

Editorial: How the transport industry is changing due to Covid-19

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Welcome to this sixth issue of 2024 of the Institution of Civil Engineers' (ICE) *Transport* journal on “*Themed Issue: How the transport industry is changing due to Covid-19*”. I am glad to organise this special issue related on effect on Covid-19 pandemic on transportation area. The papers includes various studies which investigate effects of pandemic on rail and public transport, mobility, transportation behaviors and preferences of passengers.

During and after COVID-19 pandemic, the transport industry undergone significant changes, which reshaped mobility patterns and accelerated several pre-existing trends. The pandemic highlighted the critical role of transport in maintaining economic stability, but also exposed vulnerabilities such as the reliance on mass transit systems and the challenges of ensuring public safety in confined spaces. As a result, transport operators and governments had to adapt quickly, implementing new health protocols, reducing capacity and embracing digital technologies for contactless payments and real-time service updates. Additionally, shifting work patterns, like the rise of remote work and flexible hours, decreased demand for traditional peak-hour commuting. This change prompted a rethinking of urban mobility models, with more emphasis on active travel options like cycling and walking, and the adoption of shared, micro-mobility services such as electric scooters and bikes. The increased focus on sustainability and resilience also accelerated the transition towards greener transportation solutions, such as electric vehicles and the expansion of low-emission zones in urban areas.

In the post-pandemic world, the transport industry faces the dual challenge of rebuilding public trust in mass transit systems while embracing innovations that promote efficiency, safety, and sustainability. This period of disruption has laid the groundwork for a more adaptable and resilient transportation ecosystem.

In the first paper, Ekici (2024) investigates the impact of the COVID-19 pandemic on rail passenger traffic in Türkiye using trip generation models. The study utilizes daily station-to-station rail passenger flow data from 2011 to 2019 and applies region-based models to estimate the expected rail passenger flow (RPF) in 2020 under a no-pandemic scenario. By comparing these modelled values with the observed data, the study quantifies the loss in rail traffic due to the pandemic, revealing an approximate reduction of 21 million passengers. The paper emphasizes the importance of regional analysis over a one-size-fits-all model, showing

that geographical segmentation provides more accurate insights into travel behaviors. The findings highlight the substantial impact of COVID-19 on public transportation and underscore the need for contingency planning and strategic investments to mitigate future disruptions in the transport sector.

The second paper by Rizelioğlu *et al.* (2024) examine the impact of the COVID-19 pandemic on public transportation usage. It compares pre- and post-pandemic public transport usage, focusing on buses, trams, and light rail systems. Using survey data from 767 participants and ordinal logit models, the study identifies key factors influencing transportation preferences before and during the pandemic. Before the pandemic, factors like age, gender, and distance between home and work were significant, while during the pandemic, educational status and distance played a more prominent role. The study also explored potential shifts towards active transportation modes like walking, cycling, and e-scooter use, contingent on the availability of safe, separated routes. The findings provide valuable insights for sustainable transportation planning, particularly during crises like pandemics.

In their study, Kuma and Ngwah (2024) evaluate the impact of the COVID-19 pandemic on the transport sector in Douala, Cameroon. The study highlights how government-imposed restrictions such as lockdowns, curfews, and limits on public gatherings significantly reduced passenger mobility, especially in intra-urban and inter-urban transport. The informal transportation sector, which dominates in Sub-Saharan Africa, experienced severe economic downturns, with many transport operators, including taxi and bus drivers, facing financial hardships and layoffs. Through interviews with 190 key informants, including drivers and transport agency owners, the study underscores the challenges posed by reduced demand and passenger occupancy rates. It also provides policy recommendations aimed at building a more resilient transport system capable of withstanding future pandemics, such as investing in better road infrastructure, digital platforms, and inclusive policy-making.

Karimi *et al.* (2024) explore how the COVID-19 pandemic affected the use of different transport modes in Tehran, Iran. The authors conducted two cross-sectional surveys during and after the pandemic, using multivariate ordered logit models to analyse the frequency of use of private cars, public transport, collective taxis, and ride-hailing services. The study revealed that the pandemic

caused a reduction in public transport usage and increased reliance on private cars. However, post-pandemic, the metro emerged as a dominant mode, gaining a significant share of commuters, while private car usage decreased. Ride-hailing services demonstrated resilience, with their share increasing in the post-pandemic period. The findings highlight shifting travel behaviors and the competition or complementarity among different transport modes, emphasising the need for policy adjustments to promote sustainable and resilient urban mobility in a post-pandemic world.

In the study conducted by Magriço *et al.* (2024) analyse the long-term effects of the COVID-19 pandemic on commuting patterns in Great Britain, focusing on rail commuting. The study is based on a longitudinal survey of 3,826 respondents, comparing commuting behaviors pre-pandemic to those in 2023. The findings reveal a significant reduction in commuting frequency, with an average decrease of 1.18 days per week in commuting and a corresponding increase of 0.85 days per week in working from home (WFH). The study highlights that professional and office-based occupations saw the greatest shift towards WFH, and younger individuals and those with shorter commutes are commuting more frequently post-pandemic. The research also notes that rail commuting in February 2023 was at 78% of pre-pandemic levels, and changes in home locations contributed to some shifts in commuting behaviour. Overall, the pandemic has led to lasting changes in commuting habits, particularly towards hybrid work models.

In the last and final paper, Murat and Cakici (2024) investigate how the COVID-19 pandemic influenced people's transportation behaviors and preferences. Based on a survey of 471 participants, the study explores changes in transport mode usage before and after the pandemic. The results show a marked shift from public transportation, like buses and minibuses, to private vehicles, driven largely by concerns over hygiene, occupancy rates, and ventilation. Public transit systems, especially metrobus, were perceived as high-risk environments during the pandemic. The study emphasizes the importance of redesigning public transport to address these concerns, incorporating features like improved hygiene, reduced occupancy, and flexible schedules. The findings highlight the need for transportation systems to adapt to evolving user preferences in a post-pandemic world.

In summary, a total of six papers on effect of Covid-19 pandemic is important for future studies, transportation activities, planning studies during the new pandemics. This issue covers many study all around the world related on Covid-19. Thus, it is covering various examples from different countries. I am glad to share that the results of the published researches in the published papers will have great contributions for the future studies.

On behalf of the Editorial Board of the journal, I would like to thank the authors who shared their findings with the transportation community and the reviewers of the journal for their contributions in ensuring high quality peer-reviewed papers in this issue. You can discuss the papers or send you comments to support@emerald.com.

As a last remind, I recommend you to see the Ahead of Print on Transport Virtual Library home page to see our latest transport related articles. Also, please do not hesitate to email me if you have any questions or comments about this issue.

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