

## Elderly Households' Travel Expenditure Patterns: Analysis of Double Hurdle Model

Using the 1995 Consumer Expenditure Survey, this study (1) examines the travel-related expenditure patterns of elderly households headed by those who are 55 years old or older; and (2) uses a double-hurdle model to identify factors that influence the decision to travel and the level of travel expenditures among the elderly consumers. Results from this study provide valuable information about senior travelers and the information can be used to serve them by marketers.

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In 1996, the percentage of the U.S. population which was 55 years old or older was 20.8 %. The percentage is projected to be 23% by the year 2005 (U.S Bureau of the Census, 1998). As a group, the economic status of the elderly has been improved and they tend to have large amount of discretionary income and more leisure time (Bryant, 1990; Hong & Swanson, 1995). With more available leisure time, they tend to be frequent travelers and constitute significant portion of the expenditure in travel market (Chon & Singh, 1995). The major objectives of this study are: 1) to examine expenditure patterns among three elderly groups for five distinct categories: food, lodging, transportation, entertainment, and other expenses; 2) to identify factors associated with the decision to travel and the level of the travel-related expenditures; and 3) to draw implications for consumer educators and travel industry.

This study used the first quarter data of the 1995 Consumer Expenditure Survey (CE) and the sample for this study consists of 1,588 elderly: 588 young-old (55-64), 563 old (65-74) and 437 very-old (74 over). Among 1,588 elderly, 433 respondents (27.3%) traveled during the survey period and reported expenditure related to tourism product and services.

Four groups of independent variables were examined. Socio-demographic variables were ethnicity, education, marital status, household size, and region. Economic variables included after-tax income, liquid assets, illiquid assets, and homeownership. Age, age squared, and health expenditures were included to reflect the health status of the respondent. Employment status captured time constraint faced by the elderly. Double hurdle model has two steps of estimation: estimating a model of the probability of traveling using probit and truncated regression analysis for the model of amount spent for trips (Blundell & Meghir, 1987).

Transportation (\$1,308) was found to be the greatest components of the total expenditures, followed by food (\$807), lodging (\$572), sightseeing and entertainment (\$323), and other expenditures (\$135) annually. Probit model suggest that race, education, marital status, and economic factors, such as after-tax income, illiquid assets, and home ownership determine whether or not to travel among the elderly. However, age, health care expenditures, and household income were significant in the truncated regression model. These findings clearly illustrate the importance of the two step approach to model travel behavior of the elderly.

### References

- Blundell, R., & Meghir, C. (1987). Bivariate alternatives to the tobit model. *Journal of Econometrics*, *34*, 179-200.
- Bryant, W. K. (1992, Winter). Human capital, time use, and other family behavior. *Journal of Family and Economic Issues*, *13*(4), 395-405.
- Chon, K., & Singh, A. (1995). Marketing resorts to 2000: review of trends in the USA. *Tourism Management*, *16*(6), 463-469.
- Hong, G. S. & Swanson, P.M. (1995). Comparison of financial well-being of older women: 1977-1989. *Financial Counseling and Planning*, *6*, 129-138.
- U. S. Bureau of the Census (1998). *Statistical abstract of the United States: 1998* (118<sup>th</sup> ed.) Washington, D.C.: U.S. Government Printing Office.

### Endnotes

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