

The association between state value-added taxes in tobacco use in India: Evidence from GATS and TCP India Survey

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Abstract

Introduction: State value-added taxes (VAT) on tobacco products have been increased significantly in recent years in India. Evidence on how these VATs were associated with smoking is highly needed.

Methods: State bidi and cigarette VAT rates were linked to Global Adult Tobacco Survey (GATS) India 2009–2010 and Tobacco Control Policy (TCP) India Survey waves 1 (2010–2011) and 2 (2012–2013), respectively. These linked data were used to analyze the associations between bidi VAT rates and bidi smoking, between cigarette VAT rates and cigarette smoking, and between the two VAT rates and dual use of bidis and cigarettes. Weighted logistic regressions were employed to examine GATS cross-sectional data, whereas Generalized Estimating Equations (GEE) were employed to examine longitudinal TCP data. We further stratified the analyses by gender.

Results: A 10% increase in cigarette VAT rates was associated with a 6.5% ($p < 0.001$) decrease in dual use of cigarettes and bidis among adults and a 0.9% decrease ($p < 0.05$) in cigarette smoking among males in TCP; and with a 21.6% decrease ($p < 0.05$) in dual use among adults and a 17.2% decrease ($p < 0.001$) in cigarette smoking among males in GATS. TCP analyses controlling for state fixed effects are less likely to be biased and indicate a cigarette price elasticity of -0.44 . As female smoking prevalence was extremely low, these associations were non-significant for females.

Conclusions: Higher state cigarette VAT rates in India were significantly associated with lower cigarette smoking and lower dual use of cigarettes and bidis. Increasing state VAT rates may significantly reduce smoking in India.

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