THE TRAVEL BEHAVIORAL CHANGES IN SUSTAINABLE TRANSPORTATION DURING THE COVID-19 PANDEMIC AND ITS PATTERNS IN POST-PANDEMIC IN KASHIWA CITY

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In the concept of a sustainable society, one of the primary tasks is to fully accomplish the utilization of sustainable transportation. In specific, the mobility of walking, biking, public transiting, clean energy vehicles, and shared mobility. Increasing the public awareness and the utilization rate of the above-mentioned sustainable transportation in all kinds of situations is an important, yet challenging topic. This paper will look for solutions that will maintain the utilization of sustainable mobility during the pandemic period and provide policy-making suggestions for the post-pandemic recovery. Under the Covid-19 pandemic, a drastic change in the travel behavior of sustainable transportation could be observed in many regions of the world. The increased number of walking and biking, and the decreasing number of public transiting and shared mobility. The question then comes as follows: what factors triggered these changes? How long will the impact last? Will the citizens continue their current travel behavior even in the post-pandemic? How much do the factors of risk perception, social anxiety, governmental policies, and working and studying style, change their travel behavior? Therefore, studies on travel behavior during pandemics and the prediction of post-pandemic travel behavior are necessary.

To clearly understand the changes in utilization frequency, transport mode, travel purposes, and Covid-19 risk perception, it is necessary to compare the patterns of travel before and during the pandemic. This study also aims to identify the driving forces behind changes in individuals' transportation method changes, assess the perceived Covid-19 infection risk in each sustainable transportation, the information sources, the preferences in choosing a transportation method, the impact of governmental policies and social pressure. Overall, this paper is planning to fill the following research gap: Lack of empirical data on the utilization rate of each sustainable transportation method before and during the pandemic; The perceived infection risk did not cover each sustainable transportation method; In term of governmental policy influence, only focused on the impact of restriction policies, such as lockdown, and excluded the policies that stimulate individuals' incentives to go outside.

To address the above-mentioned research gaps, I would like to introduce the research objectives in this paper. The general objective is to assess the changes in the utilization of sustainable transportation for Kashiwa city's residents. Compare the travel behavior before and during the pandemic. Compare the travel behavior before and during the pandemic. Estimate the influence of each variable on travel behavior changes. The specific objectives are to: To explore citizens' risk perception towards each

sustainable transportation mode during the pandemic; To compare the public acceptance and utilizing frequency of each transport mode in normal and pandemic periods; To compare the differences between city-region situation and prefecture/nation-scale; To propose transport-related recommendations for future policymaking. To meet these targets, the methodology I will be using are secondary data analysis, interviews, and questionnaires.

Keywords: *Sustainable transportation, covid-19 pandemic, travel behavior changes, risk perception.*