

Telework Beyond the COVID-19 Pandemic: Exploring Residential Density and Travel Behavior

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Keywords

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Introduction

Alongside an overall increase in both the extent of ICT infrastructure and the attention paid to work-life balance, the COVID-19 pandemic was a clear catalyst for teleworking behavior as this was the only option for many companies to maintain business continuity. Teleworking has a number of implications for individual workers, for companies, and for communities, such as changes in mental and physical health, in the work sphere, in work-life balance, in equity in the skills divide, in the demand for space and the urban (or rural) form, and in demand for and patterns of daily mobility. Therefore, understanding teleworking and travel behavior as the COVID-19 pandemic progressed and thereafter can identify profiles more likely telework and future mobility trends among them. This research aims to understand differences in travel behavior and satisfaction, residential urbanization, and sociodemographic characteristics among four profiles of employed people in order to indicate trends regarding teleworking options.

Data and Methods

Three rounds of surveys were distributed to residents ($n=474$) of Flanders using convenience sampling at the onset of the pandemic (20 April to 4 May 2020), one year into the pandemic (23 April to 6 May 2021), and after all governmental restrictions of the pandemic were no longer in place (6 October to 30 November 2022). The initial two surveys targeted information relating to travel behavior during the pandemic and identified individuals that were forced to telework due to pandemic regulations, while the third survey specifically targeted teleworkers and their travel behavior after the end of the pandemic.

ANOVA mean-comparison and Chi-squared tests were performed to explore how residential population density, travel satisfaction, necessary trip characteristics (frequency, duration, distance, and mode), and sociodemographic characteristics (age, gender, education, employment, income, and living with child(ren)) differed between the four teleworking profiles, and binary logistic regression models estimated the likelihood of a participant belonging to each of the four teleworking profiles.

Results

Four profiles of workers were identified based on those who can/do not telework, those who began to telework during the COVID-19 pandemic and have continued, those who were forced to telework during the COVID-19 pandemic and have returned to work physically, and those who telework before, during, and after the pandemic situation.

Those continuing to telework after the pandemic had lower residential population density, and those returning to work in areas with higher density, indicating that the choice to telework after the COVID-19 pandemic was related to living in more- or less-dense areas. Those unable to telework had the highest frequency of necessary (non-commute) trips and traveled for the longest distances, indicating that this group is the most mobile.

Those returning to work physically after the pandemic took more necessary trips with active modes for shorter distances, but were least satisfied with their trips. Given their higher residential population density, this indicates that they might have greater accessibility to most necessary

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destinations but that traffic situations might be more stressful. This group was also more likely to be female (continuing teleworkers were more likely male) and living with children, and less likely to be employed full time. Those teleworking long term were older, employed full time, and in the highest income category. Therefore, perhaps highly skilled workers do not require as much supervision as their younger counterparts, making it easier for employers to trust and manage them remotely.

Conclusion

Increases in and normalization of teleworking following the COVID-19 pandemic are related to work-life balance, equity, the urban form, and travel patterns, and understanding these relationships can aid in predicting future teleworking trends and informing policy to support them. First, policy that encourages employers to provide the option to telework (where possible) could offer more equitable access to employment opportunities, and to provide flexible teleworking options for those with complicated activity and travel patterns could improve work-life balance, especially for women. Second, policy accommodating teleworkers in urban areas might be less crucial than in rural areas, but urban commuters could alternatively benefit from public transport systems with frequent and diverse stops supporting trip-chaining without a car. Finally, it is important that employers are cognizant of the competencies of employees with varying experience levels in order to provide a supportive and positive teleworking environment.