

**Stony Brook University  
The Graduate School**

**Doctoral Defense Announcement**

**Abstract**

**Initiation and Addiction: An Analysis of Adolescent Smoking Behavior**

**By**

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The aim of the dissertation is to evaluate the effectiveness of prices and tobacco tax policies as a mechanism for reducing smoking rates among adolescents. Advocating prices and tax as the premier policy tool is largely due to the assumption that, since on average youths exhibit a more elastic demand for cigarettes, prices are an effective tool to reduce take-up. In order for this policy to effectively reduce smoking, and subsequent national health, it must be the case that any other factors that influence propensity to smoke are captured in a reservation price and ultimately willingness to pay. Moving beyond the conventional definition of smoking to a definition that recognizes the complex nature of addiction by categorizing smoking into various stages of addiction, we learn that prices necessarily are not an efficient instrument to curtail smoking among some subgroups in the population. The effects of prices are not homogeneous among different stages of addiction and the conditional demand elasticities are also not the same across the various stages of addiction. Unobserved heterogeneity is significant and therefore was a problem in previous studies. We account for a significant portion of that unobserved heterogeneity by controlling for peer and family influences with a unique set of valid indicators of each. We not only control for these effects simultaneously but also measure it in a more rigorous way than it was done in the literature. Our parent measures are drawn from not only parents' smoking behavior but also through a parent-child relationship index that was constructed by taking the perspective regarding the relationship from the parents as well as the adolescents point of view. Peer effects were measured by identifying the individual's nominated friends and using their report. We also control for self-reported peer measures. We find that using our constructed peer measures significantly alters the effect of prices, by making it insignificant. Increase in prices will not achieve target reductions of adolescent smoking among those who continue to be around peers who smoke and live in household where accesses to cigarettes are easy.

**Date:** May 3<sup>rd</sup>, 2007  
**Time:** 1:00pm  
**Place:** SBS 6<sup>th</sup> Floor Library

**Program:** Economics  
**Advisor:** Debra S. Dwyer