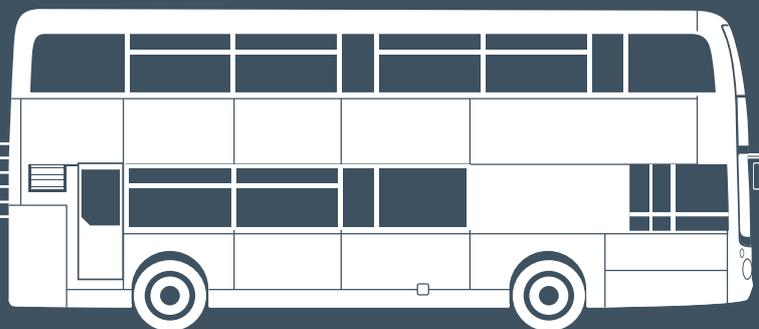


WHAT'S DRIVING BUS PATRONAGE CHANGE?



**AN ANALYSIS OF
THE EVIDENCE BASE**





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1. Executive Summary

This is a time of both crisis and opportunity for the bus.

Crisis as, year on year, bus services and patronage continues to decline to such an extent that more communities are now living without any bus service at all.

At the same time there is an opportunity from the growing awareness around the potential of the bus to achieve multiple public policy goals - from reducing congestion for all road users and tackling social exclusion by providing access to opportunity, through to opening up access to new developments and improving air quality and reducing carbon emissions. In this context, more attention is being given to the relative lack of funding priority given to the bus when compared with other modes.

The Bus Services Act 2017 has also overhauled the legislative framework for the bus, allowing transport authorities to push the limits of what can be achieved within a deregulated framework, as well as opening up a simpler route to the franchising of networks of bus services (similar to the way in which bus services in London are provided).

Despite the bus remaining the main form of public transport, research and development in the sector remains relatively low. As Stagecoach Group founder Brian Souter put it: *"How much have we as an industry put into research and development in the last five years? We're getting worse, not better and we have to change that"*¹.

Much of the research we do have can be commissioned to support pre-determined positions around the balance of responsibility between public and private sectors, and also in relation to the on-going debate about regulation versus deregulation.

With the legislative framework now settled for the sector for the near future, there is an opportunity to step aside from these debates, however valid they may be, and take an objective view of what we do know and what we don't know about the causes of bus patronage decline. In doing so, we also identify the most significant gaps in the evidence base and see how these might be addressed, including in collaboration with other organisations.

The report does this by taking an overview of the full range of factors that our research suggests are relevant to patronage decline. These are summarised under three themes.

- **Theme one:** Wider social and economic change
- **Theme two:** The bus compared with the alternatives
- **Theme three:** Public attitudes to bus travel

It also provides a commentary on the relative strength of the evidence base for each of these three themes and where additional research could prove valuable.

The key trends it identifies from the three themes are:

- Young people are moving away from car ownership... but not necessarily towards the bus.
- Older people are moving to car ownership and away from the bus.

¹ Passenger Transport Magazine Issue 194 12th October 2018, pages 4/5



- More people are living in cities - which can make active travel an attractive alternative to the bus.
- There is a general shift to the expectation of personalised and on demand goods and services – which taxis and Private Hire Vehicles (PHVs) embody but buses do not.
- Transformative social and technological change has led to people working, shopping and entertaining themselves more at home. It's also led to changes in the journeys people now make with a shift away from regimented and regular daily and weekly journey patterns on the same corridors.
- As bus travel has become more expensive it faces ever tougher competition from low cost taxis and PHVs, more extensive and much quicker steel wheel networks, and from cheap and comfortable private car use.
- More priority on the road network can improve the bus's competitiveness but road space is being squeezed to create places that favour people over motorised traffic. At the same time demands on remaining road space for different needs and types of vehicles (deliveries, taxis, cycling and so on) can be subject to highly politicised debates.
- Many bus users have an emotional connection with bus travel because of the positive aspects of its shared, communal and social nature. This is particularly the case where a bus operator provides a good service that reflects a shared pride in the identity of the place it serves.
- The way in which bus travel is perceived can vary significantly depending on the nature of the local service and also by social class, age, gender, ethnicity, mobility, disability (mental or physical).
- There are particular issues around bus travel as a shared social space, both positive (shared experience) and negative (behaviour of drivers or fellow passengers). There are also stress points in relation to the bus travel experience which are unique to bus travel and which can exacerbate some of the shared space issues (for example, will the bus arrive, the potential for protracted interaction with a driver over fares whilst being watched, when to get off, etc.). These issues may be a factor in particular for none or irregular users.

Many, but not all, of these background trends are unfavourable to the bus.

This report also looks at areas which are bucking the general trend of bus decline and seeks to draw some initial conclusions about the common denominators which are present where bus use is high, or growing, or both. The report finds that one or more of three factors are present. These factors are:

- **Good quality bus service** - i.e. levels of research and development, marketing and fleet investment are relatively high and focussed on matching the bus offer to the needs of the local market.
- **Car travel is difficult or unattractive** - due to congestion and/or expensive or limited city centre parking (sometimes this is also strongly correlated with a road layout which is highly constrained for car access due to the historic nature of the city centre built environment).
- **Denser urban areas** - where car ownership is relatively low and there is a strong culture of bus use.



The report does not aim to produce a simplistic checklist of policies that if adopted will lead to increased bus use in any circumstances. The reality is that the bus market is hyper-local, from deep rural hinterlands through to the centre of London and every kind of local circumstances between. It is our belief that the intelligent application of local research and development into what might work in each individual market, taking into account what's relevant from wider research and development, is likely to achieve the best results.

We also see this report as the first stage in a process of arriving at a more structured understanding of the causes of bus patronage decline rather than the final word.

In relation to this, the report also identifies the areas where the evidence base could most benefit from additional research. These are:

1. The correlation between the performance of the national / sub-national economies and bus travel.
2. The relationship between parking availability and cost, and its impact on the demand for bus travel.
3. The relationship between the simplicity and integrated totality of the bus offer and patronage.
4. The way in which people respond to the experience of bus travel is relatively under-researched with more focus on bus consumers as rational economic actors (so looking at comparative costs, journey times, etc.) rather than underlying emotional responses, which also inform the travel choices that people make. There is also inadequate research around how different segments of users and non-users respond to bus travel and how the bus product might be adjusted accordingly.
5. To substantiate or challenge the conclusions on the three factors identified as being present in areas of growing and/or high bus use including the relationship between congestion and bus travel (as in, why is it that in some areas of high congestion and low traffic speeds bus patronage is high or growing?).

In order to start the process of addressing these evidence gaps we have decided to commission research on the fourth of these topics. This research will take a deep dive into available existing evidence on how people respond to the experience of bus travel (including the bus as a social space) as well as undertake original research. In doing so it will look at how the bus as a social space could be changed to build on the positive associations that people have and address the negative aspects.

In conclusion, we look forward to working with our members, and with other interested organisations, in further developing the evidence base on what drives bus patronage and the lessons that can be learned.



2. Background

- 2.1. Buses continue to be the most used mode of public transport across Great Britain with 4.9 billion journeys recorded in 2016/17, 59% of all public transport journeys². The popularity of the bus is rooted in its potential to access most places using the extensive UK road network, alongside the fact that it has, historically, been the most cost effective mode of transport.
- 2.2. Bus patronage has been in decline for many decades. As cars became more affordable to working and middle class people during the 1970s, more and more opted to purchase one. Car manufacturers continued to innovate and improve the efficiency of car design. As household incomes began to rise in the late 1990s and cars became even more affordable, more and more households opted to purchase their second, third or even fourth car, with car ownership levels rocketing³.
- 2.3. All the while, the bus has seen a continuous spiral of patronage decline. There are a few exceptions. London, with its franchised bus network that's designed and contracted out by Transport for London (TfL), has seen strong patronage growth aided by the introduction of the congestion charge (and associated support for, and investment in, the bus network), and London's emergence as a global city. Most areas around the country saw some patronage increases during the late 2000s with the introduction of the free bus pass for the elderly.
- 2.4. However, since 2010 patronage has continued to drop and the figures show that in 2017, the number of local bus passenger journeys in England decreased by 1.8% compared to 2016⁴. Since 2002, the number of trips per head on bus has reduced by 23% outside of London. The reasons for this decline have been subject to much debate. Incumbent bus operators argue that rising levels of congestion are responsible⁵. Campaign for Better Transport cites fare rises above inflation as a key cause⁶ as well as on-going reductions in support for bus services by local authorities due to wider government cuts in local authority funding⁷. TfL has identified strong linkages between macro-economic and demographic factors and changes in bus use⁸.
- 2.5. Given the hyper-local nature of bus provision and the diversity of the bus market and the areas it serves (from deep rural to city centres and all points in between), the approach this report takes is to stand back from a 'one size fits all' analysis and instead seeks to:
 - Scope out the full range of factors (by theme) which could have an influence on patronage trends and set out our understanding of the evidence base for each factor.
 - Identify any gaps in the evidence base and where we think additional research could be beneficial.
 - Examine the areas which have been bucking the downward trends and see if there are any common denominators.

² https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/661933/tsgb-2017-report-summaries.pdf

³ <https://www.gov.uk/government/statistics/vehicle-licensing-statistics-2017>

⁴ <https://www.gov.uk/government/statistics/annual-bus-statistics-year-ending-march-2017>

⁵ <https://www.stagecoach.com/media/insight-features/tackling-congestion-to-unlock-the-full-potential-of-buses.aspx>

⁶ <https://www.transport-network.co.uk/New-bus-fall-shows-slow-death-of-local-buses/15101>

⁷ https://bettertransport.org.uk/sites/default/files/research-files/Buses-in-Crisis-2018_0.pdf

⁸ "Explaining recent trends in Bus and Tube travel" presentation delivered to UTG December 2018



- 2.6. As Brian Souter recently said in relation to low levels of research and development in the bus industry: “We need to look at some of these new tools that are available to us, because we’ve always just gone on gut feel”⁹. The bus sector is one where assertion about what works and what doesn’t work has often held sway.
- 2.7. With such worrying on-going decline for the sector (but with some rays of light), it’s time to set out the full range of factors that are behind general bus patronage decline and those which are behind the exceptions. In doing so, we think that this can lead to better decision making at both the national level and in the very different local circumstances in which bus services are provided.

⁹ Passenger Transport Magazine Issue 194 12th October 2018, pages 4/5



3. What do we know about the factors driving bus patronage change?

Theme one: wider social and economic change

Key trends

- Young people are moving away from car ownership... but not necessarily towards the bus
- Older people are moving to car ownership and away from the bus
- More people are living in cities - which can make active travel an attractive alternative to the bus
- There is a general shift to the expectation of personalised and on demand goods and services – which taxis and PHVs embody but buses do not
- Transformative social and technological change has led to people working, shopping and entertaining themselves more at home. It's also led to changes in the journeys people now make with a shift away from regimented and regular daily and weekly journey patterns on the same corridors.

- 3.1. Urban Transport Group has recently reported on the radical changes to trends in how people travel in its report *Number crunch*¹⁰. Significant economic and demographic changes have emerged in recent years, with implications for public transport and the car.
- 3.2. City regions are seeing strong population growth, which is expected to rise by a further 19% by 2039. At the same time, the over 75 population will grow by 80% by 2039. An increasingly urbanised and ageing society will emerge over the next 20 years.

City shift

- 3.3. Industrial city regions in the UK saw decades of decline with the death of heavy industry, leaving behind vast swathes of industrial wastelands. During the 2000s, urban redevelopment saw the transformation of cities to places where people not only worked, but where people could also live. Between 2001 and 2017, the population of Metropolitan areas across England has soared by 8.7%, with London's population increasing by 20.5%¹².

Figure 1 – Bus and cyclists in Manchester¹¹



¹⁰ http://www.urbantransportgroup.org/system/files/general-docs/UTG_Number%20crunch%20transport%20trends%20in%20the%20city%20regions_digital.pdf

¹¹ http://www.urbantransportgroup.org/system/files/general-docs/UTG%20%E2%80%93%20Active%20travel%20solutions%20for%20changing%20cities_WEB%20READY.pdf

¹² <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates>



- 3.4. More city living can be good for public transport as it reduces the likelihood of car dependent lifestyles, with increasingly dense urban populations meaning that people are living and working within a much smaller footprint, significantly changing their journey patterns¹³. Living and working within a small footprint also has the potential to make walking and cycling more attractive than bus use.

Young people moving away from car ownership

- 3.5. Young people are moving away from car ownership and use, with the number of full car driving licence holders aged 17-20 in 2014 around 29%, compared to 48% in 1992/94¹⁴. Likely reasons for this change include a wider shift towards sharing rather than owning (particularly pronounced among young people), lower disposable incomes, the comparatively high costs of car purchase and insurance, and greater use of technology such as smartphones, which cannot be used whilst driving¹⁵.
- 3.6. Over the 10 year period between 2002 and 2012, 21-29 year olds travelled 10% further on buses in terms of mileage, whilst car mileage reduced by 24% over the same period¹⁶. Clearly the bus continues to play an important mobility role for young people but it is not without external pressure, with factors such as the rise of on demand and personalised services like UBER, and more centralised living, driving potential young passengers away.
- 3.7. There are also regional variations. Growth in the use of buses across Merseyside has been associated with the introduction of a simple and cost effective fares offer for young people¹⁷. It is also possible that some recent increases in bus travel in the West Midlands could be partly associated with the region being demographically skewed to the young when compared with other city regions.
- 3.8. At the same time, some of the recent decline in bus use in London is attributed to younger Londoners cutting back on discretionary leisure travel as their incomes fail to keep pace with the cost of living in the capital¹⁸.

Older people moving to the car

- 3.9. Population projections for 2040 show an 84% increase in the number of over 75s compared with 2016¹⁹. Our society will become an increasingly aged one, and urban areas are set to see big increases in older populations, with London projected to see an 87% increase and Greater Manchester a 70% increase in over 75s by 2040²⁰.

¹³ <https://www.citymetric.com/skylines/rebirth-britains-inner-cities-mapped-1356>

¹⁴ http://www.urbantransportgroup.org/system/files/general-docs/UTG_Number%20crunch%20transport%20trends%20in%20the%20city%20regions_digital.pdf

¹⁵ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/673176/young-peoples-travel-whats-changed.pdf

¹⁶ Ibid

¹⁷ <https://www.merseytravel.gov.uk/about-us/media-centre/news/Pages/Young-people-in-the-Liverpool-City-Region-buck-trend-of-national-bus-passenger-decline.aspx>

¹⁸ <http://content.tfl.gov.uk/travel-in-london-report-11.pdf>

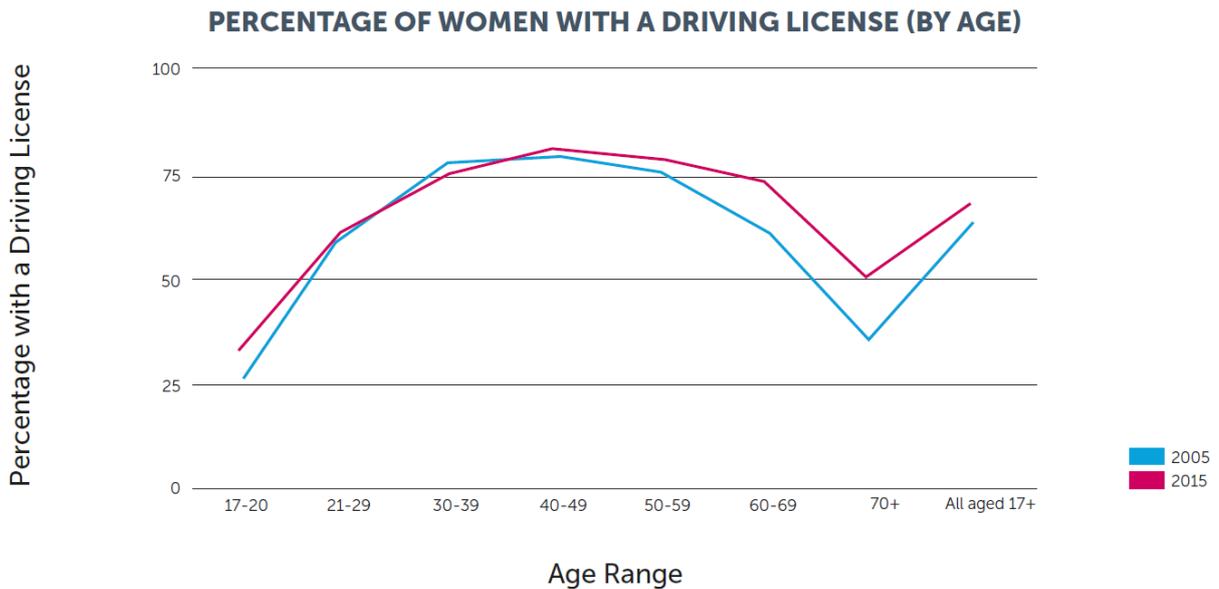
¹⁹ <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections/bulletins/subnationalpopulationprojectionsforengland/2016based>

²⁰ Ibid



3.10. The baby boomer generation that is now approaching retirement age also happens to be the generation that spearheaded the popularity of the private car²¹. In addition, previous generations of drivers were male dominated in terms of driving license holders. In recent years, there has been a significant increase in the number of older license holders who are women. In 2005, around 30% of women over 70 years of age were license holders but in 2015, it was over 50% and growing.

Figure 2 – Percentage of women with a driving license²²



- 3.11. Further to this, people who are currently approaching retirement age are having to wait longer to access their 'free bus pass' as eligibility is now linked to retirement age, where previously it had been issued at the age of 60²³.
- 3.12. This suggests a perfect storm for the bus – an older generation that drives more, and has later access to a free bus pass. This situation is now starting to feed through to lower bus patronage amongst concessionary pass holders. Following a peak in 2011/12, concessionary pass use has since reduced by 6% across England, with an even steeper decline in Metropolitan areas of 10.5%²⁴.

The shift to online, on demand and personalised services

3.13. More activities are now carried out online, whether it is shopping or ordering food from restaurants to be delivered to the home via a delivery firm. During December 2018, footfall in the High Street fell by 2%, whilst online shopping sales increased by 12% compared to

²¹https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/673176/young-peoples-travel-whats-changed.pdf

²²http://www.urbantransportgroup.org/system/files/general-docs/UTG_Number%20Crunch%20Transport%20trends%20in%20the%20city%20regions.pdf

²³<https://www.nexus.org.uk/news/item/changes-national-free-bus-pass-scheme>

²⁴https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/666770/bus0105.ods



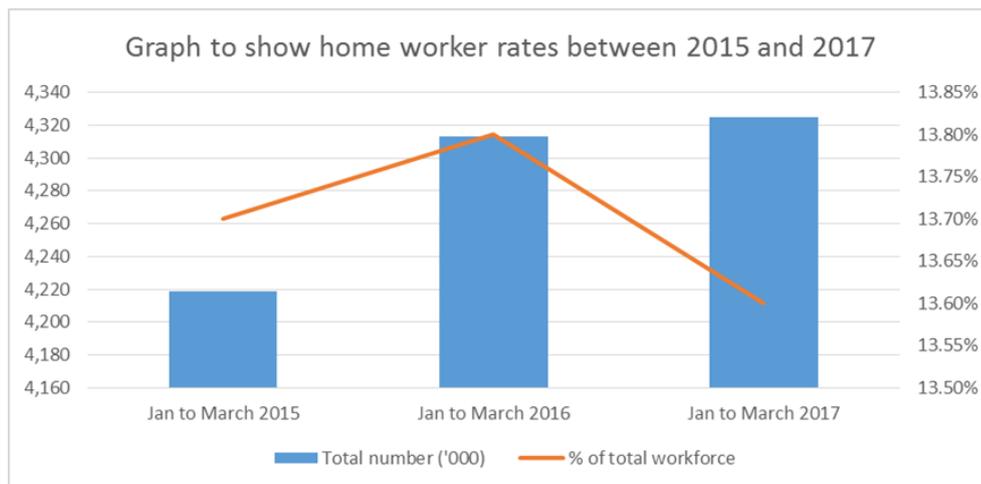
December 2017²⁵. All this means fewer trips, with the rise of online shopping coinciding with a 30% decrease in shopping trips over the last 10 years²⁶. With the bus being used more than any other transport mode to access the high street²⁷, the decline in high street shopping has significant implications for overall bus use.

- 3.14. People increasingly want to plan and pay for their journeys online and for the journeys they make to be on an on-demand and personalised basis. The increased popularity of PHVs can partly be attributed to these changes²⁸. Between 2005/06 and 2017/18, the number of licensed private hire vehicles across England has increased by 76% (London has witnessed a 119% increase), alongside a 13.8% increase in taxis²⁹.

The changing world of work

- 3.15. Transformative technological change (coupled with social change) has allowed more people to take advantage of flexible working opportunities. Whilst home working still only represents around 13% of total working, it has seen some growth in recent years³⁰. More home working means less regular commuting.

Figure 3 – Graph showing home worker rates between 2015 and 2017³¹



The state of the economy

- 3.16. The link between the state of the economy and bus patronage is complex. For example, in areas where car ownership is low and bus use is relatively high, economic growth and rising incomes can lead to growth in car ownership at the expense of bus travel.

²⁵ <https://www.rdpnewmans.com/high-street-sales-continue-to-fall-in-december-as-retailers-faced-worst-sales-on-record-8827/>

²⁶ http://www.demand.ac.uk/wp-content/uploads/2018/04/FutureTravel_report_final.pdf

²⁷ http://www.urbantransportgroup.org/system/files/general-docs/UTG%20About%20Towns%20AW_web.pdf

²⁸ http://www.urbantransportgroup.org/system/files/general-docs/UTG%20Taxis%20Report_FINALforweb.pdf

²⁹ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/751203/taxi-and-phv-england-2018.zip

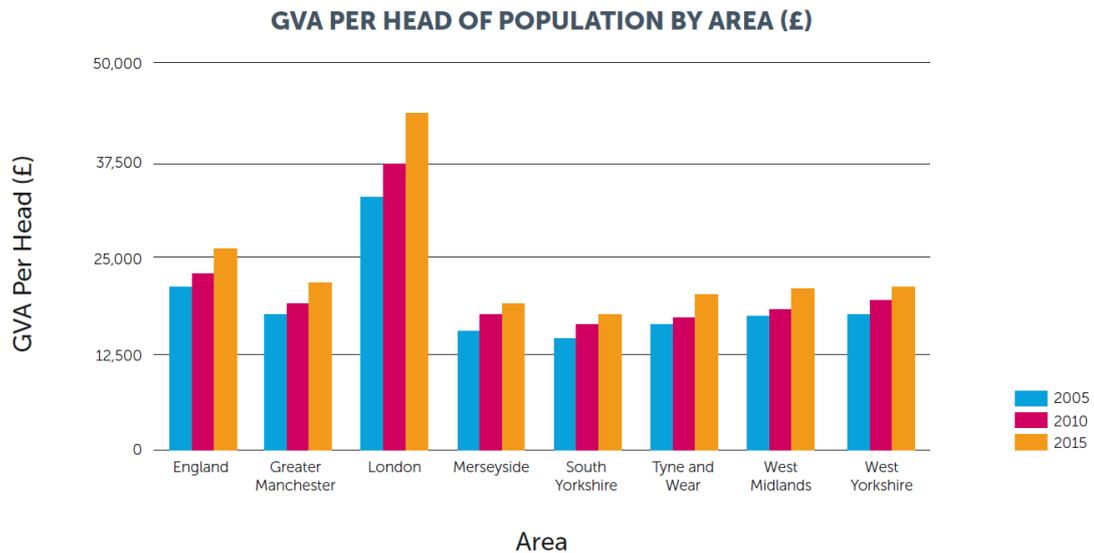
³⁰ <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/adhocs/008283homeworkersratesandlevelsjanuarytomarch2016and2017>

³¹ Ibid



- 3.17. Conversely, in areas with historically high bus use, a slowing economy with reduced inward migration and household incomes which are falling behind living costs, can lead to a reduction in bus travel (particularly discretionary bus travel). This appears to be the case in London. A report by TfL which explores the factors affecting travel demand trends in London highlights the prolonged squeeze on personal disposable income since the 2008 financial crisis as a key factor³². This is having a knock-on effect on consumer spending for 'discretionary' activities such as shopping and leisure, suppressing demand for travel, with the number of leisure trips now 20% lower than in 2013/14³³. The report also cites the recent slowdown in population growth in London as a contributor towards less economic activity and therefore less demand for travel³⁴.
- 3.18. Elsewhere, it is possible that a strong local economy could be a factor in strong patronage growth. For example in Reading, strong bus patronage growth has been seen, and the town is ranked third nationally for the economic contribution per worker (GVA)³⁵.
- 3.19. However, as can be seen in Figure 4, many of the major city regions have seen fairly strong GVA growth since 2010 but many have seen a fall in bus patronage during the same period. For example, GVA has grown by 11% in Greater Manchester between 2010 and 2015, whilst bus patronage has declined by 9%³⁶.

Figure 4 – Graph showing GVA per head of population by area³⁷



Where might the evidence base be strengthened?

- Areas where the evidence base might be strengthened include the correlation between the performance of the national / sub-national economies and bus travel.

³² <http://content.tfl.gov.uk/travel-in-london-report-11.pdf>

³³ Ibid

³⁴ Ibid

³⁵ <http://www.centreforcities.org/wp-content/uploads/2018/01/18-01-12-Final-Full-Cities-Outlook-2018.pdf>

³⁶ <https://www.gov.uk/government/statistics/annual-bus-statistics-year-ending-march-2017>

³⁷ http://www.urbantransportgroup.org/system/files/general-docs/UTG_Number%20Crunch%20Transport%20trends%20in%20the%20city%20regions.pdf



Theme two - the bus compared with the alternatives

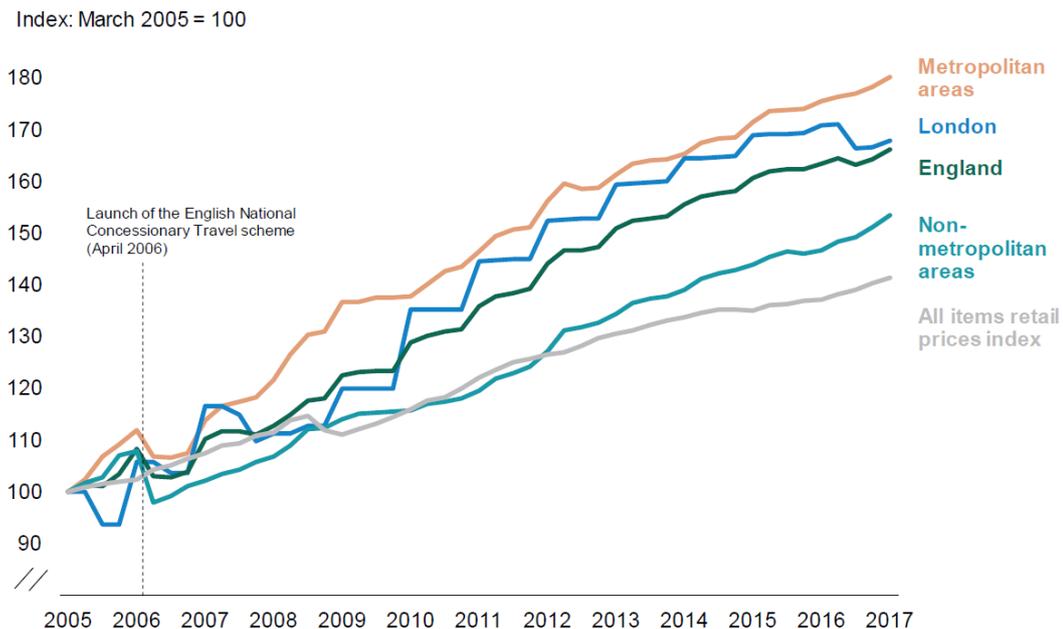
Key trends

- As bus travel has become more expensive it faces ever tougher competition from low cost taxis and PHVs, more extensive and much quicker steel wheel networks, and from cheap and comfortable private car use
- More priority on the road network can improve the bus's competitiveness but road space is being squeezed to create places that favour people over motorised traffic. At the same time demands on remaining road space for different needs and types of vehicles (deliveries, taxis, cycling and so on) can be subject to highly politicised debates.

The costs and complexities of bus travel

3.20. Local bus fares in England have risen by 66% between March 2005 and March 2017, well above RPI³⁸, as shown in Figure 5.

Figure 5 – Graph showing local bus fare trends between 2005 and 2017



3.21. Academic material suggests that demand for bus travel is elastic and very responsive to changes in price. A study by the University of Leeds in 2006 titled *The demand for public transport: The effects of fares, quality of service, income and car ownership* suggests that “fare elasticities tend to increase over time since the change of fare, with bus fare elasticities being about -0.4 in the short run, -0.55 in the medium run, and about -1.0 in the long run”³⁹.

³⁸ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/666759/annual-bus-statistics-year-ending-march-2017.pdf

³⁹ http://eprints.whiterose.ac.uk/2034/1/ITS23_The_demand_for_public_transport_UPLOADABLE.pdf



- 3.22. Based on these findings, the study suggests that in the short term, bus operators may see an increase in revenue but the longer term effect is likely to be a decrease, suggesting that raising fares to counter falling revenue is unlikely to yield long term benefits⁴⁰.
- 3.23. In recent years, a few operators have radically overhauled some of their fares in an effort to make them more attractive to passengers.
- 3.24. Simplicity, as well as actual fare level, is a key component to making travel attractive to passengers. A study commissioned by Nexus suggested that a simplified ticketing structure could increase bus patronage by over 2% in the adult market⁴¹. Reading Buses operates a very simple, £1.90 flat fare⁴², meaning that passengers know in advance how much it will cost. Reading has been one of the few places in England to see significant growth in bus patronage, with a 27.8% increase in the number of trips made per person by bus between 2009/10 and 2016/17. When Brighton and Hove introduced a flat fares trial in 1999, it resulted in an estimated patronage increase of between 3% and 8.5%⁴³.

Figure 6 – Reading Buses launching contactless ticketing in March 2017⁴⁴



- 3.25. This particular case study is outlined alongside many others in the UK and across the world in our report *The Benefits of Simplified and Integrated Ticketing in Public Transport*⁴⁵. The academic Peter White also talks of the importance of simplified ticketing in helping to boost patronage, citing successes seen in London⁴⁶. Smart means of payment including Smartcards and Contactless also aim to make traveling simpler for passengers. In London this has worked very well, with the system operating cashless for a number of years, and as of early-2018, around 50% of payments were being made via contactless⁴⁷. Outside of London, the range of ticketing options, even amongst smart ticketing, can be confusing for passengers. For example, a survey by Nexus in 2013 showed that 20% of bus users encountered different fares for the same trip on a regular basis⁴⁸.

⁴⁰ http://eprints.whiterose.ac.uk/2034/1/ITS23_The_demand_for_public_transport_UPLOADABLE.pdf

⁴¹ <https://www.nexus.org.uk/sites/default/files/Simplified%20ticketing%20research%20report.pdf>

⁴² <http://www.reading-buses.co.uk/on-the-bus-fares/>

⁴³ <http://www.urbantransportgroup.org/system/files/general-docs/integratedticketingreportFINALOct09.pdf>

⁴⁴ <https://www.ticketer.co.uk/press-article/reading-buses-introduces-fleet-wide-wave-and-pay-with-ticketer/>

⁴⁵ <http://www.urbantransportgroup.org/system/files/general-docs/integratedticketingreportFINALOct09.pdf>

⁴⁶ http://www.thredbo-conference-series.org/downloads/thredbo10_papers/thredbo10-themeA-White.pdf

⁴⁷ <https://www.smartrailworld.com/50-of-all-tfl-pay-as-you-go-journeys-now-made-using-contactless-payments>

⁴⁸ <https://www.nexus.org.uk/sites/default/files/Simplified%20ticketing%20research%20report.pdf>



- 3.26. Where operators have introduced simpler or cheaper fares (or both), there is evidence that this can drive patronage increases. For example, in Merseyside, Merseytravel and bus operators Stagecoach and Arriva have introduced good value tickets for young people, which has led to a 142% increase in the number of bus trips by young people in the three years to 2017⁴⁹. Others, like National Express West Midlands, have looked at the network as a whole, introducing six low fare zones⁵⁰, which has led to a growth in bus passengers of 4%⁵¹.

The quality of the bus travel experience

- 3.27. Given that most bus services operate in a deregulated framework and in very different local markets, the quality of the bus travel experience can vary significantly. Many modern buses have the advantages of big windows and on board CCTV, and increasingly common is the provision of free Wi-Fi, USB chargers and comfortable seats with ample legroom. Indeed, some features of local bus services are better than those of long distance intercity rail services where seating is less comfortable and spacious, and where Wi-Fi is charged for.
- 3.28. However, at the same time, light weight construction (which is better for fuel consumption) with smaller tyres can result in poor ride quality with high levels of vibration and rough riding⁵². Big windows coupled with a lack of climate control or air conditioning can also make journeys uncomfortably hot or cold. This compares less favourably with the higher ride quality of modern cars, trains and trams, as well as the wider inherent advantages that a modern car offers of being able to fine tune the travelling environment for preferred temperature, seat pitch and general ambience.
- 3.29. There is also a question to what extent bus design (both internal and external) has kept pace with that of alternative means of travel, and on this opinions can vary. As set out above, some features of a local bus are now better than those commonly provided on rail and many bus companies make an effort to market their services in striking ways (including through the look and feel of the vehicles).
- 3.30. However, it could be argued that bus design remains too conservative ('shoebox on wheels') and marketing can sometimes come across as a desperate plea for riders⁵³. All of which can play into perceptions of the bus as 'loser cruisers'⁵⁴ and a mode that lacks the cultural cache, resonance and identification that attaches to the car (as exemplified by Top Gear), rail and increasingly to cycling.
- 3.31. For example in 2016, Reading Buses set out to challenge the bus manufacturing community to push the limits of vehicle specification and drive true innovation. The chief engineer at Reading Buses highlighted how the design and comfort of cars has moved on significantly in contrast to buses: "even base-model cars have gained spec, refinement, reliability, performance and efficiency" and that "if a £250,000 car rattled as much after three years as most modern buses do then it'd be unsaleable ... it wouldn't [even] be tolerated in a £10k car"⁵⁵.

⁴⁹ <https://www.merseytravel.gov.uk/about-us/media-centre/news/Pages/Young-people-in-the-Liverpool-City-Region-buck-trend-of-national-bus-passenger-decline.aspx>

⁵⁰ Passenger Transport Magazine. Issue 180. 16th March 2018

⁵¹ <https://www.nationalexpressgroup.com/media/3307/nex-full-year-results-release.pdf>

⁵² <http://www.autospeed.com/cms/article.html?&title=Ride-Quality-Part-1&A=112914>

⁵³ <http://blog.mhdpartnership.co.uk/2018/07/be-confident-that-its-better-by-bus.html>

⁵⁴ <https://www.sciencedirect.com/science/article/abs/pii/S0966692316303465>

⁵⁵ <http://www.passengertransport.co.uk/2016/04/reading-seeks-greater-bus-design-innovation/>



- 3.32. The chief engineer at Reading warns that if bus design does not embrace the need for greater refinement, reliability, performance and efficiency, bus operators will continue to lose market share to not just the private car, but also private hire taxis⁵⁶.

Journey times and punctuality

- 3.33. Many cities are also experiencing growing traffic congestion and less reliable journey times for road vehicles. Average speeds have decreased, with a corresponding increase in delays⁵⁷. Across England there has been a 1.2% decrease in average speeds between 2015 and 2017, with a more pronounced decrease in Metropolitan areas, with Manchester and Liverpool seeing a 3% and 4% respective decrease in average road speeds⁵⁸. Greener Journeys research argues that there is a direct correlation between slower journey speeds and patronage reductions, with a 10% decrease in speeds resulting in a 10% reduction in bus patronage⁵⁹.
- 3.34. If the bus can provide a more rapid and reliable service than alternative means of making the same journey, then this is clearly a positive for the bus. This is one factor in the success of schemes like the Leigh Guided Busway which has proved so popular that additional journeys have been added to cater for demand after only a year in service⁶⁰. Year on year comparisons show the service carrying an average of 9,000 more passengers per week, now up to 63,000 in total, and has resulted in 12,500 fewer car journeys⁶¹.
- 3.35. However, there are challenges in giving bus services priority in all circumstances as by and large buses share road space with other vehicles and increasingly, local roads function as places in themselves rather than just for passing traffic. There are legitimate claims on available road space for the delivery of goods and services, for safe walking and cycling, and for on-street trams. There is also a need to ensure that streets are attractive and healthy places for people to live, work and visit⁶². This all creates challenges for ensuring that bus journey times are reliable and competitive. At the same time, making car use more expensive, difficult or slower can also bring with it political risks.
- 3.36. London is a good example of the way in which different agendas for use of available street space are playing out. Recent increased investment in walking and cycling infrastructure and redistributing road space on key corridors has changed the way people use the London bus network⁶³. TfL rapidly implemented a number of active travel and urban realm schemes which contributed to a fall in bus speeds in Central London
- 3.37. Whilst many incumbent bus operators, and the organisations they fund, argue that journey times and reliability are of overwhelming importance compared with all other factors the evidence is not as clear cut as is sometimes made out. For example, Department for

⁵⁶ <http://www.passengertransport.co.uk/2016/04/reading-seeks-greater-bus-design-innovation/>

⁵⁷ <https://www.gov.uk/government/statistics/travel-time-measures-for-the-strategic-road-network-and-local-a-roads-april-2017-to-march-2018>

⁵⁸ Ibid

⁵⁹ <https://greenerjourneys.com/wp-content/uploads/2016/06/Prof-David-Begg-The-Impact-of-Congestion-on-Bus-Passengers-Digital-FINAL.pdf>

⁶⁰ <https://www.tfgm.com/press-release/vantage-passengers>

⁶¹ Ibid

⁶² <https://www.bbc.co.uk/news/uk-england-london-45978867>

⁶³ https://www.transporttimes.co.uk/news.php/TfL-is-planning-significant-cuts-in-bus-services-and-now-acknowledges-cycling-as-a-cause-of-London-ridership-decline-333/?utm_source=Transport+Times&utm_campaign=b55a7b8dc8-EMAIL_CAMPAIGN_2018_01_17_COPY_01&utm_medium=email&utm_term=0_c0cafa3f39-b55a7b8dc8-250764209



Transport (DfT) figures show that bus punctuality compliance across England has improved from 79.8% in 2009/10 to 82.7% in 2015/16⁶⁴.

- 3.38. Meanwhile, Transport Focus research looking at the opinions of passengers in relation to punctuality found that passengers traveling on less frequent services demanded a higher standard of on time performance, particularly with regards to early running⁶⁵. For more frequent services, passengers were somewhat more relaxed due to less waiting time⁶⁶. The report also found that when travelling with a good quality operator, with good customer care, passengers were more forgiving of delays⁶⁷.
- 3.39. There are also areas where bus use has been growing the fastest, such as Reading and Bristol, which have recorded reduced customer satisfaction for the punctuality of their bus services in the latest Transport Focus survey⁶⁸, yet bus patronage has continued to increase in these areas. Other factors, which could include fare structures, quality of service, changes to parking policies and the local economy, must have played a role in patronage growth in these areas. Indeed, research conducted at University of the West of England suggests that providing a good quality bus experience can make up for the time penalty for using the bus compared to the car⁶⁹.
- 3.40. It is important to note too that improving bus reliability and journey times is also not just about infrastructure. The only piece of research which we are aware of to take an in-depth look at the causes of poor performance on a sample of routes, showed that there was a wide variety of highly location specific causes including highway design, traffic signals, roadworks, timetables, parking enforcement, dwell time and driving styles⁷⁰. Improving performance required continual attention to resolving those details and also continual monitoring and action as new local problems emerged.
- 3.41. With a 46% reduction in funding for local authority supported bus services since 2010/11⁷¹ and the generally low levels of research and development and management in the bus industry, the resources needed to pursue this approach are not available. Bus Punctuality Improvement Partnership legislation was introduced in 2004 and refreshed in 2011 to guide bus operators and local authorities on working together to resolve punctuality problems⁷². However, a lack of resources means that the scale and effectiveness of such partnerships was always limited and has since dwindled away further.⁷³

⁶⁴https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/666759/annual-bus-statistics-year-ending-march-2017.pdf

⁶⁵ <http://d3cez36w5wymxj.cloudfront.net/migrated/Bus%20punctuality%20and%20timetables%20-%20Summary%20-%20FINAL%20-%20January%202014.pdf>

⁶⁶ Ibid

⁶⁷ Ibid

⁶⁸ <http://d3cez36w5wymxj.cloudfront.net/wp-content/uploads/2017/03/04160441/Bus-Passenger-Survey-Autumn-2016.pdf>

⁶⁹ Researching the passenger experience of bus travel <http://eprints.uwe.ac.uk/29414/>

⁷⁰ http://www.urbantransportgroup.org/system/files/general-docs/pteg%20bus%20punctuality%20web%20report%20June%202014_FINAL2.pdf

⁷¹ https://bettertransport.org.uk/sites/default/files/research-files/Buses-in-Crisis-2018_0.pdf

⁷² http://www.urbantransportgroup.org/system/files/general-docs/pteg%20bus%20punctuality%20web%20report%20June%202014_FINAL2.pdf

⁷³ Ibid



The bus compared with the car

Availability of cars

3.42. In general, car ownership and use has been rising over the years although this trend has occurred at different rates in different areas. There is also lower car ownership among poorer households. Car use is also becoming more difficult, and indeed is now falling in some urban areas, with a 13% reduction in the number of car trips made in London between 2009 and 2017⁷⁴. As highlighted earlier, there are other relevant trends in car ownership and use (such as less take up of car licences among young people) meaning that although the greater availability and use of cars is clearly a negative for the bus, there are some countervailing trends which are more positive.

Relative costs of car use versus bus use

3.43. In terms of cost comparisons between bus and car travel, people generally only take fuel costs into account in deciding whether a car journey would be cheaper than a bus⁷⁵. These perceived cost advantages are magnified when a car carries multiple occupants.

3.44. However, even when factoring whole life costing of a car on the basis of a per mile cost, the bus can struggle to be competitive. According to a recent report by Greener Journeys, the freezing of fuel duty since 2011 has had a significant impact on public transport use⁷⁶. As well as keeping motoring costs down, since 2011 traffic has grown by 4% which has led to more congestion and higher pollution. At the same time bus patronage has continued its downward trajectory, the CPI index for the cost of used cars has been falling⁷⁷, increasing the competitiveness of the car compared to traveling by bus. The table below offers a cost comparison between the car and bus, based on two routes.

Table 1	Inter-urban route		Urban route	
	Bus	Car*	Bus	Car*
Mileage (return)	20.58	23 (longer route is faster for the car)	5	5
Journey time	35 minutes	22 minutes	15 minutes	11 minutes
Cost	£8 return	£9.31 plus parking	£3 return	£2.02 plus parking
Cost per mile	38p per mile	40.5p per mile	60p per mile	40.5p per mile

*Based upon a Ford Fiesta 1.0 '100' ECOBOOST covering 10,000 miles a year, 40.51 pence per mile cost (figures correct at 04.9.18)⁷⁸

3.45. This example shows that the perception that the bus can be comparatively expensive is not too far from the truth, particularly for shorter journeys. Only when you factor in parking charges, does the bus develop a strong competitive advantage over the car and if one or more than one person travels, the bus struggles against the car in terms of financial benefits. However, this analysis was based upon a day return scenario and studies have shown,

⁷⁴https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/729517/nts99_03.ods

⁷⁵ <http://www.gov.scot/resource/doc/310263/0097941.pdf>

⁷⁶ <https://greenerjourneys.com/wp-content/uploads/2018/06/THE-UNINTENDED-CONSEQUENCES-OF-FREEZING-FUEL-DUTY-01.06.18.pdf>

⁷⁷ <https://www.ons.gov.uk/economy/inflationandpriceindices/timeseries/d7il/mm23>

⁷⁸ <https://www.fleetnews.co.uk/car-stats/ford-fiesta-10ecoboost-100-stopstart-eu6-titanium-2017/3781571/?Years=4&Miles=40000>



rightly, that purchasing weekly, monthly or annual single operator bus tickets does provide some value for bus passengers. Even here though, a recent survey from the TAS Partnership highlighted that the average weekly cost of a bus ticket was £17.09 in October 2017, a 24% increase compared to 2009⁷⁹.

- 3.46. All the while, overall motoring costs have remained competitive, with the change in the cost of motoring over the last 10 years being far lower than that experienced by bus users.
- 3.47. The average cost of purchasing a new car in 2013 was roughly the same as in 1988, factoring inflation into account⁸⁰. For the same cost, today's drivers are treated to faster engines, more comfortable rides and gadgets far beyond the mid 1990's excitement of electrically folding wing mirrors. Fuel costs have risen, but cars are now significantly more efficient, protecting drivers from some of those cost pressures.
- 3.48. The cost and availability of car parking can also be a factor in choices which are made on whether to travel by bus or by car. The cost, availability and nature of on and off street parking varies markedly between different urban areas as highlighted in a report produced for Urban Transport Group titled *Changing highway policy and the implications for the Metropolitan areas*⁸¹.
- 3.49. Part of that report looked at parking policy, highlighting the varied way in which parking is managed and enforced by different authorities⁸². Some authorities will prioritise the need to attract people through competitive parking policies, such as free off peak parking, in a bid to boost retail performance⁸³. Such a policy could tip the balance away from bus travel by significantly reducing the actual and perceived costs of using a car instead. Alternatively, other authorities make use of their parking policies to deter car use and encourage alternative modes, such as Brighton⁸⁴, which has seen strong bus patronage growth in recent years (Figure 12).
- 3.50. The DfT undertook a Parking Research Review to look at the role of car parking in modal choice, which included as one of its conclusions: "*Much research has demonstrated the importance of parking costs to travel choices although the extent of the impact may vary. A combination of parking charges and reducing or restricting parking availability is likely to be most effective in encouraging behavioural change*"⁸⁵.

The bus compared with taxis and private hire vehicles

- 3.51. The availability of Private Hire Vehicles in particular has risen dramatically in recent years, with a 76% increase across England⁸⁶ as new business models have emerged which utilise new technologies and tap into changing social attitudes. PHVs can also be relatively low cost

⁷⁹ <https://cbwmagazine.com/tas-partnership-fares-survey-highlights-value-of-weekly-bus-tickets/>

⁸⁰ <http://www.thisismoney.co.uk/money/cars/article-2408807/New-car-prices-risen-inflation-25-years.html>

⁸¹ http://www.urbantransportgroup.org/system/files/general-docs/Changing%20highway%20policy%20and%20the%20implications%20for%20the%20Metropolitan%20areas%2C%20FINAL%20230214_0.pdf

⁸² http://www.urbantransportgroup.org/system/files/general-docs/Changing%20highway%20policy%20and%20the%20implications%20for%20the%20Metropolitan%20areas%2C%20FINAL%20230214_0.pdf

⁸³ Ibid

⁸⁴ Ibid

⁸⁵ <http://www.britishparking.co.uk/write/Documents/Library/Reports%20and%20research/parkingreport.pdf>

⁸⁶ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/751203/taxi-and-phv-england-2018.zip



due to low barriers to market entry and new entrants charging less than the cost of provision in order to establish market share.

- 3.52. There is a growing body of international evidence (particularly from major US cities) that low cost taxis and PHVs are taking patronage away from public transport. A 2017 report titled *Disruptive Transportation: The Adoption, Utilization, and Impacts of Ride-Hailing in the United States* found that ride hailing is contributing towards a 6% reduction in bus use and furthermore, was contributing to an increase in vehicle miles travelled in urban areas - in other words, increasing congestion⁸⁷. There has been less extensive research so far in the UK. However, following a 45% increase in the number of PHVs on the roads in the West Midlands since 2015⁸⁸, bus operators blamed UBER for a 3% reduction in bus patronage since the launch of their Bus Alliance⁸⁹.
- 3.53. The relative cost of travelling by bus or taxi/PHV is becoming a particular issue as bus fares rise - particularly when two or more people are travelling. For example, the average cost of a two mile taxi journey in Tyne and Wear is £5.34⁹⁰. At that price, the cost of hiring a PHV for two or more people would not be significantly more than travelling by bus.

The bus compared with rail and trams

- 3.54. In stark contrast to the bus industry, rail and trams have seen a renaissance in the last 20 years with strong patronage growth. Regional rail franchises outside of London and the South East have seen a 28.6% increase in passenger numbers between 2008/09 and 2017/18⁹¹. This has been aided by improvements to heavy rail services on main commuter corridors to increase capacity and/or frequency. Birmingham has seen a 30% increase in commuters arriving by rail between 2011 and 2015⁹².
- 3.55. Light rail and tram networks have seen a 42% increase between 2008/09 and 2017/18⁹³, aided by significant expansions of a number of networks, including the Manchester Metrolink and Midland Metro.
- 3.56. Travellers can have a poor perception of what a high quality bus system can provide when compared with rail⁹⁴. However, research has shown that as people become more familiar with using a bus system, their perceptions improve⁹⁵. Rail and light rail networks are generally easier to understand for unfamiliar travellers because of their often simple networks. However, for this very reason, rail fails to fulfil the flexibility of buses in providing more links to more places and connecting more communities.

⁸⁷ https://itspubs.ucdavis.edu/wp-content/themes/ucdavis/pubs/download_pdf.php?id=2752

⁸⁸ <http://www.urbantransportgroup.org/resources/types/reports/taxi-issues-and-options-city-region-taxi-and-private-hire-vehicle-policy>

⁸⁹ <https://www.transportxtra.com/publications/local-transport-today/news/52820/uber-partly-to-blame-for-bus-ridership-fall->

⁹⁰ http://www.urbantransportgroup.org/system/files/general-docs/UTG%20Taxis%20Report_FINALforweb.pdf

⁹¹ <http://dataportal.orr.gov.uk/>

⁹² http://www.urbantransportgroup.org/system/files/general-docs/UTG_Number%20Crunch%20Transport%20trends%20in%20the%20city%20regions.pdf

⁹³ <https://www.gov.uk/government/collections/light-rail-and-tram-statistics>

⁹⁴ <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.360.9930&rep=rep1&type=pdf>

⁹⁵ <https://usa.streetsblog.org/2012/06/21/explaining-the-psychological-appeal-of-rail-over-buses/>



Where might the evidence base be strengthened?

Possible areas for further research include:

- The relationship between parking availability and cost, and its impact on the demand for bus travel
- The relationship between the simplicity and integrated totality of the bus offer and patronage



Theme three – public attitudes to bus travel

Key trends

- Many bus users have an emotional connection with bus travel because of the positive aspects of its shared, communal and social nature. This is particularly the case where a bus operator provides a good service that reflects a shared pride in the identity of the place it serves
- The way in which bus travel is perceived can vary significantly depending on the nature of the local service and also by social class, age, gender, ethnicity, mobility and disability (mental or physical).
- There are particular issues around bus travel as a shared social space both positive (shared experience) and negative (behaviour of drivers or fellow passengers). There are also stress points in relation to the bus travel experience which are unique to bus travel and which can exacerbate some of the shared space issues (for example will the bus arrive, the potential for protracted interaction with a driver over fares whilst being watched, when to get off etc.). These issues may be a factor in particular for none or irregular users

Positive emotional connections

Figure 8 – Buses in London.

3.57. Transport for London undertook an extensive study in 2013/14 looking at the factors affecting satisfaction⁹⁶. TfL found that passengers had pride in the London bus, seeing it as an icon for the City, with positive emotional connections to it. TfL therefore suggests that customers are more forgiving when things go wrong.



3.58. The survey found that reliability was central to bus travel satisfaction. This referred to the overall experience, from planning to boarding and then alighting, and for the customer feeling confident that the bus will get them to their destination on time. As discussed earlier, recent reductions in bus journey times have impacted on patronage, straining the previously positive connection between the London bus and its passengers.

3.59. A 2007 study conducted in Edinburgh looked into passenger perceptions and the ideal urban bus journey experience⁹⁷. One of the key positives highlighted by the study was the social exchange opportunities that the bus presents, with a passenger able to converse and exchange with friends, acquaintances or complete strangers⁹⁸. Equally, this same factor can feature as a negative of bus travel if some passengers do not respect good etiquette, with

⁹⁶ <http://content.tfl.gov.uk/exploring-the-bus-css-metrics.pdf>

⁹⁷ <https://www.sciencedirect.com/science/article/pii/S0967070X07000182>

⁹⁸ Ibid



38% of respondents citing the behaviour of other passengers as a problem⁹⁹. Punctuality and reliability were also cited as key negatives of the bus experience.

Figure 9 – Bus passengers.



How different kinds of people respond to bus travel

- 3.60. As well as personal preferences, wider factors like age, gender, social class, disability and ethnicity can also play an important role in how bus travel is perceived.
- 3.61. Confidence is a big issue for young people traveling by bus and this is raised in Transport Focus' 2018 report¹⁰⁰ into what young people want from buses. Confident bus use starts at the home when trying to find out information about a journey and planning the destination. The report suggests that some young people may be willing to pay a little extra for a PHV simply because of door to door convenience. The report recommends that buses need to appeal more to young people, simplifying the process to use the bus including simpler fares, engaging young people through technology and helping to deliver a positive experience. Arguably, this guidance could apply to all passenger groups.
- 3.62. The DfT's recently launched Inclusive Transport Strategy highlights the importance of connectivity for those with disabilities, allowing access to social networks, employment and education¹⁰¹. Buses play a crucial role in achieving this and in the last six years, the number of disabled bus pass holders has increased by 23%¹⁰². Statistics from 2008 show that disabled bus users made more trips per person per year by bus than those who weren't disabled¹⁰³.

⁹⁹ <https://www.sciencedirect.com/science/article/pii/S0967070X07000182>

¹⁰⁰ <https://www.transportfocus.org.uk/research-publications/publications/using-bus-young-people-think/>

¹⁰¹ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/728547/inclusive-transport-strategy.pdf

¹⁰² Ibid

¹⁰³ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/49089/accessibility-action-plan.pdf



- 3.63. Therefore, the continuing decline of bus patronage raises a significant concern for disabled passengers. As fewer passengers travel, routes are increasingly becoming less financially viable, leading to service reductions and in some cases complete withdrawal. Such reductions and withdrawals will impact vulnerable people the most¹⁰⁴.
- 3.64. Initiatives such as wider implementation of audio visual announcements on buses (an estimated 19% of buses were fitted with audio visual announcements in 2012¹⁰⁵) and disability equality awareness training have helped make the bus more accessible to those with physical and mental disabilities. The Inclusive Transport Strategy outlines the need to go further to allow disabled people to board a bus with more confidence¹⁰⁶.
- 3.65. However, challenges remain, as outlined at the Mental Health and Transport Summit in 2016¹⁰⁷. According to the mental health charity Mind, one in four people in the UK experience a mental health problem each year¹⁰⁸. This includes, but is not limited to, anxiety, depression and obsessive compulsive disorder (OCD)¹⁰⁹.

Figure 10 – Bus passenger having a difficult interaction with the driver.



- 3.66. The Mental Health and Transport Summit highlighted the continuing challenges for bus use in relation to mental health, particularly around driver training. Difficult and intimidating interactions with bus drivers can end up dictating how confident those who suffer from anxiety, for example, approach not just transport but all activities in life¹¹⁰.

¹⁰⁴ <https://www.bbc.co.uk/news/uk-26385176>

¹⁰⁵ https://www.guidedogs.org.uk/media/1960/12522_talking-buses-toolkit_accessible.pdf

¹⁰⁶ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/728547/inclusive-transport-strategy.pdf

¹⁰⁷ <https://www.anxietyuk.org.uk/wp-content/uploads/2016/05/Mental-Health-Transport-Summit-Report.pdf>

¹⁰⁸ <https://www.mind.org.uk/information-support/types-of-mental-health-problems/statistics-and-facts-about-mental-health/how-common-are-mental-health-problems/#.W-L-jk14iUk>

¹⁰⁹ Ibid

¹¹⁰ <https://www.anxietyuk.org.uk/wp-content/uploads/2016/05/Mental-Health-Transport-Summit-Report.pdf>



What non users think about the bus

- 3.67. As car use has grown, the bus has become used more by those who do not have access to a car. This in turn can lead to perceptions around bus travel being a mode for those who are too poor, too young or too old to be able to use alternatives¹¹¹.
- 3.68. In 2010, the Scottish Government commissioned research looking into the views of infrequent and non-bus users¹¹². The research found that the car dominated respondent's preference for travel, citing quicker door to door journey times; ease for multi-stage journeys and easier for carrying equipment. Cars were also seen as more reliable and generated a sense of freedom. Conversely, buses were seen negatively. Respondents raised bad driving behaviour, poor driver attitudes, fear about the physical condition of buses, personal safety, slow journey times, poor reliability, and high fares as barriers to using the bus. The behaviour of other passengers causing annoyance and discomfort was also raised.
- 3.69. Research undertaken in 2004 by Centro in the West Midlands of middle income bus views showed a clear fear of the perceived unsupervised space of a bus¹¹³. Many respondents feared anti-social behaviour on the bus.
- 3.70. There can also be the perception that bus travel is expensive for what it is – especially when compared with the cost of door-to-door taxi travel (which can be cheaper when two people are travelling together).

Where might the evidence base be strengthened?

- The way in which people respond to the experience of bus travel is relatively under-researched with more focus on bus consumers as rational economic actors (so looking at comparative costs, journey times, etc.) rather than underlying emotional responses which also inform the travel choices that people make. There is also inadequate research around how different segments of users and non-users respond to bus travel and how the bus product might be adjusted accordingly.
- Urban Transport Group has therefore commissioned further research in this area titled "*How people respond to the experience of bus travel and the implications for the future of bus services*" which will explore the space of the bus and seek to understand the different interactions and how they impact different personalities and social demographics.

¹¹¹ <https://www.sciencedirect.com/science/article/pii/S0967070X07000182>

¹¹² <http://www.gov.scot/resource/doc/310263/0097941.pdf>

¹¹³ Understanding the needs of higher and middle income groups for use of bus services in the West Midlands (2004) Prepared for Centro



4. Are there common denominators among places which have been more successful on buses?

Key messages

There is no single common denominator to explain areas where there has been strong bus growth and/or where bus trips per head are highest. However, arguably all the areas of high growth / high trips per head are covered by one or more of the following three criteria:

- **Good quality bus service** - i.e. levels of research and development, marketing and fleet investment are relatively high and focussed on matching the bus offer to the needs of the local market
- **Car travel is difficult or unattractive** - due to congestion and/or expensive or limited city centre parking (sometimes this is also strongly correlated with a road layout which is highly constrained for car access due to the historic nature of the city centre built environment)
- **Denser urban areas** - where car ownership is relatively low and there is a strong culture of bus use

4.1. Whilst the overall picture for bus patronage is one of decline, look more deeply into patronage trends and you can find some areas where the bus is bucking the national trend. Clearly, it's not over yet for the bus. The town of Reading has seen bus patronage go up 27.8% since 2011/12, and Brighton up 8.3% and Bristol up 11.3% in the last year alone. Figure 11 below shows the places that have seen the strongest growth in passenger journeys per head of population since 2011/12, followed by figure 12 showing the areas with the highest numbers of journeys per head of population over the same period.

Figure 11 – Passenger journeys per head of population – growth areas¹¹⁴

Local Authority	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	% CHANGE
West Berkshire	14.5	15.2	19.1	20.5	21.9	21.0	44.59
South Gloucestershire	26.8	24.4	25.6	29.5	32.1	36.0	34.22
Bristol, City of	67.3	63.7	68.2	73.8	79.5	87.8	30.47
Reading	102.7	102.7	111.3	119.2	126.2	131.3	27.83
Bath and North East Somerset	65.9	57.7	66.8	66.9	69.9	78.9	19.77
Hertfordshire	28.5	27.2	28.7	27.3	26.6	32.0	12.54
Luton	40.7	46.4	41.0	38.2	40.9	45.3	11.34
Isle of Wight	52.2	54.1	57.1	58.1	57.9	57.0	9.32
Wokingham	13.5	13.4	13.5	14.0	14.9	14.7	8.97
Southampton	77.2	74.3	74.3	81.9	80.2	84.1	8.96
Brighton and Hove	158.6	164.0	164.7	158.0	160.2	171.8	8.30
Poole	63.7	63.8	69.2	70.5	69.5	68.6	7.80
North Somerset	23.7	24.0	24.4	27.4	28.7	25.1	5.75
Thurrock	26.0	25.1	27.3	28.4	27.3	27.0	4.07
Milton Keynes	35.4	35.6	37.5	37.3	38.5	36.5	3.12
Halton	45.8	43.0	42.0	42.1	44.0	46.6	1.70
Oxfordshire	59.9	61.7	64.9	63.3	62.3	60.7	1.23

¹¹⁴ <https://www.gov.uk/government/collections/bus-statistics>



Figure 12 – Top 10 areas for total passenger journeys per head of population ¹¹⁵

Area	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	% CHANGE
London	283.2	278.6	283.3	276.8	264.3	254.9	-10.00
Brighton and Hove	158.6	164.0	164.7	158.0	160.2	171.8	8.30
Nottingham	163.3	157.7	156.8	156.5	148.5	149.4	-8.51
Reading	102.7	102.7	111.3	119.2	126.2	131.3	27.83
Tyne and Wear ITA	115.6	111.5	109.4	107.4	104.1	101.2	-12.42
West Midlands ITA	102.6	99.7	100.3	97.7	94.2	92.4	-9.88
Bournemouth	95.7	94.2	96.3	96.5	91.6	88.2	-7.76
Bristol, City of	67.3	63.7	68.2	73.8	79.5	87.8	30.47
Southampton	77.2	74.3	74.3	81.9	80.2	84.1	8.96
Kingston upon Hull, City of	94.5	91.1	93.2	89.1	88.7	82.7	-12.44
York	80.7	74.8	75.6	77.6	80.1	80.5	-0.21

- 4.2. Only Reading, Brighton and Hove, and Bristol feature in both tables – meaning they have relatively high growth from a relatively high base.
- 4.3. Despite seeing a significant reduction in the number of bus trips per head of population, Tyne and Wear residents still make the fifth highest number of trips per head in the country, well ahead of Bristol. In addition, Nottingham, which has been much lauded over in recent years for its transport network, has seen a reduction in the number of bus trips per head, which could be related to bus passengers transferring to the tram system¹¹⁶.

There is a strong case for further and more systematic research into what the common factors are in relation to these relatively successful areas. Our initial view is that some factors stand out:

- Some areas have historically high levels of bus use, for example London and Tyne and Wear.
 - Some cities have limited commuter rail networks and have constrained road networks thus limiting some of the competition for the bus, for example York (and to some extent Brighton).
 - Some bus operators have made a concerted effort to match the product to the market including through research and development, continuous improvement and close working with the local authority (or ownership by the local authority, for example Reading and Nottingham).
- 4.4. The table on the next page aims to provide an initial comparison between a number of areas and a number of key factors that may be affecting patronage growth in each. The aim of producing this table was to see if there are any correlations or conclusions that can be drawn from the data. A list of possible correlations or conclusions follows the table.

¹¹⁵ <https://www.gov.uk/government/collections/bus-statistics>

¹¹⁶ Ibid



Figure 13 – area comparisons^{117 118 119 120 121 122 123}

	Constrained Centres		"Good bus territory"		Cities with strong bus growth	
	York	Brighton & Hove	Tyne and Wear	London	Reading	Bristol
Population (2017 mid year estimate)	208,163	288,155	1,129,538	8,825,001	163,075	459,252
Total bus patronage (2016/17)	16.8 million	49.7 million	114.3 million	2,240.3 million	21.4 million	39.9 million
Bus trips per passenger head (2016/17)	80.5	171.8	101.2	254.9	131.3	87.8
Bus trips per passenger head % change 2011/12 to 2016/17	-0.21%	8.30%	-12.42%	-10%	+27.8%	+30.47%
Average road speeds (2013 data)	20mph	16.8mph	23.7mph	16.3mph (Greater London)	14.4mph	15.1mph
Car Ownership Levels (Cars per 1,000 people)	455 cars	382 cars	343 cars (Newcastle)	303 cars (Greater London)	428 cars	445 cars
Hours of Operation	Generally 0500-midnight. Limited night network.	24 hours	Generally 0500-midnight. Limited Friday and Saturday night service.	24 hours	24 hours	24 hours
Simplicity of fares (number of single tickets)	4 single tickets on offer (First York)	3 single tickets on offer	Wide variation of tickets availability, generally based on distance	£1.50	£1.90	Fares start from £1 , but changes based on distance travelled
Youth ticketing offer	£1 single fare up to age 18 (First York)	£2.20 city saver for under 18s, or £1 outside of school times	£1 single fare up to age 18 on Stagecoach/Go North East.	Free for London residents under the age of 18	£1.40 (for under 18s)	Fares start from £1 for under 18s, but based on distance
Free evening parking (urban centres)	£1 per hour	£1 per hour	Yes - City of Newcastle	£7.5 per hour	£2 per hour	£1 per hour

4.5. Perhaps the strongest correlation found in this comparison is between low journey speeds and strong bus patronage growth. Brighton, Reading and Bristol all have average road speeds of less than 20mph and have seen bus patronage grow. Indeed, both Reading and Bristol have recorded reductions in customer satisfaction for the punctuality of bus services in the latest Transport Focus surveys¹²⁴, yet, patronage on buses has continued to grow. Although it is possible that growth within these networks is taking place on routes where the bus is subject to the least congestion, it could suggest that congestion can also generate bus patronage, as car drivers become more frustrated with driving.

¹¹⁷ <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/datasets/populationestimatesforukenglandandwalesscotlandandnorthernireland>

¹¹⁸ <https://www.gov.uk/government/collections/bus-statistics>

¹¹⁹ <https://www.gov.uk/government/statistics/congestion-on-local-authority-managed-a-roads-april-to-june-2013>

¹²⁰ https://www.racfoundation.org/assets/rac_foundation/content/downloadables/car%20ownership%20rates%20by%20local%20authority%20-%20december%202012.pdf

¹²¹ <https://www.gov.uk/government/statistics/vehicle-licensing-statistics-2017>

¹²² Various bus operator websites accessed 5/9/18

¹²³ Various City Council websites accessed 5/9/18

¹²⁴ <http://d3cez36w5wymxi.cloudfront.net/wp-content/uploads/2017/03/04160441/Bus-Passenger-Survey-Autumn-2016.pdf>



- 4.6. Another key service attribute in areas with strong patronage is the level of service offer to passengers. Research has demonstrated that operating a comprehensive, high frequency, 24/7 service is a key component to a strong bus network¹²⁵. Brighton and Hove, London, Reading and Bristol all have bus routes that operate 24 hours a day, which means that passengers can depend upon the bus no matter what time of day they wish to travel.
- 4.7. Beyond the areas discussed in the table, there are a few other success stories to highlight that are more limited in operation. Many of the ingredients needed for a strong service are said to exist in Poole near Bournemouth which has seen patronage growth due to a commitment to improve services. Transport Focus highlighted that active traffic enforcement, a well-placed bus station, strong operators and local authority investment have helped generate patronage growth¹²⁶.
- 4.8. There are other examples too of where through relatively high levels of research and development, and investment in a product that meets the specific needs of a local market, that bus services can perform well in a challenging market.
- 4.9. The Service 36 operated by Transdev between Ripon, Harrogate and Leeds up to every 10 minutes has for many years been seen as the gold standard of bus services serving what is one of the most prosperous parts of Yorkshire. These buses provide sumptuous leather seating, fast Wi-Fi, USB charging, masses of legroom and 2+1 seating on the top deck of the bus. The buses themselves boast little details that are so often overlooked when bus operators specify vehicles and yet add so much to the experience. This is a bus service that can genuinely appeal to car users.

Figure 14 – Transdev service 36 bus¹²⁷



- 4.10. A new bus franchising model on the island of Jersey has transformed the bus network and the vehicles that operate on it over the last few years. Patronage has grown by 32% between

¹²⁵ https://thredbo-conference-series.org/downloads/thredbo10_papers/thredbo10-themeA-White.pdf

¹²⁶ <https://www.transportfocus.org.uk/news-events-media/blog/want-happier-bus-passengers-heres-poole-recipe/>

¹²⁷ <https://www.busandcoachbuyer.com/transdev-harrogate-redefines-36/>



2012 and 2015¹²⁸ and has been positively received by residents of an island where car ownership is relatively high.

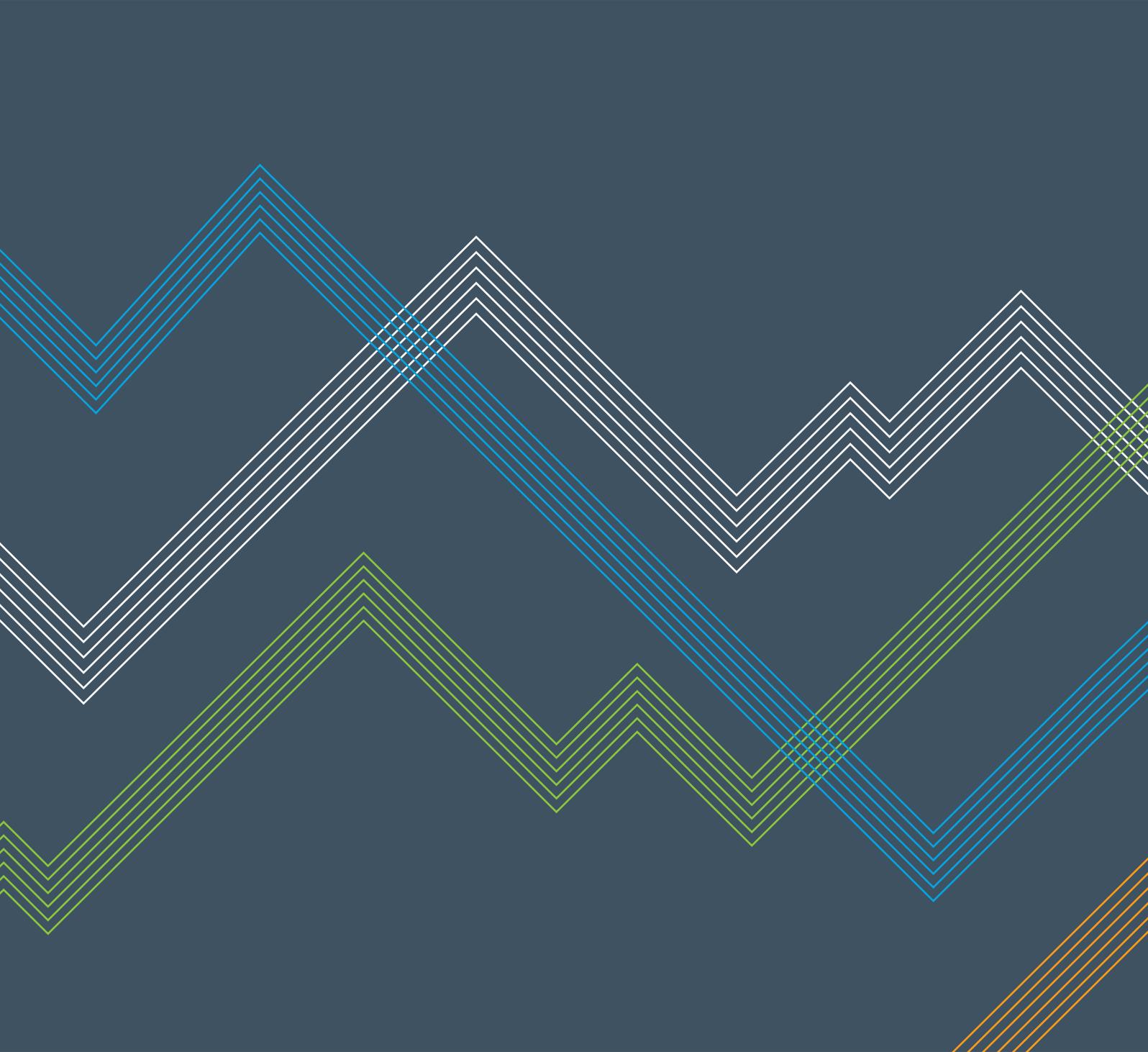
Where might the evidence base be strengthened?

- There could be a case for further research to substantiate or challenge the conclusions on the three common factors - particularly into the relationship between congestion and bus travel (as in, why is it that in some areas of high congestion and low traffic speeds bus patronage is high or growing?)

¹²⁸ <https://democracy.leeds.gov.uk/documents/s144378/App3%20HCT%20Group.pdf>



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