

Tobacco Taxation and the Heterogeneity of Smokers' Responses to Price Increases

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Abstract : This paper aims at contributing to the understanding of smokers' responses to cigarette prices increases with a focus on heterogeneity, both across individuals and price levels. To do this, a stated preference quasi-experimental design grounded in a random utility framework is proposed to evaluate the effect on smokers' utility of the price level and variation, along with social conditioning and health impact perception. The analysis is based on individual-level data drawn from a unique survey gathering very detailed information on Italian smokers' habits. In particular, qualitative information on the individual reactions triggered by changes in prices of different magnitude and composition are exploited. The main findings stemming from the analysis are the following; the average price elasticity of cigarette consumption is comparable with previous estimates for advanced economies (-.32). However, the decomposition of this result across five latent-classes of smokers, reveals extreme heterogeneity in terms of price responsiveness, implying a potential price elasticity that ranges between 0.05 to almost 1. Such heterogeneity is in part explained by observable characteristics such as age, income, gender, education as well as (current and lagged) smoking intensity. Moreover, price responsiveness is far from being independent from the size of the prospected price increase. Finally, by comparing even and uneven price variations, it is shown that uniform across-brand price increases are able to limit the scope of product substitutions and downgrade. Estimated price-response heterogeneity has significant implications for tax policy. Among them, first, it provides evidence and a rationale for why the aggregate price elasticity is likely to follow a strictly increasing pattern as a function of the experienced price variation. This information is crucial for forecasting the effect of a given tax-driven price change on tax revenue. Second, it provides some guidance on how to design excise tax reforms to balance public health and revenue goals.

Keywords : smoking behaviour, preference heterogeneity, price responsiveness, cigarette taxation, random utility models

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