



Economic and Econometric Aspects of Time Use and Health

All individuals are endowed with the same time budgets -- 1,440 minutes per day -- but time use patterns differ owing to heterogeneity in preferences and other constraints. Appealing to a Becker-Grossman health production model, the manner in which time is used has obvious implications for health outcomes. For instance, in today's health policy arena there is considerable discussion, but little conclusive strategy, about how to improve health outcomes by increasing levels of physical activity. Understanding how time is used by individuals thus becomes a critical element of understanding how to design strategies to encourage better health outcomes through healthier uses of time. This presentation will summarize and synthesize findings from three complementary studies on time use and health that are currently being pursued.

First, I will present empirical results from a study undertaken with Stephanie Robert that uses the American Time Use Surveys to understand the determinants of time spent engaged in health-promoting physical activities. The results suggest some significant differences in health-promoting time use patterns across a variety of socioeconomic and environmental characteristics.

Second, since the analysis of time use data raises some important econometric issues, I will describe various econometric methodologies and strategies for analyzing doubly-bounded multivariate share data of the sort that arise from time diaries. A multivariate version of the fractional logit model is proposed as a simple, robust estimation strategy for such data.

Finally, although the time use data being used in this research do not permit "multi-tasking" -- i.e. multiple activities being pursued at the same point in time -- the opportunities for multi-tasking are significant and potentially important (e.g. caring for children). As such, I will present some ideas on how multi-tasking or polychronicity might be understood conceptually and studied empirically.