JONATHAN BRAY

What is the scope for boosting bus use?

Our analysis of the 'Intrinsic Bus Potential' of local authority areas in England shows why we need a new deal for the bus

"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."

These were words from Brian Souter last year, emphasising that despite being the main form of public transport across the country, research and development in the bus sector remains relatively low. Much of the debate about what is driving bus use has instead been based on assertion and gut instinct. And lots of the money that should be spent on research and development is spent on spin instead.

Our new research programme, which we launched earlier this year, seeks to change that. The latest research from this programme (carried out by Transport for Quality of Life), has taken a rigorous approach by analysing a mass of data sets across England to find the combination that best predicts levels of bus use by local authority district.

The research finds that six underlying conditions, when combined, can be used to predict levels of bus use with 85% accuracy. This is what the report calls the 'Intrinsic Bus Potential' (IBP) of an area. Those areas with a high IBP could be considered "good bus territory". So what are the six background factors that are driving bus use?

It's no secret that buses are often a lifeline for the less well-off in society, and so the index of multiple deprivation is one factor. The proportion of households living in rental accommodation and the working population defined as 'lower middle class' are two other related ones. The number of students, the working population travelling between two and 20 kilometres to work, and rush-hour traffic travel times complete the six.

It's important to note that individually these factors are not necessarily the most important determinants of bus use. However, when they are combined, they provide the best fit. Most, but not all, of the factors that combine to define good bus territory will not be a surprise to many in the industry - however the exact recipe for the secret sauce is still worth knowing. And a predictive power of 85% is impressive. The one factor of the six that is surprising, and somewhat counter-intuitive, is that places with longer rush-hour travel times (i.e. more congestion) are associated with higher levels of bus use. This rather undermines the frequent assertion from incumbent bus operators that the only thing wrong with bus services in the UK is congestion and lack of bus priority.

To be fair though it should be noted that longer journey times could well be a proxy for higher density urban areas and that the statistics are for traffic speeds in general (so do not take into account the existence of bus priority or not). However, even with that proviso the convenient obsession that the industry has with presenting the one thing not under their control, congestion, as the biggest determinant of bus use, isn't supported by this data-driven analysis.

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The report then goes further by looking at 25 areas where bus use is significantly higher than predicted by the six background factors. It's striking that 18 of the 25 fall into five geographical clusters: London local authorities (five), Tyne & Wear districts (three), Nottingham and three neighbouring districts, Oxford and three neighbouring districts and Brighton and its neighbour Lewes. The other seven are Birmingham, Liverpool, Leeds, Reading, Swindon, Crawley and Oadby and Wigston.

The research goes on to suggest some common reoccurring themes among these 25 areas which may have contributed to them outperforming their background conditions. These factors include higher levels of bus provision than the norm; a 'pro-bus' local context (defined as "where operators or the local authority (or both) have invested resource, research and development and management focus to ensure the bus 'product' is well-matched to the local market"). Other possible explainations are local factors, such as relatively low levels of commuter rail provision as well as a 'halo effect', in which some predominantly rural areas outperform their low intrinsic bus potential because they neighbour a city which is also out-performing. Examples here include the Vale of White Horse (which neighbours Oxford) and Lewes (which neighbours Brighton).

Bus regulation is a reoccurring theme, with a number of London boroughs outperforming their potential as London's regulated system has allowed for high service frequencies, the introduction of a flat fare and the development of the Oyster card which speeded up bus boarding.

The final potential explainer is the maintenance of a culture of bus use. Nottingham is a good example of an area which has maintained the habit. In 1981 commuter share was among the highest in the UK for the bus (at 36%). In the last census it still recorded one of the highest bus commute mode shares outside London. Admittedly it was substantially down (at 21%) - but it was miles better than 9% in nearby Derby and 14%

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in Leicester. And take a look at Sheffield where the bus had a 41% share of rush hour trips in 1981. Now it's just 15% in 2011.

Meanwhile, there are examples where a bus culture has been built more recently. For example, between 1991 and 2011, with bus regulation as the tool for service improvement, Hillingdon saw its rush hour bus market share increase. In short a bus culture is easy to lose, a job of work to maintain, and a major undertaking to build.

So what to make of all this? There are three headline findings.

Firstly, and disconcertingly, transport authorities and bus operators have no, or limited, influence over the background factors that best predict bus use, with four of the six factors being socio-economic rather than related to transport.

Secondly, the factors that correlate with high potential for bus use are most often found in urban areas, suggesting it is urban areas where the biggest absolute gains could be made in patronage.

Thirdly, there are common themes which can be found in those areas which outperform their potential. Some of these could be applied elsewhere, including a long term nurturing of a culture of bus use, something which is possible to build where it might currently be absent.

It is also somewhat scary that the research shows that even the most successful areas are only outperforming their intrinsic bus potential by relatively modest margins (valuable as that extra patronage is). And many of the outperforming areas are still experiencing absolute decline. So in other words even if every sinew is stretched to provide a quality bus service, the marginal difference you will make to what your geographical genetics dictate may well still not be enough to save you from continual patronage decline.

Or, to put it another way, the data is like a dead-eyed shark and it keeps coming at you. We are going to need a bigger funding boat! And for that to happen we are going to need to turn the recent welcome warm words on buses from our most senior politicians into a transformative new deal for the bus. That doesn't mean tinkering at the margins, it means year-on-year simpler, enhanced and ring-fenced funding for bus. Otherwise the data shows that in too many areas the downward escalator on patronage will be going down faster than we can run up it. ■

ABOUT THE AUTHOR

Jonathan Bray is the director of the Urban Transport Group. Throughout his career in policy and lobbying roles he has been at the frontline in bringing about more effective, sustainable and equitable transport policies.

RELATIONSHIP BETWEEN IBP AND BUS MODE COMMUTER SHARE ('BEST-PERFORMING' LOCAL AUTHORITY DISTRICTS HIGHLIGHTED)

Source: 'What scope for boosting bus use? An analysis of the Intrinsic Bus Potential of local authority areas in England.' Urban Transport Group