Should E-Cigarettes Be Taxed?

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Electronic cigarettes are battery-powered cigarette look-alikes that heat liquid nicotine to emit vapor. The apparatus consists of a rechargeable lithium battery, a liquid cartridge that typically contains nicotine, propylene glycol or glycerol, flavoring, and other additives, and an LED light at one end that simulates the burning of a regular cigarette. When the user inhales, a heating element or atomizer converts the liquid in the cartridge into a white aerosol that is either odorless or bears the aroma of added flavoring. One does not smoke an e-cigarette — one vapes it.

The use of e-cigarettes is growing. According to the Centers for Disease Control and Prevention, about one in five adult smokers tried an e-cigarette between 2010 and 2011.1 As discussed below, surveys indicate that most smokers use e-cigarettes to cut down on cigarette consumption or quit smoking altogether.2 Typically, smokers who turn to e-cigarettes do so after unsuccessfully using standard cessation methods such as nicotine gums or nicotine patches.3 Smokers may prefer e-cigarettes over patches and gums for several reasons. E-cigarettes produce a higher concentration of nicotine in the blood and provide a quicker fix because the pulmonary route is the fastest practical way to deliver nicotine to the brain. E-cigarettes also offer visual, tactile, and gestural similarities to traditional cigarettes.

As e-cigarettes have increased in popularity, so too have proposals to regulate and tax them. The Food and Drug Administration is poised to propose regulating e-cigarettes as tobacco products and many state and local jurisdictions are moving to ban e-cigarettes from bars and restaurants. Senate lawmakers have introduced legislation that would subject e-cigarettes to the federal tobacco tax if, or more likely when, the FDA carries through on its plans to regulate e-cigarettes. One state, Minnesota, is already taxing e-cigarettes and other states are considering taxing them.

In this article, we discuss the proper tax treatment of e-cigarettes. We conclude that e-cigarettes should not be subject to tobacco excise taxes because, based on currently available medical evidence, they do not pose health risks remotely comparable to those posed by traditional tobacco products and therefore do not cause the same harmful effects to society. Taxation cannot be justified by the similarity in appearance of e-cigarettes to cigarettes or by the possible reduction in tobacco tax revenue arising from the substitution of

e-cigarettes for cigarettes. Leaving e-cigarettes untaxed is particularly important because it makes e-cigarettes more attractive than cigarettes to smokers, giving them an incentive to switch.

We begin with a brief overview of the regulatory treatment of e-cigarettes, followed by a discussion of the recent proposals to tax them. We then review the rationale of tobacco taxation and the public health effects of e-cigarettes, concluding that they should not be subjected to tobacco excise taxes at this time.

A. Regulatory Treatment of E-Cigarettes

1. Impending federal regulation. Under the Federal Food, Drug, and Cosmetic Act, the FDA has long had statutory authority to regulate drugs, devices, and their combinations in two categories. The first category consists of articles intended for use in the diagnosis, cure, mitigation, treatment, or prevention of human or animal diseases. The second category consists of articles, other than food, that are intended to affect the structure or any function of human or animal bodies. For many years, the FDA viewed tobacco products as lying outside the second category and it refrained from regulating them, except when they were marketed for therapeutic purposes and therefore fell into the first category. In 1996, however, the FDA reversed course, when it concluded that nicotine falls within the second category and adopted regulations for cigarettes and smokeless tobacco. In 2000, the Supreme Court, in a 5-4 decision, invalidated the FDA’s tobacco regulations and held that the agency did not have statutory authority to regulate tobacco products not marketed for therapeutic purposes.

In 2009, Congress enacted the Family Smoking Prevention and Tobacco Control Act (FSPTCA), which gives the FDA authority to regulate cigarettes, cigarette tobacco, roll-your-own tobacco, and smokeless tobacco, as well as any other tobacco product that the FDA deems to be subject to the law. The FDA is authorized to exercise that deemed authority over products “made or derived from tobacco that is intended for human consumption.” The FSPTCA empowers the FDA to regulate the sale, advertising, promotion, and mode of manufacture of tobacco products and to prescribe standards for those products, but stipulates that the FDA may not require that tobacco products be available only to those with medical prescriptions, may not prohibit face-to-face sales of tobacco products by a specific category of retail outlet, and may not impose a minimum age higher than 18 for the purchase of tobacco products. Under the statute, the FDA adopted regulations that prohibit the sale of cigarettes to persons younger than 18, restrict cigarette advertising and marketing, and require graphic warnings on cigarettes.

Also in 2009, the FDA attempted to prevent imports of e-cigarettes under its authority to regulate drugs and devices. But in 2010, the U.S. Court of Appeals for the D.C. Circuit blocked the FDA’s action, holding, in accord with the Supreme Court’s 2000 decision, that the FDA cannot regulate e-cigarettes as drugs or devices, unless they are marketed for therapeutic purposes. The court stated, however, that the FDA can regulate e-cigarettes as tobacco products under the FSPTCA because the nicotine delivered by e-cigarettes is derived from the tobacco plant. In response to that decision, the FDA announced in 2011 that it planned to apply its regulatory authority under the FSPTCA to e-cigarettes.

The Office of Management and Budget is reviewing a proposed FDA regulation that would deem e-cigarettes to be subject to the FSPTCA. In its most recent semiannual regulatory agenda, the FDA stated that the proposed regulation would apply to hookah, cigars, pipe tobacco, nicotine gels, some dissolvable tobacco products, and some other products. Under the proposed regulation, the FDA would have authority over registration, product and ingredient listing, user fees, pre-market requirements, and adulteration and misbranding provisions for those products. It would also allow the FDA to promulgate restrictions designed to reduce initiation and increase cessation, particularly among youth. The FDA is expected to issue the proposed regulation soon.

2. State and local regulation. State and local regulation is moving forward. Some state and local governments have prohibited sales of e-cigarettes to minors and have prohibited vaping in public places. According to the American Nonsmokers’ Rights Foundation, three states — North Dakota, South Dakota, and West Virginia — have laws barring the sale of e-cigarettes to persons younger than 18. In four other states, Cincinnati, New York City, Philadelphia, and Toronto, e-cigarettes are illegal to sell to persons younger than 21. ...
New Jersey, and Utah—prohibit e-cigarettes where smoking is banned, and nine states prohibit e-cigarettes in specific places. In 108 local jurisdictions, restrictions have been imposed on the vaping of e-cigarettes in places such as offices, restaurants, bars, and casinos. In December 2013, New York City’s then-mayor Michael Bloomberg signed into law a ban on e-cigarettes anywhere cigarettes are prohibited, including indoor public spaces, parks, and beaches. In March 2014, Los Angeles Mayor Eric Garcetti (D) signed a generally similar ban into law. Boston and Chicago impose similar restrictions.

B. Efforts to Tax E-Cigarettes

As regulations on e-cigarettes have increased, so have efforts to tax them. To place the current debate in perspective, we present background information on federal, state, and local tobacco taxes.

1. Federal, state, and local tobacco taxes. Congress imposes heavy excise taxes on the tobacco products listed in sections 5701 and 5702. Those tobacco products include cigars, cigarettes, smokeless tobacco (snuff and chewing tobacco), pipe tobacco, and roll-your-own tobacco. Cigarette papers and tubes are also taxed. Cigars and cigarettes that weigh less than three pounds per thousand are taxed at $50.33 per thousand, making the tax on a 20-cigarette pack approximately $1.01. Snuff is taxed at $1.51 per pound and chewing tobacco is taxed at $50.33 cents per pound. Pipe tobacco is taxed at $2.83 per pound and roll-your-own tobacco is taxed at $24.78 per pound. Cigarette papers are generally taxed at 3.15 cents per 50 papers and cigarette tubes are generally taxed at 6.3 cents per 50 tubes.

The tobacco tax is a destination-based tax that applies to items consumed within the United States, rather than items produced within the United States. Imported items are generally taxed under section 5703(a)(1), and exported items are generally exempted under sections 5704(b) and 5706. Under sections 5705 and 5708, tax can be refunded in some cases if the items are destroyed, lost, condemned, or rendered unmarketable before being sold to consumers.

Congress has increased tobacco taxes four times since 1982, when the tax rate on cigarettes was 8 cents per pack. Congress adopted legislation in 1982 increasing the tax to 16 cents, legislation in 1990 increasing it to 24 cents, legislation in 1997 increasing it to 39 cents, and legislation in 2009 law increasing it to approximately $1.01. The tobacco tax is now more than 12 times higher in nominal terms, and more than five times higher in inflation-adjusted terms, than it was 32 years ago. Although the tax rate has never been automatically indexed for inflation, Congress has consistently increased it at a pace that has far outstripped inflation.

In fiscal 2013, tobacco tax revenue was $16 billion, about 0.6 percent of total federal revenue. Tobacco tax revenue is projected to decline to $13 billion, less than 0.3 percent of total federal revenue, in fiscal 2024. That reflects the ongoing decline in smoking in the United States and the absence of automatic inflation indexation to the tax rate.

In his fiscal 2015 budget plan, President Obama proposed another sharp increase in tobacco taxes—to $1.95 per pack, effective January 1, 2015, with tax rates indexed to inflation in later years. The proposal would raise about $78 billion of revenue in fiscal 2015 through 2024. In addition to the federal cigarette tax, every state levies its own. From 1981 to 2011, the average state tax rate on a manufacturer to its employees for their use or consumption, and there is no tax on tobacco products furnished for experimental purposes.


18Tobacco tax revenue would rise by more than $78 billion, but income and payroll tax revenue would be reduced, yielding a $78 billion net revenue increase. For a general explanation of
cigarette tax rose from 13 cents to $1.38 per pack. In 2013, six states increased their cigarette taxes. Three states adopted particularly large increases: Indiana increased its tax from 99.5 cents to $1.98 per pack, Massachusetts increased it from $2.51 to $3.51, and Minnesota increased it from $1.23 to $2.83. Dozens of other states considered, but did not adopt, tobacco tax increases in 2013. On January 1, cigarette taxes ranged from 17 cents per pack in Missouri to $4.35 per pack in New York. Thirty states and the District of Columbia had tax rates higher than the federal rate of $1.01 per pack. Further, states impose heavy taxes on tobacco products other than cigarettes, with many of those taxes computed as percentages of the wholesale price or the manufacturer’s price.

Some local governments impose their own tobacco taxes. For example, Cook County, Ill., increased its cigarette tax from $2 to $3 per pack on March 1, 2013, and Chicago increased its tax from 68 cents to $1.18 on January 10. When combined with the Illinois state tax of $1.98 per pack and the federal tax of $1.01 per pack, the total federal, state, county, and city tax on cigarettes in Chicago is now $7.17 per pack, the highest in the nation. The combined federal, state, and local tax on cigarettes in New York City is a close second, at $6.86 per pack.


E-cigarettes are not subject to the federal tobacco tax or to state tobacco taxes, except in Minnesota. But proposals to tax e-cigarettes have been introduced at both the federal and state levels.

2. Federal proposals to tax e-cigarettes. In January 2013, Sen. Tom Harkin, D-Iowa, introduced S. 39, the Healthy Lifestyles and Prevention America Act. The bill proposes to increase the cigarette tax to $2.10 per pack and to subject “any product...that has been determined to be a tobacco product by the Food and Drug Administration...[to] tax equivalent to the tax rate for cigarettes on an estimated per use basis as determined by the Secretary” of the Treasury.


In April 2013, Lautenberg, joined initially by Blumenthal, Harkin, and Durbin and later by Sens. Sheldon Whitehouse, D-R.I., and Finance Committee member John D. Rockefeller IV, D-W.Va., introduced S. 826, the Tobacco Tax and Enforcement Reform Act. It proposes to increase the tax on cigarettes to approximately $1.95 per pack and includes language identical to that set forth in S. 39 to tax products deemed by the FDA to be tobacco products.

Enactment of any of those bills would not immediately extend the federal tobacco tax to e-cigarettes because the FDA has not yet deemed e-cigarettes to be tobacco products. However, that legislative language in conjunction with the anticipated FDA regulation deeming e-cigarettes to be subject to the FSPTCA would result in e-cigarettes being subject to the tobacco tax.

3. State proposals to tax e-cigarettes. As mentioned above, Minnesota is the only state to apply its tobacco tax to e-cigarettes. (E-cigarettes are subject to general sales taxes in most states.) But other states are considering imposing taxes on them.

In October 2012 the Minnesota Department of Revenue concluded that cigarettes were taxable as tobacco products unless the taxpayer could prove that the nicotine delivered by the e-cigarette was not obtained from the tobacco plant. The department observed that the state statutory definition of taxable tobacco products included any product derived from tobacco that was inhaled. Accordingly, the department decided that e-cigarettes were subject to a tax equal to 95 percent of the wholesale
price, the rate that Minnesota applies to tobacco products other than cigarettes.\textsuperscript{27}

The Utah Legislature recently considered, but did not adopt, a proposal to impose a tax equal to 86 percent of the wholesale price on e-cigarettes. Hawaii is considering extending the state cigarette tax to e-cigarettes, and Massachusetts is weighing a tax equal to 90 percent of the wholesale price. The Oklahoma and South Carolina legislatures considered, but did not adopt, proposals to tax e-cigarettes at 5 cents per nicotine cartridge, with the tax limited to one-tenth of the tax on cigarettes. Rhode Island is reviewing a tax equal to 80 percent of the wholesale price. Moreover, proposals have been introduced in Indiana, Kentucky, and Wisconsin.\textsuperscript{28} On March 4, 2013, the Washington House Finance Committee approved substitute HB 2795, which would tax e-cigarettes at 75 percent of the wholesale price, somewhat lower than the 95 percent tax rate that Washington applies to most tobacco products other than cigarettes. The bill provides, however, that if the FDA approves e-cigarettes for smoking cessation or other therapeutic purposes, any e-cigarettes prescribed by a physician and purchased at a pharmacy would be exempt from tax.\textsuperscript{29}

To determine whether e-cigarettes should be subject to the tobacco tax, it is necessary to examine the tax’s underlying rationale.

C. Rationale of Tobacco Taxation

Tobacco taxation was originally justified as a luxury tax. Adam Smith commented more than two centuries ago, “Sugar, rum and tobacco are commodities which are nowhere necessaries of life, which are become objects of almost universal consumption, and which are therefore extremely proper subjects of taxation.”\textsuperscript{30} Smith wrote that “tobacco being a luxury, every man is allowed to buy or not to buy as he chuses [sic].” He was aware, however, that some tobacco was purchased by low-income households, referring to tobacco as a “luxury of the poor, as well as of the rich.”\textsuperscript{31}

Today, it is clear that tobacco is not consumed primarily by the well-to-do. Tobacco spending is far higher, as a share of income, for those with lower incomes. One recent study noted that cigarette expenditures were 3.2 percent of income for households in the bottom quarter of the income distribution, compared with 0.4 percent of income for those in the top quarter.\textsuperscript{32} Using consumer spending rather than income to measure household well-being does not change the results very much. An older study found that tobacco spending comprised 2.2 percent of total consumer spending for households in the bottom fifth of consumer spending levels, compared with 0.7 percent of spending for those in the top fifth. Spending shares for gasoline and alcohol were also higher for households with lower levels of spending, but not to the same extent as for tobacco.\textsuperscript{33} Therefore, the tobacco tax is highly regressive, placing a larger proportional burden on lower-income groups.

The leading rationale for tobacco taxation is that it is a corrective tax for the harmful externalities (costs imposed on third parties) that arise from smoking.\textsuperscript{34} Taxes designed to correct externalities are sometimes called Pigovian taxes, named for Arthur Cecil Pigou, the British economist who analyzed the taxes’ potential policy benefits in the early 20th century. Economic theory suggests that the market outcome will be inefficient when the activities of one person or company inflict harmful consequences on other people that cannot be addressed through private bargaining. The market outcome will involve an excessive level of the harmful activity because those considering engaging in it will not take into account the harms that it imposes on others. Pigou observed that the government could intervene to achieve an efficient outcome by imposing a tax on the harmful activity equal to the dollar value of the marginal harm imposed on others. Because those considering engaging in the harmful activity will take the tax into account when making their decisions, they will act as if they are taking into account the harm imposed on others. Similar economic logic supports the provision of a subsidy to activities that generate beneficial externalities.

Smoking causes several harmful externalities. Secondhand smoke can damage other people’s


\textsuperscript{30}Adam Smith, The Wealth of Nations (1776), Book V, Chapter III.

\textsuperscript{31}Id. at Book V, Chapter II, Part II.


\textsuperscript{34}Corrective taxes and externalities were also discussed in the preceding On the Margin column. See Emma Bennett, “Tax Policy and the Social Costs of Driving,” Tax Notes, Feb. 3, 2014, p. 563.
health. Cigarettes can start fires that endanger other people and their property. Primary attention has focused, however, on the medical costs that governments bear from smoking-related health consequences. The Congressional Budget Office, in a recent analysis of a hypothetical 50-cents-per-pack increase in the federal tax on cigarettes, used the Medical Expenditure Panel Survey linked with the National Health Interview Survey to estimate smoking’s effect on healthcare spending through a regression model that controlled for age, income, gender, race, marital status, obesity, health insurance status, and other relevant factors. The CBO found that smoking is responsible for approximately 7 percent of national healthcare expenditures and 8 percent of total healthcare costs among those age 65 to 74. That result is in line with other empirical research, which tends to indicate that smoking has a larger effect on Medicaid and Medicare costs than private insurance because smoking is more common among Medicaid-eligible and older individuals. Precise determination of the external costs imposed by smoking is difficult.

Cigarette taxes are sometimes justified on paternalistic grounds, based on the claim that the government should use taxes to discourage people from engaging in activities that are harmful to them. We view the paternalism rationale as problematic for adults deciding to engage in an activity whose harms are well known. It has more force for teenagers, who unfortunately continue to acquire cigarettes despite the legal prohibitions. The empirical evidence discussed below indicates that taxing cigarettes helps keep them out of teenagers’ hands by making them more expensive.

Many economists have investigated the effect of tobacco taxes on the quantity of cigarettes purchased, the incidence of smoking, and youth smoking initiation. Empirical estimates vary depending on the data source and modeling strategy, but results generally indicate that higher tobacco taxes are associated with moderate decreases in youth smoking and smaller impacts on smoking behavior of older established smokers. Based on a survey of previous research, the CBO analysis discussed above concluded that the overall elasticity of demand for cigarettes ranges between -0.3 and -0.7, meaning that a 1 percent increase in price reduces cigarette purchases by 0.3 to 0.7 percent. The CBO concluded that the price elasticity among younger smokers is larger, ranging between -0.5 and -1.5. The CBO found that higher prices contribute equally to reductions in prevalence (the number of smokers) and intensity (the number of cigarettes consumed by smokers). The CBO estimated that a tax increase of 50 cents per pack, which would increase cigarette prices by roughly 10 percent, would reduce the number of smokers by about 3 percent, with a significantly larger impact on youths and young adults.

### D. Public Health Issues

Both the externality and the paternalism rationales for cigarette taxation rest on the adverse health effects of smoking. Taxing e-cigarettes therefore makes sense if they have adverse health effects or if they lead to an increase in smoking. Based on the evidence, e-cigarettes do not appear to have those effects.

The great health advantage of e-cigarettes over conventional ones is the absence of smoke. The surgeon general confirmed in 1964 that smoking can be deadly. As reported last year in the *New England Journal of Medicine*, the life expectancy of smokers is more than 10 years lower than that for nonsmokers, and the rate of death is about three times greater for smokers than those who have never smoked. The tars and gases contained in tobacco products produce cancers of the lung, oral cavity, and throat, and, to a lesser extent, produce liver, prostate, colorectal, and breast malignancies. Further, smoking causes other cardiovascular conditions, such as stroke and high blood pressure, as well as pulmonary diseases, such as bronchitis.

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36 Frank J. Chaloupka and Kenneth E. Warner, “The Economics of Smoking,” in *Handbook of Health Economics* (Elsevier, 2000), eds. Anthony J. Culyer and Joseph Newhouse, at 1539-1627 and 1579-1583, discuss the difficulties involved in estimating the external costs, including the highly contentious question whether government retirement programs’ cost savings arising from smokers’ premature deaths should be netted against the medical and other costs.
37 For example, Gruber and Koszegi, *supra* note 32, present a model in which cigarette taxes are beneficial to potential smokers who fail to recognize the consequences of becoming addicted.

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The nicotine component of cigarette smoking leads to addiction in roughly half of all smokers, but it does not account for the lethality of the habit. As Mitch Zeller, the head of the FDA’s tobacco division commented, people smoke for the nicotine and die from the tar. He said, ‘I’m not saying nicotine is benign, but compared to the risk from regular tobacco, it pales.’ Zeller declined to say exactly where he viewed e-cigarettes as falling on the risk continuum from cigarettes to medicinal nicotine.43 It is clear, however, that users of e-cigarettes get the nicotine they desire in a far safer form, without the tar.

E-cigarettes haven’t been in use long enough to determine whether the vapor poses its own long-term health problems. Experts consider e-cigarettes to be 95 to 99 percent safer than cigarettes, because carcinogen levels in e-cigarette vapor are about a thousand times lower than those found in cigarette smoke.44 In particular, e-cigarette liquid contains tobacco-specific nitrosamines. While those nitrosamines can be carcinogenic at some levels, when used properly in e-cigarettes, they are in concentrations similar to those found in a nicotine patch. In conventional cigarettes, the nitrosamine levels are 400 to 1,400 times higher.45

Vaping can irritate the airways, but the aerosol produced by an e-cigarette is minimally hazardous in the short term for both users and bystanders. The main substrate in e-cigarette liquid is propylene glycol or glycerin. They are generally regarded as harmless — they’re found in toothpaste, hand sanitizer, asthma inhalers, and many other FDA-approved foods, cosmetics, and pharmaceuticals. Cadmium, lead, and nickel may be present, as well, but in amounts and forms considered nontoxic.46

The levels of cadmium, lead, and nickel detected are comparable to those found in FDA-approved Nicorette inhalers.47

Regarding secondhand vapor effects on bystanders, relative to cigarette smoke, the pollutant concentrations from e-cigarettes are negligible.48 Using an e-cigarette in indoor environments may expose nonusers to nicotine, but not to toxic tobacco-specific combustion products.49 E-cigarettes do provide nicotine. Depending on the concentration of nicotine in the cartridge and the intensity of puffing, the user can achieve nicotine blood levels that are comparable to those attained during smoking. Notably, evidence suggests that nicotine delivered from an e-cigarette — that is, not as a constituent of tobacco smoke — may be less addictive than nicotine derived from smoke.50 Many users report that cravings for e-cigarettes are weaker than cravings for actual cigarettes.51

The health effects of nicotine are generally benign. Nicotine in tobacco-replacement products does not lead to cardiovascular disease in healthy people.52 Smokers regularly switch to over-the-counter nicotine-replacement products such as patches, gum, nicotine lozenges, and a Swedish tobacco pouch called snus. They often continue using those products for months or years — a pattern of use approved last year by the FDA for gum and patches — with no or low risk to their health.53


"Jan Czogola et al., ‘‘Secondhand Exposure to Vapors From Electronic Cigarettes,’’ Nicotine & Tobacco Research, Dec. 11, 2013. HHS, ‘‘How Tobacco Smoke Causes Disease: The Biological and Behavioral Basis for Smoking-Attributable Disease: A Report of the Surgeon General,’’ Atlanta: U.S. HHS, CDC, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2010, chapter 4, stating, ‘‘Several lines of epidemiologic and laboratory evidence presented in this chapter indicate that tobacco-delivered nicotine is substantially more addictive than are pure nicotine forms. Other tobacco constituents, delivery methods, and processes may play a critical supporting role,’’ available at http://www.ncbi.nlm.nih.gov/books/NBK53018/.

health.\textsuperscript{53} Still, because nicotine has stimulant properties, it is potentially harmful to developing fetuses, breastfeeding babies, and people with unstable cardiovascular or bronchial disease.\textsuperscript{54}

Much of the public health concern about e-cigarettes surrounds use by youth. According to a 2012 CDC report that relied on the National Youth Tobacco Survey, the use of e-cigarettes among high school students more than doubled from 2011 to 2012, from 1.5 percent in 2011 to 2.8 percent in 2012. Those percentages refer to teens who tried an e-cigarette — perhaps as little as a single puff. One in five middle school students who reported trying them said they hadn’t tried traditional cigarettes.\textsuperscript{55} Yet most middle and high school students were not naive about tobacco products and had tried other forms of tobacco, such as chewing tobacco, cigars, pipes, hookah, or snus.\textsuperscript{56} According to Brad Rodu of the University of Louisville, only 11 percent of youth had tried e-cigarettes without trying any other tobacco, while 76.3 percent smoked and 12.9 percent used chewing tobacco, cigars, pipes, hookah, snus, and dissolvable tobacco.\textsuperscript{57}

The central question is whether the small group of teens who reported trying e-cigarettes progressed to smoking conventional ones, and there are no reliable signs that that has happened. The rate of youth smoking continues to decline. In 2011 the latest year for which data are available, 18.1 percent had tried a cigarette within the last month, a record low.\textsuperscript{58} Combined with trends in e-cigarette experimentation and use, the data suggest that increased exposure to e-cigarettes isn’t encouraging more people to smoke. Because the numbers are so small, however, it’s too early to make definitive claims about the relationship between teen vaping and smoking.

A survey from the University of Oklahoma Health Sciences Center confirms those findings. Out of 1,300 college students, only 43 said that their first nicotine product was an e-cigarette. One of those went on to initiate regular smoking.\textsuperscript{59} More recently, a survey by Deepa Camenga and colleagues found extremely low use of e-cigarettes by nonsmoking youth: Only five nonsmokers out of 1,345 high school students (0.4 percent) had experimented with e-cigarettes in the past month.\textsuperscript{60}

If youth smoking goes up as a direct result of e-cigarette popularity, we have a problem. But the existing data should allay fears that it is happening now.\textsuperscript{61}

There are no data on the long-term use of e-cigarettes. Long-term exposure to propylene glycol is likely benign, but confirming that speculation should be a research objective. Data on at least a decade of continued use by thousands of users would be needed before confident assessments could be conducted. The ideal study populations to determine health risks of e-cigarettes are individuals who vape compared with those who never smoked and smokers who quit all nicotine versus those who switched to long-term vaping. We want to know the extent to which teens might initiate e-cigarette use exclusively before moving to smoking conventional cigarettes.

E. Proper Tax Treatment of E-Cigarettes

With the above information in hand, we can assess the proper tax treatment of e-cigarettes. The bottom line is simple: It would make sense to tax e-cigarettes if they pose serious health risks or lead to an increase in smoking. As discussed, however, the evidence does not point to serious health risks.


\textsuperscript{61}A study by Lauren M. Dutra and Stanton A. Glantz, “Electronic Cigarettes and Conventional Cigarette Use Among U.S. Adolescents: A Cross-Sectional Study,” published online March 6, 2014, JAMA Pediatrics, available at http://archpedi.jama network.com/article.aspx?articleid=1840772, has been touted by its authors as demonstrating a gateway from vaping to smoking. Because the study is cross-sectional, however, it shows only correlation, not causality. That youths who smoke, and those who smoke more cigarettes, are more likely to have ever used e-cigarettes does not mean that using e-cigarettes caused them to smoke cigarettes. It is plausible that youths who are inclined to be heavier smokers are more likely to be drawn to e-cigarettes or that they would have become heavier smokers even if they had not vaped.
or to e-cigarettes serving as a gateway to smoking. Therefore, e-cigarettes should not be taxed at this time.

Some arguments in favor of taxing e-cigarettes are clearly unfounded. For example, it makes no sense to say that e-cigarettes should be treated the same as cigarettes merely because they look alike. Astonishing as it may seem, however, that argument has appeared in the regulatory debate. At a New York City Council hearing on December 4, 2013, Kevin O’Flaherty of the Campaign for Tobacco-Free Kids said, “If it walks like a duck and it talks like a duck and it sounds like a duck and it looks like a duck, it is a duck.”62 As The New York Times columnist Joe Nocera aptly asked, “Is this what passes for science when you oppose e-cigarettes?”63 Some kinds of e-cigarettes look like standard cigarettes from afar and they provide cigarette-like sensory and gestural stimulation to the user, but they don’t kill like cigarettes and that is surely the more relevant concern. It is similarly absurd to argue that e-cigarettes should be treated the same as cigarettes merely because they are sometimes produced by the same companies.

Another unfounded argument asserts that e-cigarettes should be taxed because they are replacing cigarettes and therefore reduce tobacco tax revenue. If a product that doesn’t have the harmful effects of cigarettes replaces them, the resulting decline in tobacco tax revenue is not a problem, as the harms that the tobacco tax is intended to prevent are also diminishing. The lost revenue can be replaced through increases in general taxes. Unfortunately, revenue concerns appear to be playing an undue role at the state level. At a May 2013 National Tax Association conference, Tax Analysts Deputy Publisher David Brunori lamented the tendency for politics to displace sound tax principles in state tax policy. He cited an example of a state legislator who wanted to tax e-cigarettes at the same rate as cigarettes simply because the state needed money.64 A recent news report commented, “In an era of revenue-hungry state governments — some still dealing with declining revenue from traditional tobacco taxes and recovering from the Great Depression — taxing e-cigarettes seems likely to get the most attention from state lawmakers in 2014.”65

Another set of issues concerns how e-cigarettes affect demand for actual cigarettes. If cigarettes were being taxed and regulated to the extent that cigarette use had been brought down to its proper level, the issue of whether another product was reducing or increasing cigarette demand would have no bearing on its tax treatment. One might think, however, that adult smoking is still higher than it should be. And everyone agrees that smoking by minors is higher than it should be. In that case, the effect that a product has on smoking is relevant, because there is a case for taxing items that promote smoking and subsidizing items that discourage smoking. But, as discussed above, it seems more likely that e-cigarettes are a replacement for smoking rather than a gateway to it, thus reinforcing the case against taxing them.

It seems clear, therefore, that e-cigarettes should not be taxed at the same rate as cigarettes. As Jennifer Carr, the deputy editor of State Tax Notes, has commented in the context of state taxation, “Because e-cigs are almost certainly safer than cigarettes and may help with smoking cessation, states should resist the urge to lump them in with tobacco products for tax purposes.”66

Should there be any excise tax on e-cigarettes? As discussed, there may be a few harmful effects from vaping; thus, some tax may be warranted. But the potential of e-cigarettes to serve as a substitute for cigarettes, which are far more deadly, cuts against the imposition of any tax on them.

Moreover, even if a low tax would be theoretically appropriate, it might not be worth imposing it because of the administrative burdens. That logic explains why many items that have small adverse effects on society are not taxed. In the case of e-cigarettes, it might be difficult to determine how to apply the tax, as e-cigarettes are nonstandard products. As Carr said, a tax based on wholesale price — the approach that has been most frequently considered by the states — would be the easiest to administer. However, a wholesale price would not account for differences in nicotine potency, which can vary greatly across brands.67

62New York City Council, Transcript of the Minutes of the Committee on Health, Dec. 4, 2013, at 117.
66Carr, supra note 28, at 427.
67Id.
We do not yet have conclusive information about the long-term health effects of e-cigarettes. If adverse health effects are ultimately found to exist, tax policy would have to be reassessed in light of those findings.

Although the case for taxing e-cigarettes at this time is weak, there is a role for well-designed FDA regulation. The FDA should set safe manufacturing standards. It should ensure that the cartridges of nicotine solution contain reliable content, are properly and informatively labeled, harbor no dangerous adulterants, and have clear instructions on how to use and dispose of them. To allay concerns about potential gateway use and youth addiction to nicotine, the FDA should ban the marketing and sale of e-cigarettes to minors. It should not be heavy-handed in restricting marketing and sales to adults, although it should require that the marketing make clear that the long-term effects of e-cigarettes remain uncertain.

F. Conclusion

While use of e-cigarettes in the United States is likely to continue to rise and affect the tobacco industry, health outcomes, and excise tax receipts, there is no convincing public health evidence that would justify taxing e-cigarettes at rates similar to those applied to cigarettes.