



Gender Disparity in Transportation and Its Impact on Sustainable Urban Mobility and Climate Change Adaptation

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ABSTRACT

In rapidly urbanizing cities, equitable access to sustainable transportation is vital for both gender equality and climate change mitigation. Gender disparities in transportation choices, particularly for women in low-income communities, exacerbate challenges related to safety, affordability, and infrastructure, often leading to higher costs for women, known as the "pink tax" (Kaufman et al., 2018). These disparities affect urban mobility patterns, emissions, and the overall carbon footprint of cities.

This study explores how gendered transportation choices—shaped by safety concerns, caregiving roles, and economic constraints—differ between men and women, with a focus on lower-income groups. It examines how these differences in travel behaviour influence climate change adaptation and sustainability goals, especially in cities like Delhi, India. The research uses integrated choice modelling and both qualitative and quantitative data to assess the impact of gendered travel patterns on carbon emissions, public transit use, and the potential for adopting low-carbon alternatives.

The findings highlight the need for gender-responsive, sustainable transportation systems that address the specific mobility needs of women. By designing inclusive, safe, and affordable transport options, cities can reduce emissions, promote climate resilience, and foster gender equality in urban mobility.

Keywords: Sustainable transportation, Urban Mobility, Gender disparity, Inclusive transportation system, Climate change mitigation