AN ABSTRACT OF A THESIS

MODE CHOICE BEHAVIOR OF UNIVERSITY STUDENTS: IMPACT OF URBAN FORM, LIFE STYLE, AND SOCIOECONOMIC CHARACTERISTICS

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The primary objective of this thesis was to investigate the travel behavior of university students for the trip to campus. Tennessee Technological University (TTU) campus, located in a small urban area, serves as the test bed for the research.

A mail-back questionnaire, requesting information on personal characteristics as well as revealed and stated preferences, was sent to six thousand TTU students. At the end of the survey period the 379 completed questionnaires received as well as data from a transportation-system inventory were analyzed to determine facility and user-behavior variables likely to influence mode choice. Results of the descriptive analyses indicated that convenience, weather, and making multiple trips during the day were the primary reasons for choosing the auto-driver mode for the trip to school. For those who walked, the primary reasons for selecting that mode were convenience, exercise, and cost. Safety and deficiencies in the pedestrian infrastructure were identified by some of the respondents to be the primary reasons for not walking, particularly females. Lack of bike lanes and appropriately located bike racks were the reasons cited by some for not biking to campus. Responses to stated preference questions were used to judge how students would respond to specific changes in pricing or the transport infrastructure leading to and on the TTU campus. In particular, the data suggest that a parking permit price in excess of $60 would cause a significant reduction in the percentage of students who drive to campus.

Finally, to explore trade-offs among the variables, a multinomial logit mode choice model was developed using variables highlighted in the descriptive analyses. The estimation output showed the variables influencing choice of mode by students include transportation system, user-behavior, and environmental characteristics.