



To: Transport & Health Policy Makers, & Practitioners
From: Prof Adrian Davis, TRI, Edinburgh Napier University
Date: 24th February 2022
Subject: Essential Evidence 4 Scotland No.49: Impact of Covid-19 on Public Transport Use

Top Line: A shift away from public transport can be expected post-pandemic with more people using cars, and walking and cycling. There is a consequent need for policy interventions, targeted at specific groups of commuters, in order to break the loop of reductions in demand and supply of public transport services, which may be expected post-pandemic.

COVID-19 was declared a pandemic by the World Health Organisation in March 2020. The UK and Scottish Governments initially responded to the threat of COVID-19 by imposing a 'lockdown' to restrict everyday life activities to the essential minimum. Individuals' decisions to limit their travel, in order to reduce their own exposure to COVID-19, along with the implications of the Government imposed lockdown significantly affected transport and travel patterns. During 2020 there was a dramatic decrease in vehicular activity.¹ To examine intentions to use public transport in the future TRI researchers developed an online travel behaviour questionnaire for Scotland completed in February 2021 by a representative sample of 994 adults resident in Scotland.² This focused on daily travel as well as people's long-term travel habits, attitudes and preferences during the different pandemic phases as well as post-pandemic.³ Specifically, expectations related to the post-pandemic bus and train use were analysed to identify which socio-demographic, behavioural and perceptual factors are associated with a decrease of the demand for public transport.

Respondents were asked to rate how risky they perceived different types of transport in terms of the potential for contracting or spreading the virus. The majority of respondents viewed walking (92%) and cycling (93%) as low risk. In contrast, with reference to travelling by bus or train, 64% and 57% of respondents respectively considered these to be high-risk activities. Air travel was considered the most dangerous mode with 84% of respondents considering it a high-risk activity. The survey respondents also indicated that, after the COVID-19 pandemic was over (12 to 18 months ahead) when an effective vaccine has been deployed on a large scale, 45% of respondents expected to walk more, 29% expected to cycle more and 25% expected to drive their car more. In contrast, 42% of respondents anticipated flying less, 36% anticipated using buses less and 34% anticipated using trains less. For public transport, there is a larger proportion of respondents who intend to reduce their use when compared to those who anticipate increasing their use, whereas for car driving, walking and cycling more people think they will increase their use. For those intending to use public transport less in the future, the top three reasons given were: the possibility of becoming infected with COVID-19 (63%); lack of cleanliness (49%); and overcrowding (45%).

TRI researchers found that certain characteristics of respondents significantly influence future bus or train travel intentions. For those intending travel the same amount or more by bus in the future, this includes those with a long-term illness or disability that prevents them from working are significantly more likely than those in other forms of employment (e.g. part employment, self-employed, retired, student). Those who live in the Lothian region are significantly more likely than those from other regions to travel more by bus, as are and those living in households with three or more occupants. One behavioural factor gauging mode of travel used prior to COVID-19 also significantly influenced public transport travel intentions. Those who used cars or vans three or more times per week prior to COVID-19, were found to be significantly more likely to travel less by bus and train following the pandemic, in comparison to those who do not frequently use a personal vehicle.

¹ Transport Scotland, 2021 COVID-19: Scotland's transport and travel trends during the first six months of the Pandemic <https://www.transport.gov.scot/publication/covid-19-scotland-s-transport-and-travel-trends-during-the-first-six-months-of-the-pandemic/> (accessed 24.02.22)

² Funded by the Scottish Funding Council.

³ Downey, L., Fonzone, A., Fountas, G., Semple, T. 2022 The Impact of COVID-19 on Future Public Transport Use in Scotland. 101st Annual Meeting of the Transportation Research Board, Washington, D.C.