

Increasing cigarette taxes shifts consumers to more dangerous products

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Increasing cigarette exercise taxes may have the unintended consequence of encouraging consumers to seek higher nicotine content and more dangerous cigarette products, according to a study published in *Marketing Science*, a journal of the Institute for Operations Research and the Management Sciences (INFORMS).

The Unintended Consequences of Counter-Marketing Strategies is by Yanwen Wang, the University of Colorado Boulder; Mike Lewis, Emory University; and Vishal Singh, New York University. The study shows that while counter-marketing techniques often reduce total consumption of cigarettes, increasing [cigarette taxes](#) per package shifts some consumers to higher nicotine products. Given the addictive properties of nicotine this result increases addiction levels for some consumers.

Over the past 50 years, regulators and advocacy groups have increasingly used marketing tools to discourage cigarette consumption. Excise taxes are used to increase prices faced by consumers. Educational advertising is used to increase awareness of health risks and decrease preferences for the category. Smoke-free policies are used to make cigarette consumption less convenient.

"One interesting element of tobacco counter-marketing is that policies tend to be established and implemented at the state level," Yanwen Wang said. "This is important because the variation in policies across states enables natural experiments with different approaches. These natural experiments allow researchers to determine the relative effectiveness of

different anti-smoking efforts."

The authors study how counter-marketing efforts impact overall cigarette consumption and the choice between regular and low nicotine products using store level sales data provided by IRI. By conducting the analysis on nationwide data about store sales, the researchers examine populations of consumers that are exposed to different tax rates, advertising levels, and smoking prohibitions. In addition, data from the US Census on ZIP code demographics allow the researchers to examine the effectiveness of counter-marketing across consumers of different socio-economic levels.

"We find that the different anti-smoking techniques varied in terms of effectiveness," Mike Lewis noted. "Taxes that directly increase the prices faced by consumers are the most effective technique in reducing consumption of cigarettes. Health-oriented advertising is also effective. Smoke-free air policies such as restaurant or workplace bans on smoking are the least effective."

"However, while taxes are the most effective technique reducing smoking rates, we find that this tool has a significant downside," Vishal Singh added. "Because cigarette taxes are currently applied at the per pack level and without regard to nicotine levels, consumers may respond to increasing cigarette taxes by switching to higher nicotine products. In other words, if consumers desire to minimize the cost per unit of nicotine, then increasing cigarette taxes may lead some consumers to shift to higher nicotine products." This unintended consequence of cigarette taxes can have significant health consequences since higher nicotine levels will increase addiction levels."

Importantly, the authors also found that this unintended consequence was more likely to occur in poorer neighborhoods. A possible explanation for this disparate impact is that the lower socio-economic

level of these consumers leads to a greater emphasis on minimizing nicotine costs.

The study has significant implications for regulators and advocacy groups. First, the results suggest that health advertising and excise taxes are both effective tools. Health-oriented advertising is a particularly strong technique, as this method does not lead to shifts towards more dangerous (higher nicotine) products. Second, the results suggest that simple per-pack tax policies should be re-evaluated. While regulators may be leery of nicotine-based taxing schemes that seem to communicate that "lower" nicotine products are less dangerous, this feared result should be weighed against direct empirical evidence that flat taxes lead many [consumers](#) to shift towards more dangerous products. The study results also suggest that regulators should pay special attention to disparate impacts across communities.

More information: Yanwen Wang et al. The Unintended Consequences of Countermarketing Strategies: How Particular Antismoking Measures May Shift Consumers to More Dangerous Cigarettes, *Marketing Science* (2015). [DOI: 10.1287/mksc.2015.0910](https://doi.org/10.1287/mksc.2015.0910)

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