Abstract

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Essays on Modeling Limited Dependent Variables
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My dissertation research includes three essays that utilize discrete choice/limited dependent modeling applied to problems in industrial organization and labor markets.

The first paper provides a new explanation for the existence of quantity surcharges that occur in some food products. Quantity surcharges occur when a larger-sized package of a product has a higher per-unit price then its smaller-sized counterpart. I hypothesize that different sizes the same product are imperfect substitutes and thus are differentiated products. To test this hypothesis, I utilize grocery store scanner data with canned tuna of varying sizes. I estimate the demand for each type of tuna and the associated cross-price elasticities. A random coefficients logit demand approach to calculate elasticities. There is evidence to support the hypothesis that quantity surcharges in canned tuna are driven by firms catering to heterogeneous consumer preferences.

Next, there are two papers examining issues in the labor market. Both papers consider the decision to leave a job. The first one asks what affects child care providers' duration of employment. The child care industry commonly experiences difficulties in retaining employees. The extremely high employee turnover rate is a threat to quality of care. If child care quality is compromised, it can negatively affect the child's cognitive and social-emotional development. The data used in this analysis is from surveys that were self-administered by participating child care center directors over nine years regarding both individual employees and child care center characteristics. Factors considered include an employee's wages, benefits, position description, age-group assignment, education, center characteristics, and other employee demographic variables.

The third paper in this dissertation examines the retirement decisions of university faculty. Approximately one-half of all U.S. faculty in higher education are older than 50 years, and more than two-thirds of payrolls are tied up with these faculty. It is apparent that a "generation turnover" of these faculty members is beginning to occur as they retire in large numbers. However, since the removal of mandatory faculty retirement in 1994, it is difficult to make precise predictions of when an individual faculty member will retire. This study investigates the retirement decisions of faculty using survey data collected for this purpose at a major land-grant university. Two models are estimated. The estimation results from the proportional Cox hazard model suggest that if a faculty member has already established a program to save for retirement, then he/she will be more likely to retire. The estimation results from the nested model suggest that health and financial preparedness increase the likelihood of acceptance of early phased retirement programs. This analysis has important implications for both individual faculty members and the University as an employer.