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Ensuring Public Transport Supports the Needs of all Sections of the Population

Summary of Evidence

This submission responds to the call for evidence on priorities for post covid recovery for Welsh bus and rail with particular attention to growing public transport use and supporting the needs of sections of the population who rely on it. It contains evidence on how public transport is used across the population and the contribution it makes to people's lives. It particularly focuses on buses given buses are the most commonly used form of public transport in Great Britain.

We are still seeing lower levels of bus and rail use two years after the start of the pandemic. It is difficult to judge whether this is a 'new normal' or patronage levels will return to former levels. It is worth taking a step back and reflecting on pre-pandemic trends and what they tell us. This submission draws on pre-pandemic research carried out by the Centre for Transport & Society and the work of other researchers. While public transport use has been dramatically curtailed during the pandemic, its importance in supporting the recovery after the pandemic cannot be over-stated with reform long overdue to make it more affordable and convenient for those who need to use it.

Trends in car and public transport use

Personal travel has been decreasing in the first two decades of the 21st century with 10% fewer trips and miles travelled per person in 2019 compared to 2002. A reduction in car travel explains most of this trend. Bus travel has also decreased but rail travel has increased. Bus use has been decreasing in most areas of England, but there are notable exceptions in cities such as Bristol and Reading where there has been targeted investment to improve bus services.

Importance of buses across the population

Despite the observed reduction in bus journeys, buses remain an important mode of transport for large parts of the population. One in four adults (25%) in England use buses at least once a week, while 14% use buses at least once a month. Nearly a third of the adult population (31%) do not have personal car access with over half of these (54%) using buses at least once a week, indicating the importance of buses to people without cars. While three-fifths of the population make little or no use of buses at any one time, people's travel behaviour is fluid and people have been found to increase their public transport use when their life circumstances change and when they experience improvements to public transport connections. It is important to anticipate a strong return to bus use after the pandemic as people resume activities and move their lives forward.

Public transport and changing working patterns

Public transport was particularly important pre-pandemic for commuting with 8% of commute trips in England undertaken by bus and 12% by rail (including London Underground). However, regular

commuting to the same destination at the same time has decreased amongst the population and is likely to further decrease post-pandemic. To serve the needs of increasingly complex work travel patterns requires re-thinking the design of public transport services in terms of timetabling and ticketing.

Satisfaction with using public transport

While a high degree of satisfaction with public transport is reported by users from surveys undertaken by Transport Focus, amongst the broader population there has been a decrease in satisfaction with local buses in recent years. Public transport commuters are less satisfied with journeys to work than commuters using other forms of transport with crowded conditions and unpredictable journey schedules known to contribute to stressful public transport commutes. Providing high quality public transport services to more of the population will increase levels of satisfaction and encourage greater public transport use.

Cost burden of running a car and using public transport

Household expenditure on transport adjusted for inflation increased from £69 per week in 2009 to £80 in 2018/19. Motoring costs represent a large proportion of this expenditure (£59). It has been estimated that 6.7% of UK households are in a state of 'forced car ownership' where they own a car but are materially deprived in other respects. Average household expenditure on fares and other transport costs has risen from £11 a week in 2009 to £21 in 2018/19 which indicates an increasing cost burden for those that rely on public transport.

Importance of public transport for life opportunities

Various studies have shown that lack of good public transport connections is a major barrier to seeking employment. People aged 70 and over, people who have impairments and people with low household incomes are less likely to be able to access essential services than the rest of the population and it has been shown that better public transport connections improve their ability to access services. It is clear that access to life opportunities can be enhanced through improving public transport alternatives.

Role of public transport for young people

Young adults in Great Britain are driving less now than young adults did in the 1990s and make fewer journeys than all other age groups, except those over 70 years of age. As young people get older they travel more independently and buses make up a larger share of their travel. Bus use is particularly important for those living in households without a car. A number of 'impact pathways' have been identified via which a deficit of transport might impact on young people's development and future prospects. Lack of good public transport can: (i) inhibit young people's independence, autonomy and self-efficacy; (ii) compromise education, training and employment prospects; and (iii) limit future ambitions. It is recommended transport subsidies are redirected as a force for positive change for young people and that national governments should support systems for concessionary fares, bursaries and loans that are clear, universal and consistently applied.

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Full Evidence

This submission contains evidence on how public transport is used across the population and the contribution it makes to people's lives. It particularly focuses on buses given buses are the most commonly used form of public transport in Great Britain. It draws on pre-pandemic research carried out by the Centre for Transport & Society at UWE Bristol, as well as the work of other researchers. While public transport use has been dramatically curtailed during the pandemic, its importance in supporting the recovery after the pandemic cannot be over-stated with reform long overdue to make it more affordable and convenient for those who need to use it.

1. Trends in car and public transport use

It is important to look at pre-pandemic trends of travel in general, and car use in particular, to set the context for public transport trends. The car in 2019 was still by far the most dominant form of personal travel (with 61% of personal trips by car and 77% of personal trip mileage by car in England (NTS0601¹)) but growth in car travel has levelled off since the mid-1990s. In fact, car trips per person fell 14% and car mileage per person fell 16% between 2002 and 2019 (NTS0601). The decrease in personal car travel has not been compensated by significant increases in use of other forms of transport. There has been a reduction overall in the number of journeys made per person in England of 11% between 2002 and 2019 and of distance travelled by 10% (NTS0601). Commuter trips and shopping trips have seen particularly large falls which are attributed to changes in working practices and the impact of on-line shopping deliveries (Marsden et al., 2018).

The aggregate trend of decreasing car travel masks differential trends within the population with younger people driving less than previous cohorts of young people and older people driving more than previous cohorts of older people (Chatterjee et al., 2018). The trend of decreasing car travel also differs by geographic area. Reductions in car travel have been largest for those living in Greater London and smallest for those living in rural areas (ibid). There are also contrasts within large urban areas with reductions in car travel and increases in public transport use in central areas and continued rises in car travel in peripheral areas and on inter-urban routes (ibid).

Transport policies have sought to reduce car travel in towns and cities. Mass transit systems (light rail, trams, bus rapid transit) have been expanded in some cities and progress has been made in developing walking and cycling networks in London and some other towns and cities. However, bus provision and patronage have generally declined outside London where they are deregulated (UTG, 2018). Bus service miles in England outside London have decreased by 12.9% since 2004/05 driven by a 49% decrease in local authority supported mileage (DfT, 2019). Bus use in England outside London has been in decline since 2008/09 with a decline in London also seen since 2014/15. The taxi and private hire vehicle market has been transformed by the arrival of ride-hailing services such as Uber, although no significant increase in personal travel by taxi/minicab has been recorded in national travel statistics (NTS0601).

TSGB figures show that bus journeys in Great Britain declined by 12.8% in the last 10 years (between 2009/10 and 2019/20), while national rail journeys increased by 38.5% (and London Underground

¹ Results from National Travel Survey are referenced in this paper in terms of data table numbers such as NTS0601. The data tables can be found at <https://www.gov.uk/government/collections/national-travel-survey-statistics>

journeys increased by 26.2% and light rail journeys increased by 44.4% (TSGB0101²). However, bus journeys are by far the most common form of public transport used making up 57% of all journeys by public transport in 2019/20. While bus use has generally declined, there have been exceptions in some places where there has been targeted investment, including Reading and Bristol (Goodman et al., 2020). An analysis by Le Vine and White (2020) concluded that “the decline in bus travel in England outside London has been particularly influenced by a contraction in the traditional bus market (where the highest users were female, people on low-incomes, non-car owners, students and pensioners)”.

2. Importance of buses across the population

It is estimated that one in four (25%) adults aged 16 and over use buses often (at least once a week), while 14% use buses sometimes (at least once a month but less than once a week) (Chatterjee et al., 2019a). Nearly a third of the adult population (31%) do not have personal car access with over half (54%) of these using buses often, indicating the importance of buses to people without cars. Bus use is more common for people living near frequent bus services and those living in London and other large cities. Frequent bus use is also more common amongst younger and older adults, those in BAME groups and those with lower incomes. Meanwhile, one-in-ten (8%) people use trains often (at least once a week). Unlike buses, trains are used more often by those with higher incomes.

It is tempting to think of there being a fixed group of the population who are bus users and fixed groups of car users, rail users and cyclists. In reality the majority of people use a blend of transport options. An analysis of National Travel Survey one-week travel diary data (Heinen and Chatterjee, 2015) showed 27% of English adults reported making a bus journey in a particular week but for only 30% of these was bus the main transport mode they used that week. This highlights bus is the main form of transport for about 8% of adults and contributes to the mix of transport modes used for over one quarter of adults.

A study of over 1,500 commuters in Bristol found a similar story in that relatively few commuters used the bus on each occasion they went to work (4%) but a larger number included bus in their transport alternatives used during a one week period (8%) (Chatterjee et al., 2016). Over time, many people make changes to their travel choices as their circumstances changes. The study of Bristol commuters followed the participants every three months and asked them to report a week’s commuting each quarter. It found about one in four made a change in the transport modes they used from one quarter to the next (Chatterjee et al., 2016).

Looking at a representative sample of 15,000 English workers in 2009/10 and comparing their main commute mode a year later, it was found that two-thirds of bus commuters (66%) were still using the bus a year later but 34% were using another option (half of these switching to car, about 170 individuals) (Clark et al., 2016). Of car commuters, 91% were still using a car one year later with 2% switching to public transport (1% to the bus and 1% to the train) with this comprising 200 individuals (ibid). Commute mode changes were particularly likely when changing job or moving home (which occurred for 11% and 7% of the population respectively). High quality public transport links to employment centres were shown to encourage switches away from car commuting.

It has also been seen how major improvements to bus services available to the population result in increasing bus use. A study of the impacts of the Fastway bus rapid transit system in West Sussex

² Result from Transport Statistics Great Britain (TSGB) are referenced in terms of data table numbers such as TSGB0101. The data tables can be found at <https://www.gov.uk/government/collections/transport-statistics-great-britain>

showed 21% of residents had increased their bus use six months after its introduction with 6% decreasing their bus use (Chatterjee, 2011), thus showing a significant net increase in bus users.

3. Public transport and changing working patterns

Public transport was particularly important pre-pandemic for commuting with 8% of commute trips in England undertaken by bus and 12% by rail (including London Underground), but only 5% of all trips undertaken by bus and 3% by rail (including London Underground (NTS0409)). However, even before the pandemic, the average worker was commuting less often (379 commute trips per year on average for those full-time employed in England in 2002 and 323 in 2019 (NTS0411)) with changing working patterns such as increased part-time work, flexible working and remote working. Crawford (2020) has distinguished four types of travel-to-work patterns amongst English workers - infrequent, spatially variable, temporally variable and regular travellers. The group of regular travellers has decreased in size between 1998 and 2016 from 63% to 59% but remains the largest group. They use public transport more for their work travel than the other groups. Both the infrequent and spatially variable groups have grown over the same period (16% to 22% for infrequent group and 5% to 10% for infrequent group). To serve the needs of increasingly diverse work travel patterns requires re-thinking the design of public transport services in terms of timetabling and ticketing for example.

4. Satisfaction with using public transport

Most public transport users report being satisfied with the journeys they take - just over 80% of rail passengers report being satisfied with their journeys (TSGB0608) and the figure is 89% for bus passengers in England (outside London) (Transport Focus, 2020). However, trend data from the National Travel Survey shows a decrease in satisfaction with local buses from 73% of residents being satisfied in 2009/11 to 68% in 2015/2017 (Le Vine and White, 2020).

International research shows commuters who walk and cycle report the highest levels of commute satisfaction, whereas public transport users report the lowest levels (Chatterjee et al., 2020). This has been attributed to stress induced by unpredictable journey times and crowding. An analysis of *Understanding Society* data from 26,000 employed people living in England between 2009/10 and 2014/15 found that bus commuters feel the negative impacts of longer commute journeys more strongly than users of other transport modes in terms of job satisfaction and mental health (Clark et al., 2020). It also found that rail commuters with longer commute times have lower strain than rail commuters with shorter commute times. One possible explanation is that people with shorter rail commutes find them more stressful as they are more likely to involve the use of crowded, urban commuter lines or metro systems. Commuters with longer journeys may be better able to use their journey time productively.

5. Cost burden of running a car and using public transport

Household expenditure on transport adjusted for inflation has increased from £69 per week in 2009 to £80 in 2018/19 (TSGB1306). Hence, transport costs represent an increasing burden on households, especially low-income households. Motoring costs represent a large proportion of this expenditure (£59), highlighting the cost burden of owning and running a car for households with modest incomes. In 2019, three-quarters of households (76%) in England had at least one car (NTS0205). Mattioli (2017) estimated that 6.7% of UK households were in a state of forced car ownership in 2012 (households who own at least one car and are materially deprived) and compared to those without cars were more likely to include children and employed adults in the middle age groups, to be on low-to-middle incomes and to have a mortgage. If public transport could serve their needs instead, they could improve their economic situation.

Average household expenditure on fares and other transport costs has risen from £11 a week in 2009 to £21 in 2018/19 (TSGB1306) which indicates the increasing cost burden for those that need to use public transport. Between 2011 and 2017 the cost of rail travel rose by 19% and bus by 24%, while the cost of motoring did not rise and the consumer price index rose by 11% (TSGB1308).

6. Importance of public transport for life opportunities

People's ability to access activities (education, jobs, networks and services) is related to the location where they live (which determines the jobs, networks and services nearby) and the transport options available to connect them to activity destinations. A Joseph Rowntree Foundation funded study into transport-related barriers to employment in low-income neighbourhoods found employment opportunities were difficult to reach by public transport and out-of-work residents were therefore unwilling to look for jobs, especially if they perceived jobs to be insecure (Crisp et al., 2018). It has been shown using English Census data that longer public transport times to employment were associated with lower employment rates at the neighbourhood-level, after accounting for population and car availability (Johnson et al., 2017).

There have been relatively few attempts at systematic evaluation of the benefits of initiatives aimed at improving accessibility for target groups/areas. A case study evaluation of four projects funded by the Urban Bus Challenge Fund (Lucas et al., 2009) in deprived communities found that users of the enhanced/new bus services were predominantly non-car owners and used the buses for a mixture of travel purposes, often involving new journeys not made previously. Research on the impact of the introduction of the concessionary bus pass since 2006 shows increased bus use by older people since its introduction with surveys of users suggesting that it enables them to engage in new activities and pursuits and gives a sense of belonging (Ormerod et al., 2015).

DfT commissioned NatCen and UWE Bristol in 2019 to investigate how access to transport affects life opportunities and wellbeing of across the wider population in England (Chatterjee et al., 2019a). The study involved analyses of two national longitudinal data sets: *Understanding Society* and the *English Longitudinal Study of Ageing*. It found people aged 70 and over, people who have impairments and people with low household incomes are less likely to be able to access services (healthcare, food shops and learning facilities) than the rest of the population. Both personal car access and public transport access were found to be important for being able to access services. Rating local public transport as good, rather than poor, makes it 2.8 times more likely that someone is able to access services. Short journeys by public transport to town centres (10 minutes or less) make it 1.7 times more likely that someone can access services (compared to journeys of over 30 minutes). Rating local public transport as good, rather than poor, also makes it 1.4 times more likely that someone is able to go out socially. Hence, positive opinions of public transport (which are linked to living close to good public transport services) are associated with better access to services and increased social participation. This shows that access to life opportunities can be enhanced through improving public transport alternatives.

7. Role of public transport for young people

Public transport has particular significance for young people. It is important to highlight firstly that young adults in Great Britain are driving less now than young adults did in the early 1990s (Chatterjee et al., 2018). According to statistics for 2019, 35% of young people aged 17 to 20 have a full driving licence, down from a peak value of 48% in 1992/94 (NTS0201). For 21-29 year olds, 62% have a full driving licence in 2019 while it was 75% in 1992/94. This has been accompanied by a substantial decrease in overall travel of young adults. National Travel Survey results for 2019 show

that 17-20 year olds make fewer journeys than all other age groups, except those over 70 years of age, making 824 journeys per year (2.3 per day) compared to 953 journeys per year (2.6 per day) for all ages (NTS0601). It is notable that the number of journeys made by this age group has decreased from 1,003 per year in 2002. Similarly, 21-29 year olds make 860 journeys per year (2.4 per day) compared to 1,061 journeys per year in 2002. This suggests there are particular barriers to travel for young adults which have emerged in the last 20 years. A study commissioned by the Department for Transport to explain the trend of declining car travel among young people concluded that it has been driven “by changes in young people’s socio-economic situations (increased higher education participation, rise of lower paid, less secure jobs and decline in disposable income) and living situations (decline in home ownership and re-urbanisation” and also “changes in when people start a family, their social interactions (substituting face-to-face interaction with digital communication, for example) and the importance that people attach to driving” (Chatterjee et al., 2018).

Figure 1 shows the use of different transport modes by young people aged under 30. Getting lifts by car dominates the travel of under 17 year olds, making up over half of journeys made. As young people get older they travel more independently and buses make up a larger share of their travel. Bus use is particularly important for those living in households without a car (see Figure 2).

Figure 1: Mode share percentage for trips made by children and young people in England in 2017

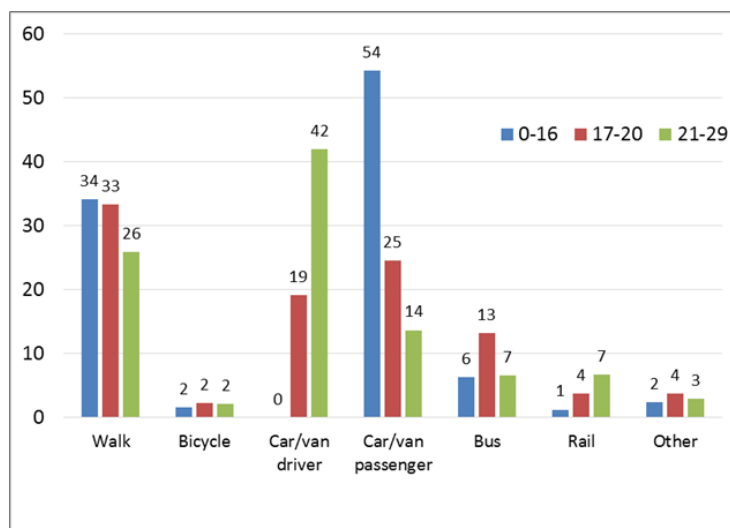
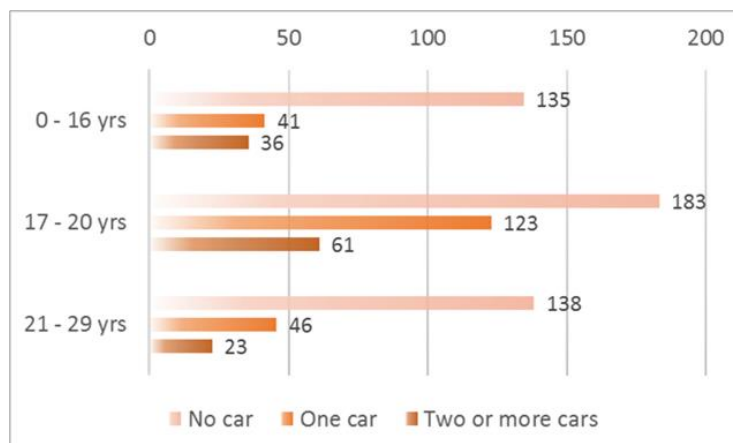


Figure 2: Bus journeys per year and household cars in England in 2016-17



The role of public transport for young people is a particularly important issue to consider when looking at the future of buses post-pandemic. In 2019, the Health Foundation commissioned Sustrans and UWE Bristol to review evidence on ‘the role of transport in supporting young people to develop and transition to an independent healthy future’ (Chatterjee et al., 2019b). A number of ‘impact pathways’ were identified via which a deficit of transport might impact on young people’s development and future prospects. These are shown in Table 1 below from which it can be appreciated that lack of good public transport can: (i) inhibit young people’s independence, autonomy and self-efficacy; (ii) compromise education, training and employment prospects; and (iii) limit future ambitions. It is clear that access to affordable public transport, especially buses, can mitigate negative consequences from not having access to car transport.

Table 1: Impact pathways by which transport affects young people’s development

1. Education and training options	Young people can have limited local education and training options due to lack of transport to get to more distant opportunities
2. Participation in out-of-school activities	A household car enables children to participate to a greater extent in out-of-school activities; participation in out-of-school activities has been shown to benefit children economically in the long run
3. Physical activity and mental wellbeing	Walking and cycling contribute significantly to recommended physical activity levels for young people who travel in these ways and physical activity is linked to better mental wellbeing
4. Independence, autonomy and self-worth	Independent mobility allows young people to develop social connections and choose their own activities, providing increased autonomy in their lives
5. Capabilities and willingness to use transport options	Young people supported and encouraged to use alternatives to the car as children are more likely to be willing to use them when older
6. Employment opportunities	Young people are disinclined from considering jobs with difficult journeys by public transport and employers are reluctant to offer jobs to them
7. Stress, fatigue and low self-esteem	Poor quality of the built environment for walking (unattractive, mistreated and ‘forgotten’ places) causes psychological and emotional stress
8. High transport costs and job/housing immobility	Young people are less likely to change their job or move home to seek improved career opportunities than previously was the case with high transport (and housing) costs seen as contributory factors

Given the important role public transport plays in supporting life opportunities for young people the report recommended transport subsidies should be redirected as a force for positive change for young people and that national governments should support systems for concessionary fares, bursaries and loans that are clear, universal and consistently applied (Chatterjee et al., 2019b). Concessionary fares systems need to be non-discretionary and funded across the UK to benefit those younger people who are most in need of reduced travel costs. Concessionary fares should cover all those subject to compulsory study or training (16 and 17 year olds) and all those people under 25 looking for work and in the first months of employment.

UWE Bristol and Sustrans are following up the evidence review with a three-year project funded by the Health Foundation (see <https://www.health.org.uk/article/building-the-policy-agenda-for-young-peoples-future-health>) which aims to make the policy case for transport that better enables young people aged 16-24 to make journeys and reach opportunities that help them to thrive. A policy briefing is currently being prepared on 'Fair bus fares for young people' which includes:

- Current picture across the UK of discounted bus fares for young people aged 16+ and future ambitions of 79 Local Transport Authorities in England for bus fares for young people as set out in their Bus Service Improvement Plans.
- Case studies of discounted bus fare schemes for young people in South Yorkshire, West Yorkshire, Scotland and London. These case studies consider how discounted fares for young people are justified, the extent to which young people use the schemes, and what benefits young people gain from them.
- Recommendations to national governments, local authorities and bus operators on future improvements to the offers they make for young people on bus fares.

We would be happy to share the policy briefing with the Welsh Parliament as soon as it is available.

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