



Editorial

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Editorial

The COVID-19 pandemic has been (and at this moment still is) a global health crisis which impacted the life of so many of us. Not only the medical footprint of this pandemic was enormous, also its mental-health fallout will take us many more years to understand in full detail. Also the societal impacts and behavioural patterns of the post COVID-19 era are still hard to foresee. Several scholars believe that the fallout of the crisis is expected to fundamentally change business industries and customers' needs. With this in mind, the *International Journal of Urban Sciences* has launched a special issue related to the behavioural change of activities and travel in response to the pandemic disease. Indeed, mobility patterns and transport are simply a derived demand, i.e. derived from activities we do, and if society is to change fundamentally, also mobility will follow this evolution without any doubt.

We are proud to present to you in this special issue a selection of seven papers, which went through a rigorous blind review process, nicely illustrating the aforementioned societal and behavioural changes due to COVID-19. A summary of the different contributions is mentioned below.

In a first paper, *Abbas Ziafati Bafarasat* conducted a meta-analysis of COVID-19 lessons to primarily characterize the application of anticontagion strategies that are situated in their contextual specifications. To guide prior preparations for future application of pandemic management strategies, this paper nicely consolidates lessons learned in implementation of situated strategies and proposes preparations at the national level for elimination, at the local/community level for suppression, and at the regional level for mitigation.

After that, the paper by *Muhammad Ahsanul Habib and Md Asif Hasan Anik* examined the long-term impacts of COVID-19 using an integrated transport and land-use modelling system. Specific behavioural attributes of households associated with and without a COVID-19 scenario are modelled and simulated up to year 2030 within an integrated transport, land-use and energy model. Apart from the metrological and technical contributions, the results of this study will offer transport and land-use planners insights into how households' long-term decision making may evolve in the future due to the COVID-19 crisis and help develop policies to continue focusing on the sustainability goals for communities.

In a first study from the United States, *Hakan Yilmazkuday* investigated the welfare costs of staying at home due to COVID-19 across socio-economic and demographic groups using daily census block group level data from the U.S.A. The empirical results provide evidence for significant heterogeneity across census block groups regarding the welfare effects of staying at home. This heterogeneity is further used to obtain measures of welfare changes for different socioeconomic and demographic groups at the national level.

Furthermore, in a study conducted by *Jody Liu, James Gross and Jaehyun Ha*, GPS location data across 3108 counties in the U.S. mainland was used to assess the effects of income and supermarket availability on travel reduction during the COVID-19 pandemic. Specifically, the authors found the reduction of both frequency and distance of trips is negatively correlated to both median income and supermarket density. The authors conclude that individual choice in adherence to staying-at-home is less dependent on the lockdown measures and more influenced by financial capacity and access to necessary goods and services.

Next, *Rosa Arroyo, Lidón Mars and Tomás Ruiz* take us back to Spain for studying COVID-19 there. Data collected through a web-survey from 1653 participants is studied in this paper. The information analysed is related to the satisfaction of the basic psychological needs (autonomy, competence and relatedness) and positive and negative effects. Activity-travel data and sociodemographic characteristics are also considered in the paper. Apart from these interesting results, lessons are also learned to improve urban planning during a pandemic.



The final two papers deal with COVID-19 in South Korea. In their paper, *Miyoung Bhin and Seulki Son* aim to develop a method to characterize changes of travel behaviour under pandemic by examining changes of bus use frequency of Gyeonggi Province, South Korea in response to COVID-19. A set of mathematical models are established to summarize the bus use frequency distribution across bus stops and its change under COVID-19. Several interesting results were found, suggesting important implications to the future transportation services policy under the long lasting and/or recursive pandemic.

Likewise, the study by *Moon-Hyun Kim, Jiwon Lee and Tae-Hyoung Tommy Gim* empirically examined how the perception of urban spaces was changed by COVID-19 and how it influenced the choice of travel modes in the Seoul Metropolitan Area, South Korea. A structural equation model showed that changes in individual cognition and positive perception of policy changes during COVID-19 change their perception of multi-use facilities negatively compared to before the COVID-19 outbreak.

Collectively, the contributions to this Special Issue provide evidence and timely insights into these remarkable 2 last years of COVID-19, and we are sure it will inspire researchers also in the years to come to develop new theoretical insights and push forth new empirical evidence on this topic. Because indeed, while vaccinations will hopefully finally win the battle against this pandemic, the research topic which emerged from has only just started and it will create enormous opportunities in many years to come for social sciences and for better understanding human behaviour and transport.

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