The Impact of Different Tax Structures on Retail Price of Other Tobacco Products

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Background
- Why the effectiveness of raising tobacco use has been well-documented, very little is known about how the excise tax on tobacco products may affect the effectiveness of price policies.
- Excise tax structure is defined by the tax base and whether different rates are imposed. A specific excise tax is a monetary tax levied on the quantity of tobacco products, and an ad valorem excise tax is a tax levied as a percentage of the value of tobacco products.
- Limited evidence shows that, compared to a uniform specific excise tax system, other systems are associated with greater price variability and opportunities for tax avoidance.
- However, very little is known about the impact of the structure of excise tax on other tobacco products on retail prices of other tobacco products.

Study Aim
- To assess the impact of tax structure changes for other tobacco products on retail prices of other tobacco products using state-level tax structure and prices data in the U.S.

Data
- OTP Tax Structure Data: OTP data structure data were compiled via original legal research for the years 2007 through 2013, which contain coded state laws (statutory and administrative regulations) that relate to tax base, type, and tax rates for all tobacco products.
- OTP Prices Data: OTP prices data were obtained from the Nielsen scanner data organized by 52 designated Nielsen markets. The data contain the quarterly market-level prices and sales data for tobacco products at the Universal Product Code (UPC) level for the time period 2007 to 2013.

Method
- OTP Tax Structure data were linked to the Nielsen Price Data based on state, year, and quarter.
- Regression Analysis: used to estimate the association between prices and tax structure.

Analytical Model:
$$P_{t} = \beta_{0} + \beta_{1}\cdot\text{Tax}_t + \beta_{2}\cdot\text{Value}_t + \beta_{3}\cdot\text{Year}_t + \beta_{4}\cdot\text{Quarter}_t + \epsilon_t$$

Results
- Table: Data from the regression analysis for different OTPs during the study period.

Conclusion and Discussion
- Two general conclusions: the cross-sectional analysis indicates price increases for other tobacco products, and prices are higher under specific tax structure than ad valorem tax structure.
- For little cigars, average prices increased after states changed their tax structure from ad valorem to specific tax.
- For moist snuff, average prices increased in State of Washington and Texas after these two states changed their tax structures from ad valorem to specific tax.
- Although we observed price increases, at least for a few states in our study, after states changed their tax structures from ad valorem to specific tax for little cigars and moist snuff, the reason that prices increase is unclear. The price increase may be due to an increase in effective tax rates associated with the tax structure change. It may also be due to the change in the number of tax types within a specific product category.

Acknowledgments
-Funding provided by the National Cancer Institute under the State and Community Tobacco Control Initiative, grant number 5U01CA154248, University of Illinois (PI: Frank J. Chaloupka, PhD).

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