Online retailer noncompliance to e-cigarette excise tax and tobacco licensing laws

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ABSTRACT

Introduction Tax non-compliance by online vaping retailers undermines excise taxes designed to reduce vaping rates and fund prevention efforts. Despite California's 12.5% Electronic Cigarette Excise Tax and federal mandates under the Prevent All Cigarette Trafficking Act, online vaping retailers' adherence to excise taxes remains unclear. This study assessed excise tax compliance among online vaping retailers shipping products to California consumers.

Methods 156 purchase attempts were made from n=78 online vaping retailers shipping to San Diego residential addresses. 16 buyers used their personal billing information and residential addresses. Receipts obtained from their purchases were analysed to determine if retailers charged the required 12.5% tax. Retailer licensing status was verified by comparing retailer information to the state's licensed business list using geolocation and approximate string matching. Differences in compliance rates were compared using χ^2 and Fisher's exact tests.

Results Of the n=58 retailers with receipts, 84.5% did not charge the required excise tax. In-state retailers were more likely to be ($p<0.001$) licensed than out-of-state (4.0%) or international (0.0%), but tax compliance rates did not significantly differ by retailer location ($p=0.57$)—intrastate (19.2%), interstate (16.7%) or international (0.0%). Licensed retailers had higher tax compliance (27.3%) than unlicensed ones (9.1%); however, overall compliance was low.

Discussion Many online vape retailers fail to comply with California's excise tax and licensing laws. Low compliance rates indicate existing enforcement mechanisms are not optimised for online sales. Enhancing oversight and enforcement of excise tax laws for online retailers is crucial to reduce tax non-compliance, prevent revenue loss and support public health.

WHAT IS ALREADY KNOWN ON THIS TOPIC

- ⇒ Excise taxes on vaping products aim to reduce usage and fund public health initiatives.
- ⇒ Tax non-compliance by retailers, especially online sellers, undermines the effectiveness of these taxes.
- ⇒ Prior research indicates low compliance with excise tax laws among a limited number of online vape retailers.
- ⇒ Taxes increase the price of tobacco products, and youth are sensitive to price changes.

WHAT IMPORTANT GAPS IN KNOWLEDGE EXIT ON THIS TOPIC

- ⇒ The extent of excise tax non-compliance among a broader sample of online vaping retailers is not well-documented.
- ⇒ The relationship between retailer licensing status, location and tax compliance in online sales is unclear.

WHAT THIS STUDY ADDS

- ⇒ This study found that only 15.5% of 58 online vape retailers that shipped vaping to California charged the required excise tax, revealing widespread non-compliance.
- ⇒ Licensed retailers were more likely to comply with tax laws than unlicensed ones, but overall compliance was low regardless of retailer location or licensing status.

INTRODUCTION

Excise taxes are considered one of the most effective tobacco control strategies.[1] They work in two ways: increasing prices to deter use, especially among price-sensitive populations (eg, youth), and generating revenue for complementary initiatives such as media campaigns and cessation services.[2]

However, tax evasion—the illegal non-payment or underpayment of tax by tobacco retailers—undermines the effectiveness of excise taxes.[3] Tax evasion often occurs through unregistered businesses and cross-border sales.[4] Growth in online and delivery sales could exacerbate the issue due to the anonymity of sales and their global reach, making it difficult to track compliance.[5] Currently, vaping product sales are particularly vulnerable to these issues because they are widely available online.[6 7]

Despite the widespread adoption of vaping product excise taxes—with 54 countries[8] and 32 states in the USA[9] implementing such measures—estimates of tax noncompliance among online retailers are surprisingly rare. A PubMed search for tax non-compliance and e-cigarettes identified only one peer-reviewed study that reported tax compliance among online retailers.[10] That study used scraped website data from five online retailers and found that three failed to charge taxes, and among the two that did, the accuracy of tax collection was low.

To further investigate compliance with tobacco excise tax laws, this study analysed purchases from online retailers identified through Google searches and Google or Yelp maps, with deliveries made to residential households in San Diego, California. This design enabled an assessment of adherence

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to California's 12.5% excise tax on e-cigarettes, introduced by the 2022 California Electronic Cigarette Excise Tax (CECET).[11] CECET is required to be paid on e-cigarette sales in California regardless of the retailer's location.[12] Violation of CECET has federal penalties tied to requirements for state excise tax payments among vaping delivery sales in the Prevent All Cigarette Trafficking Act as amended by the 2020 Preventing Online Sales of E-Cigarettes to Children Act.[13] Additionally, because most purchases had return addresses and tax non-compliance often occurs among out-of-state and unlicensed retailers, tax compliance rates were examined by whether the retailer was in California or elsewhere, and by whether the retailer had a licence to sell tobacco in the State of California—a requirement for all delivery sales including for out-of-state retailers who are required to have distributor licences.[12] The findings of this study highlight a critical need for improved enforcement mechanisms for online retailers to ensure compliance with state excise taxes.

METHODS

Sample description

The sample was derived as a part of an audit of retailers selling to consumers in San Diego, California.[14] Vaping retailers accessible through search engines were identified, focusing on two types: 'search-based' and 'map-based' retailers, which consumers in San Diego County might encounter when searching for nicotine vape products online.[15] Search-based retailers were identified through Google searches using shopping-related terms (eg, order) combined with vape-related terms (eg, e-cig), with results from the first two pages analysed, as previous research showed 97% of these lead to e-commerce sites selling vaping products.[16] Map-based retailers were identified through searches on Google Maps and Yelp using location data from San Diego's 108 Zip Code Tabulation Areas. URLs from both search strategies were reviewed to determine if they sold and shipped vaping products to residential addresses. A combined list of n=481 unique URLs was returned across strategies, of which n=78 were determined to potentially ship to consumers in California. Websites mainly included e-commerce retailers selling multiple brands, but there were also a few manufacturer websites.

Throughout October 2023, n=16 buyers working in matched pairs made attempts to purchase nicotine vaping products that had been preselected by study staff on websites that were identified using search engines, resulting in n=156 purchase attempts (2 purchase attempts per website×78 websites). All buyers were 21+ years old, provided their actual age and billing information and attempted to have products delivered to their permanent residential address. Buyers attempted purchases using a preloaded Visa e-gift card or their own credit card and, if payment was accepted, uploaded a copy of their receipt to a survey. Once buyers received an order, they returned the parcel to study staff, who then took pictures of the shipping label for all packages that contained one.

Measures

Excise tax compliance

Six trained study staff working in pairs (ECL, GB, NS, RMH, SE and TM) reviewed receipts to extract payment information including product price and taxes. Compliance determinations were made in accordance with the CECET guidelines from the California Department of Tax and Fee Administration.[17] Retailers are required by law to list CECET as a separate line item on receipts and separate from other taxes (eg, sales taxes or other state excise taxes). Therefore, receipts with line items explicitly mentioning terms like 'CECET' or 'excise tax' were considered to have paid CECET, and this amount was considered the excise tax paid. Line items for general terms like 'tax' were not considered as payment of CECET. A sensitivity analysis was performed that accounted for cases where excise tax may have been collected but not explicitly reported on the receipt. For this, CECET was assumed to be collected if the total tax paid was at least twice the expected sales tax. There was perfect agreement between coders for both the final extracted price and CECET tax amounts.

Once price and tax data were extracted, it was used to estimate the tax rate per purchase. As CECET applies to handling but not shipping charges, and only one retailer provided a handling charge, the product price was used to estimate the tax rate. This was calculated as the excise tax paid divided by the product price. Retailers who paid ≥12.5% excise tax were considered compliant with CECET.

Retailer location

Six trained study staff also reviewed the shipping labels to extract the return addresses, which were used to determine whether it was an intrastate, interstate, or international transaction.

Retailer licence status

To determine retailer licence status, retailer names, locations, website URLs, titles and return addresses were compared with the California Department of Tax and Fee Administration's licensed retailer, distributor and wholesaler lists (n=24311) as of 3 October 2024.[18] A rule-based matching procedure was applied with two methods:

1. Geolocation matching: Retailer and licensing list addresses were geocoded,[19] enabling comparison by location using latitude and longitude. Any map-based retailer within 100 m[20] of a licence address was considered a match.
2. Approximate string matching: For retailers without a geolocation match, approximate string matching was applied to identify the best match for each retailer using the licence list's doing-business-as names and each retailer's return address, website URL, title and retail store.[21] The best match for each retailer was reviewed to determine whether it was a possible match.

If a match was found via any of these methods, the retailer was considered licensed in California; otherwise, they were classified as unlicensed.

Statistical analysis

Analyses reported include the percentage of retailers who correctly paid CECET and had licences to sell tobacco in the State of California, and tests for whether there was a difference in licensing status and tax compliance rates between intrastate, interstate and international transactions using two-tailed χ^2 tests (or Fisher's exact when n≤5 for a stratum) with α=0.05.

RESULTS

Of the two purchase attempts made to the n=78 retailers, 76.9% processed at least one transaction, and 69.2% processed both transactions. At least one receipt was available for n=58 retailers, and two receipts were available for n=41 retailers. Among the n=41 retailers with two receipts, the rate of excise tax charged between receipts was identical for all retailers. Among the n=58 retailers with at least one receipt, 84.5% of retailers did not charge the required excise tax (table 1).

Table 1 E-cigarette excise tax payments and licensing status among purchases to online retailers, San Diego County, California, USA

Characteristic			Complied with CECET*		Retailer had California tobacco retailer licence†‡	
		n‡ (%)	n (%)	P value	n‡ (%)	P value
Full sample		58 (100.0)	9 (15.5)		22 (40.0)	
Transaction type‡	Intrastate	26 (47.3)	5 (19.2)	0.88	21 (80.8)	<0.001
	Interstate	24 (43.6)	4 (16.7)		1 (4.2)	
	International	5 (9.0)	0 (0.0)		0 (0.0)	
Retailer had California tobacco retailer licence‡	Yes	22 (40.0)	6 (27.3)	0.16		
	No	33 (60.0)	3 (9.1)			

*Paid the required 12.5% excise tax as required by the CECET.
†Return address or business names matched an address or business name in the lists of licensed distributors, retailers and wholesalers published by the California Department of Tax and Fee Administration as of 3 October 2024.
‡n=3 transactions were missing return addresses used for determining retailer location.
CECET, California Electronic Cigarette Excise Tax.

In the sensitivity analysis with the more permissive assumption of CECET tax payment, overall compliance rates were 39.7% (compared with 15.5% with the stricter definition requiring excise tax to be listed explicitly as required by law). The pattern of compliance rates across licensed and unlicensed retailers and by intrastate, interstate and international transactions was similar among both definitions but became statistically significant with the permissive assumption (online supplemental table 1).

DISCUSSION

These results demonstrate widespread non-compliance with state excise tax payments among online vape retailers, despite state and federal law mandating compliance, confirming previous reports relying on smaller samples.[10] Few retailers had licences to sell tobacco products in the State of California, and even fewer paid excise taxes. Purchases coming from out-of-state retailers had significantly lower rates of tax compliance and these retailers were less likely to be licensed.

These results could be limited in generalisability since they examined compliance with only one state's tobacco excise tax law. Although two conservative methods to verify licensing were used, some retailers may have been misclassified as unlicensed. Finally, despite being the largest online sample assessing tax compliance to date, the very low compliance rate limited the statistical power for hypothesis testing. Larger samples exploring the effectiveness of licensing in improving compliance are warranted.

In summary, these results document widespread non-compliance with California's e-cigarette excise tax law among online vaping retailers. This lack of compliance could lead to increased demand for vaping products by lowering the price and to substantial lost tax revenue on online sale of vaping products which was valued at US$16.7 billion in 2023 in the USA alone.[22] Routine surveillance of online retailers, such as that conducted here, may improve efforts to enforce licensing and excise tax laws, thereby lowering demand among youth and reducing revenue loss.

Contributors ECL had full access to all of the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis. Concept and design: TM, SE and ECL. Acquisition, analysis or interpretation of data: all authors. Drafting of the manuscript: all authors. Critical revision of the manuscript for important intellectual content: all authors. Statistical analysis: SE, TM and ECL. Obtained funding: ECL. Administrative, technical or material support: SE and ECL. Supervision: ECL.

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Supplementary Table 1. Suggestive e-cigarette excise tax payments among purchases to online retailers, San Diego County, California USA

Characteristic			**Suggestive CECET Compliance**[a]	
		n[c] (%)	n (%)	p-value
Full Sample		58 (100.0)	23 (39.7)	
Transaction type[c]	Intrastate	26 (47.3)	15 (57.7)	0.011
	Interstate	24 (43.6)	6 (25.0)	
	International	5 (9.0)	0 (0.0)	
Retailer had California tobacco retailer license[b,c]	Yes	22 (40.0)	15 (68.2)	<0.001
	No	33 (60.0)	6 (18.2)	

[a]Paid total taxes greater than twice the local sales tax rate, suggesting CECET tax could have been paid
[b]Return address or business names matched an address or business name in the lists of licensed distributors, retailers, and wholesalers published by the California Department of Tax and Fee Administration as of October 3, 2024
[c]Note: n=3 transactions were missing return addresses used for determining retailer location