urban areas pay lower total costs than those in rural areas. However, families living in urban areas on the periphery of major cities are almost as likely to face transport poverty, with a rate of 11%. Examples can be seen on the outskirts of London where transport poverty is high, for example in Enfield (20%) and Havering (10%), compared to low rates within the central city. A similar phenomenon can be seen even where the urban area has high transport poverty to begin with, such as in Knowsley (40%) near Liverpool (30%), or in South Cambridgeshire (28%) near Cambridge (20%). These rates imply that even for those cities suffering from transport poverty, urban households can save costs by walking, cycling, or using public transport, while those outside the city are forced into expensive car use. While these rates are also affected by lower incomes outside central cities, an analysis of total costs shows wide discrepancies as well.

Figure 3: Projected transport poverty by local authority (2019)



Source: Office for National Statistics (Boundaries), Simple maps (Points)

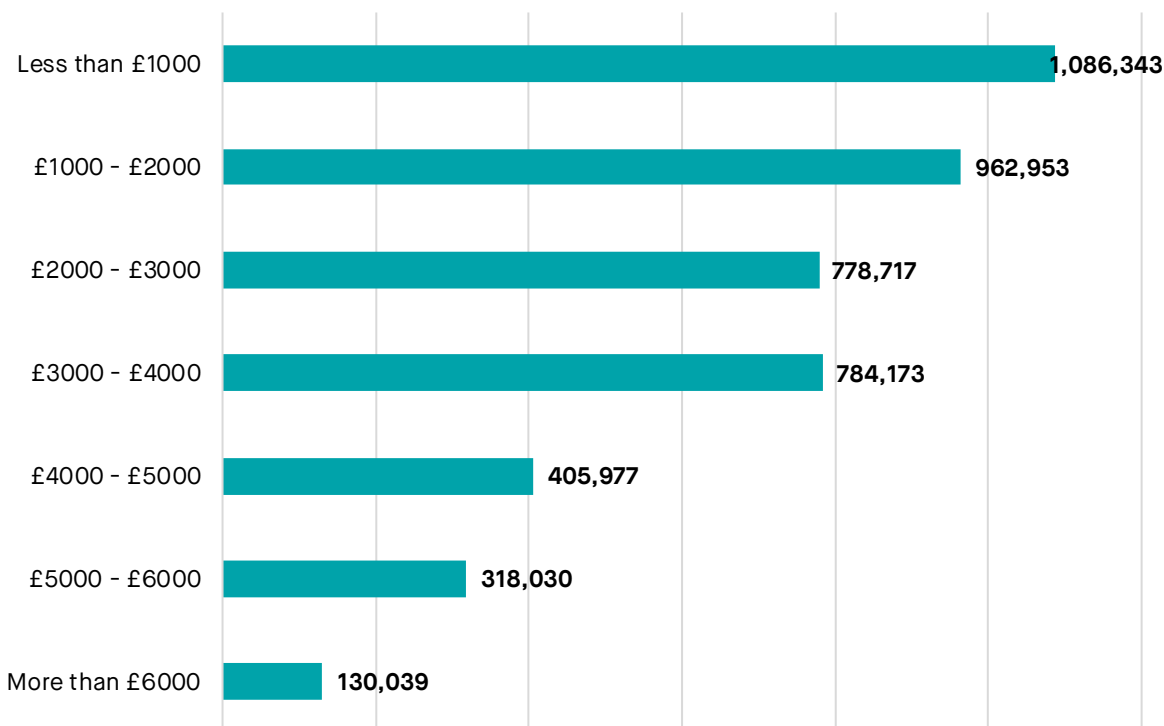
Source : NTS, SHS, LCFS, SMF Analysis²⁰

Table 4: 10 local authorities with highest rates of transport poverty

Local Authority	Proportion of Households in Transport Poverty
Middlesbrough	40%
Knowsley	40%
Shropshire	36%
Staffordshire Moorlands	33%
Wyre	32%
North Warwickshire	32%
Thanet	31%
Leicester	30%
Stoke-on-Trent	30%
Portsmouth	30%

Source: NTS, SHS, LCFS, SMF analysis

Of those households suffering from transport poverty, a quarter (24%) are less than £1,000 from the poverty line. A further 22% are between £1,000 and £2,000 from the poverty line. Less than 1% of households are over £5,000 in transport poverty.

Figure 4: Number of individuals in transport poverty by their distance from the poverty line (England, banded)

Source: NTS, SHS, LCFS, SMF analysis

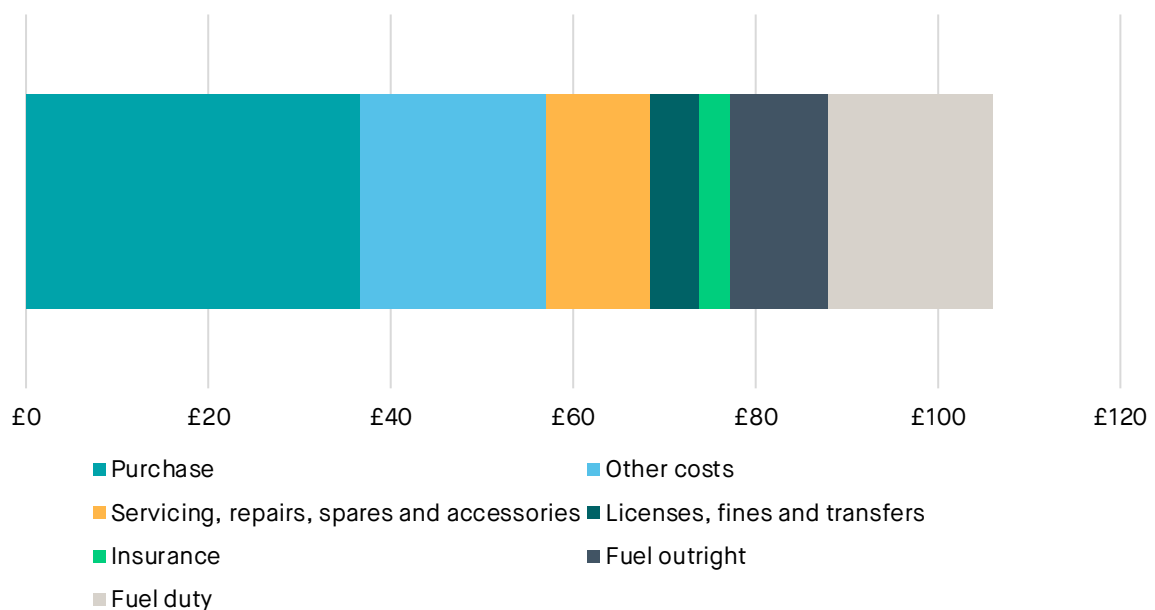
Freezes and cuts to fuel duty have failed to mitigate transport poverty

Freezes and cuts to fuel duty have attracted attention in media and political discourse as a solution to transport poverty. Fuel duty, also known as the duty on hydrocarbon oils, is an excise tax on petrol, diesel and other motor fuels, which was intended to decrease driving by slowly increasing the cost of fuel. It had been designed to grow annually by 1p plus the rate of inflation, however this was frozen in 2011 and reduced in 2021 in the name of cutting costs for motorists.²¹ Under the plans laid out by the previous Labour government, by 2024, fuel duty was projected to have risen to 80.67p per litre. In reality, it now stands at 62.67p per litre.²²

However, given its relatively small share of a motorist's budget, freezing fuel duty has only had a modest impact on transport poverty. A decade plus of fuel duty freezes save the median UK household just £13 per month, less than 3% of the vehicle's running costs. Those on the lowest deciles, who are less likely to drive, save just £7.20 each month. The cumulative impact of these policies has been to decrease poverty by just 0.3 percentage points in the year ending March 2020. To reiterate, that is because taxes only account for a small proportion of motoring costs.

In the year ending March 2020, the average household spent £106 on motoring per week, of which fuel duty made up £18.10, or 17%. Another £5.30 was spent on licenses, fines, and transfers, pushing the total attributable to government policy to 18%.²³ Most costs for motorists come from areas outside the government's direct control, including the purchase of new vehicles, maintenance, the global price of oil, and other factors.

Figure 5: Weekly average motoring expenditure (UK)



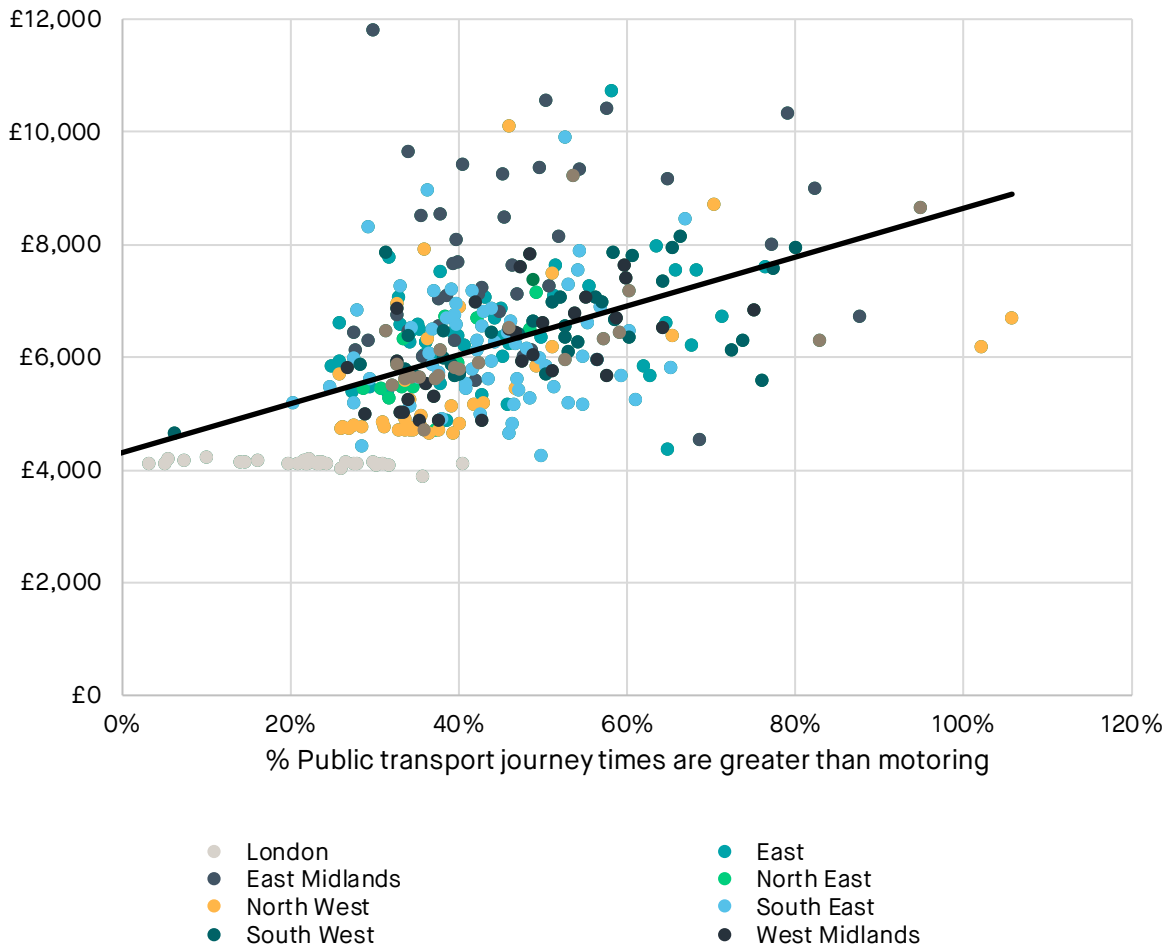
Source: LCFS and SMF Analysis

Moreover, the positive impact that fuel duty cuts have achieved on transport poverty needs to be set against the opportunity cost of lost tax revenue. If the government had held on to the money it would have received from fuel duty under the plans it inherited and spent it on benefits and public services in line with its usual spending pattern, the poorest 40% would be better off.²⁴ However, such social support programmes have been reduced or cut since 2011, under a government which has consistently claimed that funds for them are unavailable. At the same time as programmes have been withdrawn, fuel duty freezes and cuts have cost the government £100 billion in revenue, which will increase to £188 billion by 2028. Additionally, cutting fuel duty tends to increase motoring, further costing households and keeping many in poverty.

Public transport improvements have the potential to decrease transport poverty

Public transport plays a key role in lowering costs by providing households an alternative to motoring. Using data from the Department for Transport on journey times by mode, we can measure the relationship between public transport speeds and private expenditure on transport. Journey time data is measured annually within England and tracks the average distance in each LSOA to key services like schools and businesses.

The following analysis measures the average journey time to employment centres, schools, and food shops, and compares the differences in motoring and public transport. Outside of a few exceptions in central London, motoring is faster on average in every LSOA. The following chart looks at that average across local authorities in England, where journey time data is consistent. It shows the additional amount of time required to reach a destination by public transport as a percentage of the journey time by motoring. For instance, where public transport takes 10% longer than motoring, it is listed at 10%. The vertical axis shows the modelled expenditure.

Figure 6: Median household transport costs vs. relative speeds of public transport (England)

Source : NTS, LCFS, Department for Transport, SMF Analysis²⁵

Reviewing the chart, there is a clear correlation between the amount households spend on transport and the costs of transport. Those with fast public transport in London pay the least, while households with slower public transport pay the most, such as in the East Midlands and the North West. Our modelling suggests that for every 10% increase in public transport speeds relative to motoring, the average household saves more than £434 each year. If this average is extrapolated, every 10% increase in relative public transport speeds pulls 500,000 out of poverty, decreasing poverty in Britain by 0.8 percentage points.

Box 1: London has the lowest transport poverty across the UK

London provides an important case study, as the Greater London Authority enjoys the lowest transport poverty as measured in gross population or on a per capita level. 315,000 people are in transport poverty in London constituting about 3.5% of the population. This should not be ascribed to higher incomes in the capital. Even when the poverty line is raised to be 60% of London's median wage, rather than the UK version, transport poverty only rises to 414,000 or 4.7%, and remains the lowest in the country.

Why?

Londoners spend less on transport. The average London household pays £3,330 per year – less than half the UK average. This could be due to the relative density of the city, which creates more walkable communities. However, differences in walking are not so vast. In London, 33% of trips on foot compared to 26% across the rest of England. While this generates some cost savings for Londoners, it cannot fully account for the difference between those in the capital and those outside.

A better explanation for lower costs in London is that public transport is more accessible than in any other region. London's public transport journey times are 20% shorter than the national average before even accounting for other advantages including simplicity, frequency, reliability, or fares. The difference is even starker in inner London, while outer London sees higher costs as public transport is more meagre and motoring is more common. Inner London's advantage in public transport has fuelled a continued preference for buses and rail where other regions have seen a decline over the decades. Today in London, 28% of trips are made by public transport, more than three times the English average of 8%.

So?

While London's rapid public transport is non-viable in sparse settings, there are cities across the UK which are dense enough to have the potential for comparable transit with a comparable difference in journey times. There are 75 local authorities classified as including major urban conurbations, or large urban areas in Scotland. The list features large cities like Manchester and Edinburgh as well as smaller cities like Bolton and Dundee. If these cities provided transport that allowed behaviour and costs similar to London's, poverty in these cities would fall by 22 percentage points on average. Poverty across the UK would fall by over 1 million individuals or 7%. Such estimates only include the savings from these options, and do not include the external benefits to employment and productivity which would likely result.

It should be noted that these estimates are not definitive. People's behaviour and travel choices are intrinsically personal and where they live in the country would likely affect modal choice. Even if buses and rail were better provided, ridership would not be guaranteed. However, the estimates above provide an indication of how poverty can be decreased by making less expensive efficient public transport options available. These should be taken into consideration when discussing issues related to poverty and levelling up.

Electric vehicles can decrease transport poverty by lowering fuel and servicing costs

Electric vehicles (EVs) are substantially cheaper to operate than petrol and diesel vehicles. This is largely due to maintenance costs and fuel savings. We do not have any UK studies on the comprehensive cost of EV vs car ownership, but evidence from the US gives us an indicative view of the potential savings. According to a 2020 study, EVs generally cost half as much to maintain and service as petrol and diesel vehicles.²⁶ This is due to the simpler machinery and the lack of operating requirements such as oil. Looking purely at energy costs, Octopus EV estimates that the cost of fuel for an electric car is 11p per mile, compared to 19p for petrol or diesel vehicles, saving 42%.²⁷ A separate study on American prices found fuelling an electric car over a year cost \$485 compared to \$1,117 for petrol or diesel vehicles, saving the motorist 67% on costs.²⁸ This aligns with a British Gas report which found fuelling an electric car at home typically costs £15.10 for a 200-mile range, while a full tank of petrol on average costs £104.²⁹ The latter provides for double the range with up to 400 miles, making the estimated savings from electric car fuelling worth 71%.

Both fuel and energy costs are subject to the volatility of international oil and energy prices. The conflicting and imprecise estimates on savings generated from EV operation make it difficult to estimate with confidence potential household savings generated a pivot to electric vehicles, as estimates range from 40% to 70%. As such, four estimates were generated tracking how many people were lifted out of poverty assuming a decrease in servicing costs worth 50% and a decrease in fuel costs worth 40%, 50%, 60%, and 70% respectively, while keeping upfront costs steady.

Table 5: Estimated fuel and servicing savings from EV uptake

Servicing Savings	50%			
	Fuel savings	40%	50%	60%
Average annual savings in urban areas	£616.88	£725.76	£834.65	£943.54
Average annual savings in rural areas	£867.75	£1,011.05	£1,154.34	£1,297.64
Individuals pulled out of transport poverty	609,000	696,000	807,000	856,000
Reduction in poverty	4.3%	4.9%	5.6%	6.0%

Source : NTS, SHS, LCFS, SMF Analysis³⁰

The results show a decrease in transport poverty listed below. At the lowest estimate, 600,000 households are pulled out of transport poverty, decreasing overall poverty by 4.3%. At the highest estimate, this rises to 856,000 pulled out of poverty, decreasing poverty by 6%. When measuring on a per capita basis, gains are highest in the West Midlands, where poverty would be reduced by 12% or 190,000 given a 70% discount on fuel. This is followed by the North East and Wales, which would each see a 9% decrease in poverty. Rural areas tend to benefit the most from cheaper costs due to the greater role of distance in their motoring expenditure, saving almost £1,300 per year on fuel assuming a 70% reduction in costs.

It should be acknowledged that these savings are partly a result of existing tax breaks for electric vehicles. As EVs do not pay for petrol or diesel, they are exempt from fuel duty charges which generate £17 per week in savings. As EVs grow more popular on our road network, the government will be under more pressure to tax them in order to pay for the infrastructure they use, including through a road pricing policy as suggested by the SMF.³¹ While EVs would remain a cheaper alternative than petrol and diesel vehicles even after road pricing is introduced, the difference between the two options would become less drastic, and so the poverty reduction impact would be smaller.

Nevertheless, the benefits of EV uptake vastly outweigh the benefits resulting from current freezes to fuel duty, and the potential savings have helped many households already transition to electric vehicles. In October 2022, EVs comprised 21.4% of new car sales and reached the milestone of having 1 million models on the road when including plug-in hybrids.³² However, there is a large obstacle, which continues to obstruct poorer households from accessing the savings EVs can generate.

While EVs are cheaper to operate, they have higher up-front costs relative to petrol and diesel vehicles. This depends on the model, but the National Resources Defense Council estimates the average sticker price of a new electric car to be approximately US \$10,000 (£8,000) more expensive than the industry average.³³ British Gas uses the Vauxhall Mokka as an example, noting that where the petrol line costs £24,640, its electric equivalent costs £31,945.³⁴

Over the vehicle's lifetime these costs are regained by the consumer in fuel and maintenance savings. The consumer reports study compared nine electric vehicles to comparable petrol vehicles and found a difference between \$6,000 and \$10,000 in savings across a vehicle's lifetime, saving on average 60% of total costs. Yet high upfront costs mean those who could most benefit from these savings are unable to reach them, requiring an intervention if poverty is to be reduced.

CHAPTER FOUR – RECOMMENDATIONS

Government must invest in a metric to measure transport expenditure and affordability to understand British poverty

Transport constitutes the largest single expense for rural households and the second largest for urban ones, yet successive governments have thus far failed to understand the distribution and trends of this expenditure. Understanding these issues at the core of poverty can help policymakers and legislators plan investments and target support, as the Fuel Poverty Review by John Hills did regarding domestic fuel poverty.³⁵

The new metric should be capable of:

- Analysing the geographical breadth of transport poverty.
- Analysing the depth of transport poverty, as measured by households' distance from the poverty line.

To understand its impact on household incomes, we advise focusing on affordability issues in transport poverty. Geographic units should be as small as possible, ideally targeted to the LSOA level or its equivalent in Scotland and Northern Ireland.

The metric outlined in this report allows for the immediate implementation of exactly that through the analysis of data that is already available. It shows the geographical distribution of transport poverty and the different modes responsible in each LSOA.

Given the impact of transport availability on a household's budget, we advise the metric should be maintained by the Department for Transport (DfT). Given its proximity to data such as the National Travel Survey (NTS) and Journey Time statistics, the DfT is well placed to understand the costs of transport and its effects on household travel behaviour. Responsibility would also encourage it to include costs in the NTS which could greatly improve transport poverty analysis. It would further allow for realistic benchmarks to be set to decrease transport poverty and encourage the department to examine policies likely to realize this goal. DfT administration would allow for benefits across transport planning and policy in a similar way that responsibility for fuel poverty data now affects planning and policy at the Department for Energy Security and Net Zero.

This metric should be used to inform policymaking, as a resource to model how new interventions are likely to affect transport poverty. At the central government level, policymakers should use such a metric to analyse the impact of potential funding allocations such as those spent on rail lines or bus networks. At the local level, policymakers could better understand the impact of local travel options on poverty, such as when recommending the benefits of new bus routes or the impact of low traffic neighbourhoods. Benchmarks should be introduced by both local and central governments to decrease transport poverty and a reasonable timeline should be established to do so. Such reforms would help improve the efficiency of British transport and target supportive policies to those who need them most.

Recognise that freezes and cuts to fuel duty have failed to decrease transport poverty, and allow the rate of fuel duty to rise or replace it with road pricing mechanisms

The belief that fuel duty is an effective way to decrease poverty has wasted over £100 billion in public money, which is set to rise to £180 billion by 2028. It has further restricted and distracted debate on transport poverty.

Policymakers should acknowledge that any cuts to motoring taxation can do little to decrease overall motoring expenditure. This is due to the relatively minor role government-imposed taxes and charges play in determining motoring costs. For this reason, freezes and cuts to fuel duty since 2010 have saved the median UK household just 13% of a vehicle's running costs and decreased poverty by just 0.3 percentage points, before accounting for the enormous opportunity cost in terms of lower benefits and public service funding.

Policymakers should therefore look for ways to tax motorists in more equitable ways. Fuel duty rates should be allowed to rise over the short term as scheduled by the Office for Budget Responsibility, which will greatly enhance government revenue and its ability to fund ventures to more actively decrease transport costs.

However, by 2028 electric vehicles are scheduled to account for over half of British car sales, rising to 100% by 2035.³⁶ The decline in use of petrol and diesel represents a £30 billion annual decrease in tax receipts, despite the fact that EVs will continue to require financial support including road maintenance, physical infrastructure, safety monitoring, and cause associated health issues.

As such, given the growing dominance of EVs, government activity will require new forms of funding. We continue to recommend road pricing as a fair alternative to fuel duty, which would charge motorists according to how much they drive through a fixed per mile charge.³⁷ While the introduction of road pricing, likely necessary in the near future, will dampen cost savings, EVs will remain a cheaper vehicle capable of saving households hundreds of pounds every year. Such a policy could be coupled with a free mileage allowance to avoid overtaxing those who are forced into motoring due to a deficit in public transport alternatives.

It should be made clear to the public that fuel duty and road pricing are not designed to dissuade travel in general. An individual's mobility is central to their economic opportunity and wellbeing, as well as to the health of the wider economy. These taxes are not designed to discourage travel but to encourage travel by alternative methods that decarbonise our environment, improve health, and cut costs for households. As such, revenue from these initiatives should be spent, in whole or in significant part, on improving alternative means of transit as detailed below.

Develop a credible public transport plan that mitigates transport poverty by enabling a shift towards buses and rail

Public transport indicators including the number of bus routes and rail reliability have decreased over recent decades amid claims that funds for their support are unavailable. These cuts are likely to have forced more individuals into transport poverty due to the higher costs of motor transport. Since 2010, over 8,500 bus lines have been cut, totalling 50% of the 2010 amount.³⁸ This has been especially harmful in the West Midlands, where 68% of lines have been lost, and across the North – the same regions that today likely suffer the highest rate of transport poverty. These cuts have likely increased poverty and inequality while restraining Levelling Up.

Cuts have been justified by the state of the public finances. This claim should be examined in context. Firstly, with £180 billion being devoted to subsidising motoring through fuel duty freezes and cuts, it is difficult to argue money for transport is unavailable. Secondly, British households are spending over £300 billion annually on transport. An overwhelming majority of this money is spent on motoring due to its disproportionate expense and the limited availability of alternatives. These funds could be more efficiently allocated at the public level by providing cheaper and more efficient modes of transport.

New funding is required to maintain both the physical infrastructure and staff required to encourage motorists to alter their preferred mode of transport. This could be distributed to local authorities to improve their busing and rail infrastructure and increase the sustainability and affordability of British transport. Such funding can be combined with demand-side reforms like the bus fare cap, which lower costs and further incentivises modal shift.

The public expenditure required should be understood and framed as a cost-saving measure for households. For every 10% increase in the relative speed of public transport, the average household saves over £400 annually. Benefits also accrue to motorists by providing them with less congested roads.

Those regions most at risk of transport poverty should be prioritised. These include the North East, North West, and West Midlands. Cities and their outlying regions in particular should be targeted, both because of the disproportionate benefits each new bus and rail line can provide due to the greater population density along each line and its association with the Levelling Up agenda. Benefits would likely spill over to the city's wider regional economies as new income is spent within the area.³⁹

The exact amount needed in new funding and how it should be spent is beyond the scope of this report. Rather than answer all of these questions, this research instead provides a lens with which to assess the arguments. The high private costs of motoring and the high public costs of fuel duty freezes show that transport expenditure has been misdirected and have left millions in poverty. In future, recognising and analysing transport poverty will be essential to making evidence-based decisions regarding Britain's transport, including providing new funds for buses and rail.

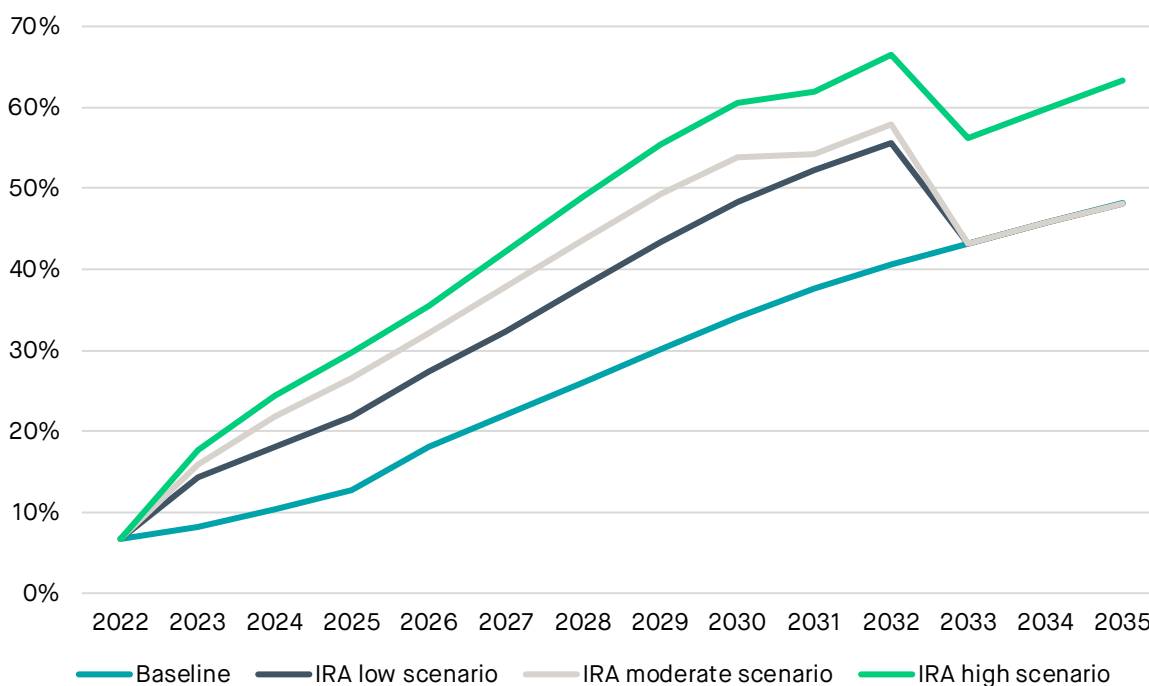
Reintroduce subsidies to increase access for electric vehicles

Electric vehicles have the potential to decrease transport poverty by almost 1 million through cheaper operating costs which could save households over £1,000 per year.

However, these savings are obstructed by the high upfront costs of EVs relative to petrol and diesel vehicles, with EVs costing approximately £8,000 more than the industry average. While price differences between EVs and traditional vehicles are projected to equalise by 2030, this date is not guaranteed, and households will require support in the interim to meet the government’s goal of making 80% of car sales electric by 2030.

As such, governments around the world have developed policy solutions to make EVs available to the wider population. The simplest option is that taken by the United States, where the Inflation Reduction Act (IRA) lowered the upfront cost of electric vehicles by USD \$7,500 (£6,050) so long as the vehicle was manufactured in North America.⁴⁰ The subsidy is provided by making the purchaser eligible for a tax credit worth the appropriate amount. A 2023 white paper from the International Council on Clean Transport predicted the IRA will almost double EV uptake by 2030.⁴¹ The researchers found 13% of light vehicle sales in 2025 would be electric without the IRA, compared to between 22% and 30% with IRA policies (Figure 7). By 2030, such policies are projected to raise this share from a baseline of 34% to between 48% and 61%.

Figure 7: US light-duty EV sales share



Source: Peter Slowik et al. “Analysing the impact of the Inflation Reduction Act on electric vehicle uptake in the United States (International Council on Clean Transportation, 31 January 2023). Note that the original authors’ inclusion of a “moderate with increased state advanced clean cars rule” scenario has been excluded.

Such a policy is not very different from the UK's Plug-in Car Grant, introduced in 2011 by the Conservative government but abolished in 2022. This originally provided up to £5,000 towards the sale of low emissions vehicles, subsidising the cost for consumers. It was arguably simpler for consumers given that it was directly provided to car dealerships following a sale.⁴² As the supply of EVs grow and as prices decline, reintroducing such a grant could prove a popular way to increase the accessibility of EVs for the wider population.

The French government has proposed an alternative policy to increase access to EVs through social leasing. The plan would see the French government subsidise EV leases for eligible households in lower income brackets, lowering their monthly cost to €100 (£86) per month for EVs whose listed price sits below a ceiling (currently set at €20,000).⁴³ An equivalent policy in the UK would almost halve the fixed costs of motoring, currently £156 per month for the median household. However, the scheme should be examined in light of French difficulties finding a sufficient supply of EVs at rates affordable to the state. As the policy is still being planned, no estimates on uptake are currently possible but high demand means they will likely be based on the supply of EVs available.

Whether the UK chooses to pursue a direct purchase subsidy as is done in the United States or a social leasing subsidy as pursued in France, it is clear that public money will need to be made available to grant households on the lower side of the income spectrum the same savings that are increasingly available to the rich. Savings worth between £4,850 and £8,000 would accrue to households over a vehicle's life, pulling up to 1 million individuals out of poverty, but only if they are given the means to bear the up-front costs.

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