

A dynamic panel analysis of smoking behavior

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Abstract

This study is the first dynamic panel analysis to examine how smoking behavior relates to time preference. The analysis is based on a Japanese questionnaire panel survey. By controlling for the state-dependency on which smoking participation strongly depends on the smoking status in the previous year, the probability of smoking participation is found to be positively associated with personal discount rates. Due to state-dependency, the long-run marginal effect of an increase in time preference by one unit of S.D. on smoking participation is shown to be 0.3–0.4 percentage-points larger than its short-run marginal effect. A comparison of associations between time preference and smoking participation in static and dynamic models reveals that an omitted variable bias would occur if, as in previous studies, static models were adopted for regression. The state-dependency of smoking participation is stronger as the number of cigarettes consumed in the previous year is larger. Male respondents exhibit stronger state-dependency in smoking than females. The gender gap partially disappears when I control for the effect of having children.

Keywords: Dynamic Panel Analysis, Time Preference, State Dependence

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