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Everything Old is New Again: How the Vaping Industry Borrowed Banned Practices of the Tobacco Industry

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EVERYTHING OLD IS NEW AGAIN: HOW THE VAPING INDUSTRY BORROWED BANNED PRACTICES OF THE TOBACCO INDUSTRY

by

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A thesis submitted in partial fulfillment of the requirements
for graduation with Honors in the Marketing

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All requirements for graduation with Honors in the
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A thesis submitted in partial fulfillment of the requirements for graduation with Honors in the Tippie College of Business

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INTRODUCTION

Most experts believe cigarette usage decreased in recent decades due to increasingly strict marketing regulations and prohibitions along with private sector efforts to educate the consuming public (CDC, 2019). In contrast, unregulated marketing of e-cigarette alternatives rapidly proliferated their usage among both adults and youth. Cullen argues that millions of people are currently addicted to vaping because its marketing was unregulated, including over 5 million teenagers (Journal of the American Medical Association, 2019). Crucially, research from the *Pew Research Center* demonstrates how the growth of e-cigarette products during the last ten years largely occurred without regulatory oversight (Schaeffer, 2019). This transpired even though the dangers of nicotine addiction and other health consequences caused by e-cigarettes have long been understood, especially regarding youth consumption of these products.

It is particularly troubling that the marketing of e-cigarettes paralleled banned marketing practices that led to addiction, illness and death from traditional tobacco products. Past marketing of cigarettes provided a blueprint for market success when it was combined with financial backing from established tobacco companies. An example of this financial support comes from Juul, which received a $12.8 billion investment from Altria, the parent company for tobacco brands like Marlboro (CSP, 2018). According to the watchdog group *Truth Initiative*, the crisis of youth vaping "could have been prevented if the Food and Drug Administration had done its job of regulating e-cigarettes, instead of allowing them to stay on the market without undergoing a review of their public health impact" (TI, 2019).

The process of creating and implementing product safety and marketing regulations is challenging because the commercial rights of sellers must be balanced against the rights of consumers to expect sellers to provide safe products and engage in fair marketing practices. In the current regulatory environment, this process is also time consuming with needed regulations often delayed by 5-10 years. As a result, the current regulatory process allows the introduction and marketing of tobacco-derived products to operate unregulated because every new product form requires new regulation despite its similarity to currently regulated tobacco products. This inefficiency provided an extended window of time for e-cigarette marketers to promote the spread and adoption of e-cigarette products through methods that were banned for traditional cigarettes. Consequently, a new generation of youth became addicted to nicotine and the

dangerous products through which it is consumed. I believe it is vital to shift the emphasis in current regulatory processes for hazardous products away from specific product forms and marketing activities to focus on consumer outcomes, regardless of the specific forms of products.

The key objective of this research is to determine if health regulators can prohibit marketing products to children based on likely health outcomes without specifying the exact product (i.e., e-cigarettes) and business activity (i.e., advertising). My thesis illustrates how the vaping industry took a tobacco-derived product, e-cigarettes, and employed the same banned marketing activities that helped create the traditional cigarette industry to harm today's consumers. My analysis directly compares banned marketing practices for cigarettes with e-cigarettes regarding advertising, packaging, flavorings, endorsements, marketing campaigns, and targeting of the vulnerable youth population. The thesis will conclude by providing recommendations based on this analysis of how product regulations should be crafted to increase the effectiveness of new regulations to curtail their introduction and dangerous marketing rather than the current post hoc practice of writing regulations to minimize the harm caused by products already on the market.

RESEARCH BACKGROUND

Smoking cigarettes is the leading cause of lung cancer today and kills millions in America and worldwide. Smoking disproportionally affects young people, as they are more susceptible to engage in long-term habits than adults. Cummings et al. (2002) analyzed corporate documents from "Big Tobacco" companies to prove they knew most current and former smokers began as teenagers and almost universally regret their decision to start smoking.

Fortunately, cigarette usage has been decreasing for many years now. Research from the *U.S. Department of Health & Human Services* shows the percentages of students in the eighth, tenth, and twelfth grades that smoke cigarettes have decreased markedly from 1976 to 2018. Specifically, for twelfth grade students, this rate decreased from a high of 28.8% in 1976 to a low in 2018 of 3.6%. Additional research from the *U.S. Department of Health and Human Services* finds that, "Nearly 90 percent of adult smokers began smoking before the age of eighteen (HHS, 2014)." Therefore, curbing smoking adoption rates of teenagers benefits this vulnerable group and is essential to reducing the number of adult smokers in the population.

As evidenced above, cigarette smoking has always been a habit one is more likely to begin as a youth rather than an adult. Consequently, the tobacco industry aggressively targeted youth for most of their history. A 1974 document from RJ Reynolds notes, “As this 14–24 age group matures, they will account for a key share of the total cigarette volume—for at least the next 25 years (Cummings et al., 2002).” Common industry marketing practices to promote trial and usage among youth included alternative flavors, sponsoring paid endorsements from celebrities and athletes, and selling appeals targeting teens with gender specific themes related to sexual attractiveness (HHS, 2012).

Much like cigarettes, vaping is a physical risk to young people. Vaping brands, such as the industry leader Juul, claim without evidence that vaping is much safer than smoking traditional cigarettes. The result is many youths consider vaping to be a consequence-free way to enjoy nicotine with tasty flavors. However, an increasing body of research finds vaping is a dangerous alternative to smoking. For instance, “popcorn lung”, (i.e., bronchiolitis obliterans) is associated with vaping and attributed to the chemicals diacetyl, propylene glycol and glycerol commonly found in e-cigarettes (Stratton et. al, 2018). This damages the lung’s airways and potentially causes extreme shortness of breath (Selekman, 2019). Additionally, depending on the type of vaping product and the settings chosen by the user, a single puff can have as much nicotine as an entire pack of cigarettes. This contributes to vaping being even more addicting than traditional cigarettes, and in some cases even encourages youth to both vape and smoke to satisfy their newfound addiction to nicotine (Selekman, 2019).

Since vaping has a great deal in common with smoking cigarettes, an important element to understand regarding vaping today is to take a step back and examine how tobacco has been regulated over the years. Surgeon General Luther Terry’s report on smoking in 1964 was formative to the future regulation of tobacco. The report’s overwhelming evidence for the link between smoking and lung cancer led to an onslaught of civil litigation against the tobacco industry and individual tobacco companies (HHS, 2014). Following this report, warning labels were mandated on cigarette packs, advertisements were banned on American television and radio, individual states passed smoke-free laws, broader bans were implemented on tobacco advertisements and sponsorships, restrictions were placed on the verbiage allowed to describe tobacco products, and the FDA was given regulatory authority to restrict sales to youth and

prohibit flavors, mandate warning labels, and increase the minimum age required to purchase tobacco products (HHS, 2014).

As effective as these advancements were for reducing tobacco and nicotine usage, they were not foolproof. First, tobacco regulation did not start until 1964 and required another 50 years to be enacted to its current state. Second, for the most part, these regulations do not cover vaping. Regarding the FDA, electronic cigarettes are not tobacco delivery devices, so many of the prior tobacco regulations do not apply (Sharfstein, 2019). An example of such language is: "The term 'cigarette' means -- (A) any roll of tobacco wrapped in paper or in any substance not containing tobacco, and (B) any roll of tobacco wrapped in any substance containing tobacco which, because of its appearance, the type of tobacco used in the filler, or its packaging and labeling" (FTC, 1966). This understanding of the regulations allowed companies like Juul to launch products using marketing programs that the most successful cigarette companies, like Philip Morris and RJ Reynolds, had previously proven fruitful over many decades.

Third, traditional tobacco companies helped finance the growth of vaping products. For example, Altria, the parent company of Philip Morris USA, has a large minority stake in Juul, which came directly after Altria withdrew from the vaping market after discontinuing their MarkTen e-cigarette (FTC, 2020). Some argue that vaping brands have the potential to help existing cigarette and tobacco brands which have increasingly unprofitable futures. However, e-cigarettes have been proven to carry their own negative health consequences that do not justify themselves as a harmless replacement to cigarettes or having reduced negative associations with cigarettes (DeVito, 2018).

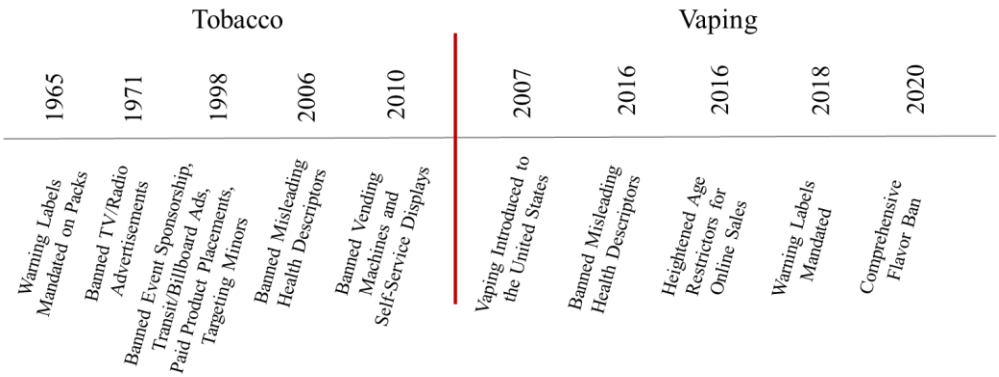
TIMELINE OF REGULATIONS

The regulation of cigarettes began in 1862 with the first federal taxation of cigarettes. Importantly, this tax was created as a revenue generating vehicle rather than to reduce the rate of cigarette smoking. As previously noted, the Surgeon General's 1964 report provided substantial evidence for tobacco's health risks which led to regulations mandating warning labels on all packages of cigarettes in 1965. This spawned a new era of cigarette regulation in the United States with new restrictions being increasingly added through the present day, most recently

featuring the 2019 change in regulation which increased the minimum age to purchase tobacco and vaping products to 21 (T21).

The current generation of e-cigarettes was introduced by brands like N'Joy in 2007. As indicated in *Table 1*, a substantial body of successful regulation for other types of tobacco products existed nearly 40 years before this product's introduction. However, because of the highly constrained writing and interpretation of existing tobacco regulation, the vaping industry was essentially unregulated at the federal level until 2016. At this time, the FDA published the *Deeming Rule* (FDA, 2016) that instituted many of the same regulatory goals and marketing prohibitions already in place for cigarettes. Therefore, while vaping was first introduced to the United States in 2007, regulators required almost a decade to implement meaningful laws and prohibitions to counter its spread.

As a result, millions of youth are more likely to have tried e-cigarettes (CDC, 2020) and consequently become addicted to nicotine. The obvious implication is that marketing of vaping products to youth was a dangerous attempt to allow e-cigarettes to replace traditional cigarettes as the next dominant form of nicotine consumption. As will be demonstrated in the following sections, the most dangerous marketing tactics deployed by traditional tobacco companies to addict millions of people and cause millions of deaths have been largely replicated for e-cigarettes due to inefficiencies in the regulatory process.



RESEARCH METHOD

This research involved conducting a literature review examining marketing practices and regulations for traditional tobacco products and vaping. From this, a content analysis was

performed with a comparison of historical tobacco marketing practices with current vaping marketing practices from existing databases. The key database used was from the Stanford Research Into the Impact of Tobacco Advertising (SRITA) project. This database features an exhaustive comparison of cigarette advertising and e-cigarette advertising in several categories, including appeals to youth, flavors, and health. Directly comparing similar ads within these categories illustrates how deliberately vaping has been inspired by the tobacco industry.

The following sections provide examples of cigarette and e-cigarette marketing tactics and regulation. Special note should be taken of the dates these regulatory actions were taken and the similarity of the marketing tactics.

EVIDENCE OF HARM

Studies have shown for many decades that cigarettes cause cancer, emphysema, heart damage, and other harmful conditions to the human body (Gometz, 2011). In fact, dating back to the 1890s, there was a well-established link between tobacco use and cancers and other diseases (Doll, 1998). More evidence came from studies performed in the 1930s when observational evidence was published in *Science* magazine that detailed how tobacco use caused people to die younger and experience more frequent health problems (Doll, 1998). The modern era of cigarette regulation began in large part due to the Surgeon General's Advisory Committee on Smoking and Health in 1964 which outlined the clear link between smoking and lung cancer (CDC, 2019). This was the first mainstream evidence presented that showcased the direct harms of smoking and led to many of the regulations we have today being enacted.

Despite this rich history of regulations observed with cigarettes, its warnings were not heeded for vaping. Vaping was introduced to America in 2007. However, the first meaningful federal regulations were not taken against vaping until 2016 with the FDA's *Deeming Rule* (FDA). While vaping has been shown to have fewer negative consequences than smoking cigarettes, it is not a healthy alternative. Vaping has nicotine, the chemical that also makes cigarettes very addictive, which is also known to damage the brains of youth (Surgeon General). It can also cause severe lung diseases with flavorings like diacetyl and ultrafine particles that can cause respiratory issues (Surgeon General).

As with cigarettes, hastier action could have limited the adoption of vaping among youth, thereby reducing the harm caused to them by vaping these particles and harmful flavorings. The next sections present in further detail how the delay in acting to curb the spread of vaping allowed the vaping industry to adopt the marketing and advertising strategies of the tobacco industry and get more youths addicted to vaping than otherwise would have been possible with more effective regulation.

MARKETING AND REGULATION OF TOBACCO AND VAPING PRODUCTS

Marketing is a causal factor in the initiation of smoking behaviors, the subsequent addiction of users, and debilitating and lethal health consequences (Perks et. al, 2018). For these reasons, government health agencies began to regulate tobacco marketing through a series of ad hoc rules and prohibitions beginning in 1965 and continuing through 2020. Overall, these regulations can be grouped in eight categories: Warning Labels, Advertising Prohibitions, Misleading Health Messaging, Vulnerable Populations, Flavored Products, Event Sponsorship, Age-Verified Distribution, and Taxation.

This section of the thesis analyzes each of these eight types of regulation for both tobacco and vaping. It provides compelling evidence showing how vaping marketers duplicated banned tobacco marketing practices to the detriment of their customers.

Warning Labels

Definition and Purpose. Warning labels for tobacco products are a "demarketing" tool designed to educate and make salient safety concerns related to tobacco usage and correct the misperceptions created by its marketers. Warning labels for tobacco marketing began in 1965 with relatively weak statements required for packaging (See *Figure 1*) and expanded to the more specific and dire warnings seen today.

Tobacco Regulation. The *Federal Cigarette Labeling and Advertising Act* provided authority for the Federal Trade Commission to "establish a comprehensive Federal Program to deal with cigarette labeling and advertising with respect to any relationship between smoking and health." Its purpose was to: (1) "insure the public is adequately informed about any adverse health effects of cigarette smoking by inclusion of warning notices on each package of cigarettes

and in each advertisement of cigarettes; and (2) protect commerce and the national economy to the maximum extent consistent with this declared policy and eliminate diverse, nonuniform, and confusing cigarette labeling and advertising regulations with respect to any relationship between smoking and health" (FTC, 1966).

This regulation, the first of its kind towards curbing the sale and distribution of cigarettes in the United States, was short-sighted in its narrow application to cigarettes. Within the law itself, we see a common trend we will address later of language that too narrowly applies to the traditional definition of cigarettes as a tobacco product. It took over 50 years for a similar regulation to require warning labels on vaping products.

Vaping Regulation. As with cigarettes and other tobacco products, vaping products were not initially required to carry health-related warning labels. Whereas vaping products were first introduced in America in 2007, the first warning label requirement was only imposed in 2018. As illustrated in *Figure 1*, vaping warning label requirements are like the "weak" warnings required when tobacco warnings were first introduced rather than the stronger, more prominent and rotating warnings currently required.

Implications. Even though warning labels were among the first meaningful regulations taken against cigarettes, they were not immediately applied to vaping. The importance of warning labels, as was realized with the first regulations regarding cigarettes, was that they served as a powerful signifier of harm to the purchaser. However, the lack of mandated warning labels on vaping products allowed purchasers of vaping products to be unaware of the many negative health consequences vaping can cause. It also allowed youth to become addicted before they were aware of these consequences.

Media Prohibitions

Definition and Purpose. Media prohibitions limit the audience exposure for cigarettes and other tobacco products to potential users, particularly for vulnerable populations such as youth. The tobacco industry heavily emphasized television and radio advertising because of its popularity in American culture. Therefore, the first media ban for advertising of tobacco products prohibited exposure through television and radio. As seen in *Figure 2*, these advertisements were pervasive, and the implementation of these regulations helped curb the tobacco industry's influence.

Tobacco Regulation. The *Public Health Cigarette Smoking Act* served as an amendment to the *Federal Cigarette Labeling and Advertising Act*. It was aimed to limit the advertising of cigarettes in American media by specifically banning advertisements on television and radio. The Act specified that: "After January 1, 1971, it shall be unlawful to advertise cigarettes on any medium of electronic communication subject to the jurisdiction of the Federal Communications Commission" (FTC, 1970).

This regulation was also an important first step in future prohibitions on other popular forms of media in the United States (i.e., billboards, magazines, and retail displays). The prohibition suffered from the same missteps as its predecessor due to its specific definition of cigarettes. The accompanying *Figure 2* also showcases that even today, almost half a century later, there is no equivalent law that applies to vaping products on television and radio, as well as the more popular social media outlets like Facebook and Instagram.

Vaping Regulation. Like cigarettes and other tobacco products, vaping products were initially allowed to advertise on popular media like television and radio. Despite the fact cigarettes have been banned from television and radio advertisements for almost 50 years, vaping products today face no such advertising restrictions. As shown in *Figure 2*, vaping advertisements are only restricted by the owners of the mediums themselves rather than by comprehensive regulations at the federal level.

Implications. Even though advertising prohibitions were taken towards cigarettes beginning in 1970, these laws have not applied to vaping, leaving any medium open for exploitation at the federal level. This is important because the acceptability of advertisements signifies to viewers and eventually purchasers that vaping is not only okay but encouraged in our society. It also leaves lasting imprints on viewers and creates a positive impression of such products. Consequently, the lack of advertising prohibitions on vaping allows the messages from the vaping industry to be unchecked and create acceptability towards them.

Misleading Health Messaging

Definition and Purpose. Misleading health communications lead prospective customers into believing certain cigarettes are 'healthier' alternatives to others on the market. This insinuates any kind of smoking can be considered healthy. Common methods of implementing

this are for brands to have ‘light’ options, a strategy commonly seen with products like soda including Diet Coke and Coke Zero. As seen in *Figure 3*, this method was applied to the claim vaping was safer than smoking cigarettes. Thus, there was an implied health benefit to switching to vaping from smoking and an exploitable market of smokers that could be converted.

Tobacco Regulation. The landmark court case, *United States v. Philip Morris* through the Department of Justice, involved the DOJ suing several major tobacco companies due to their decades of effort to “deceptively market cigarettes characterized as ‘light’ or ‘low tar’ while knowing that those cigarettes were at least as hazardous as full flavored cigarettes” (PHLC). This was just one of many elements of the suit, with other elements including payments levied by several states to help cover hospital and medical expenses of smoking patients.

Language from the suit itself shows a key part of the ruling was “In particular, the Court is enjoining Defendants from further use of deceptive brand descriptors which implicitly or explicitly convey to the smoker and potential smoker that they are less hazardous to health than full flavor cigarettes, including the popular descriptors ‘low tar,’ ‘light,’ ‘ultra-light,’ ‘mild,’ and ‘natural’” (United States v. Philip Morris, 2006).

Vaping Regulation. Vaping products, like cigarettes, initially faced no restrictions on language in advertising regarding supposed health benefits. Despite the fact cigarettes were limited in this regard in 2006, this was not applied to vaping until 2018, over a full decade later. Today, vaping products cannot claim they are healthier than cigarettes, unless they receive special exemption from the FDA, which no product currently has been granted. As seen in *Figure 3*, vaping was clearly marketed as a safer alternative to cigarettes, and cigarettes like Marlboro Lights were also marketed as healthier cigarette alternatives.

Implications. The claim that vaping is healthier than smoking cigarettes is a principal reason so many youths began vaping initially and new ones begin vaping today. Claiming that vaping is a healthy alternative to cigarettes with minimal to no health risks is a powerful marketing strategy. Regulations have recently limited health claims for e-cigarettes, but the damage has been done by encouraging a whole generation of teenagers that vaping is a risk-free activity. It is likely to require many years for this misperception to be corrected (SEARHC). This regulation was applied 11 years after the first e-cigarette was introduced and nearly 20 years after the *Master Settlement Agreement* prohibited similar messaging with cigarettes.

Vulnerable Populations

Definition and Purpose. Vulnerable populations, especially youth, are particularly susceptible to the false and erroneous claims made by the vaping industry because they are less able to analyze these claims accurately and make good decisions. Cigarette and e-cigarette manufacturers have a history of leveraging these vulnerabilities by delivering targeted messaging designed to appeal to youthful target audiences. As seen in *Figure 4*, people who appear to be either below the legal age to purchase these products or directly near them are seen socializing and having fun using these products. These appeal directly to youth and encourage their trial and continued use of these products.

Tobacco Regulation. The *Master Settlement Agreement*, which was reached in 1998 and featured the state Attorneys General of 46 states, five U.S. territories, the District of Columbia and the four largest cigarette manufacturers in America concerning the advertising, marketing and promotion of cigarettes. Additionally, the MSA imposed restrictions on the sale and marketing of cigarettes by participating cigarette manufacturers. There is no such comprehensive agreement or ruling today that directly limits vaping advertising mediums or targeting youth.

Key language from this agreement also shows how the definition of what a cigarette was limited its application to future products. Utilizing the same definition as that provided by the FTC, the *Master Settlement Agreement* explains how a cigarette specifically must contain nicotine, be wrapped in a substance like paper, and generally be regarded as something a consumer would purchase like a cigarette (MSA, 1998).

Vaping Regulation. Like cigarettes, vaping products were not initially banned from targeting vulnerable populations like youth. Despite the fact cigarettes were banned from targeting youth over 20 years ago, no such ban applies to vaping products on the federal level. As seen in *Figure 4*, being sociable and having fun with friends is integral to the sale of both Salem cigarettes and Blu electronic cigarettes.

Implications. It is important to ban the targeting of youth because the advertising tends to make them feel empowered like the adults they are striving to imitate. These advertisements showcase the important role these products have in the social development of young people in relation to their peers. The lack of regulation in this area means vaping products can still appeal

to youth with essentially no restriction, thus continuing the harmful cycle of youth using e-cigarettes as a signifier of adulthood and becoming addicted to a harmful product.

Flavored Products

Definition and Purpose. Flavored products are a very important tool for encouraging youth to try them initially. As seen in *Figure 5*, flavors are a very powerful appeal that make the products seem appealing to those looking to experiment. Flavors were pioneered by tobacco products like cigarettes, with vaping carrying the torch after cigarettes could no longer do so.

Tobacco Regulation. The *Tobacco Control Act*, signed in 2009, gave the FDA authority to "regulate the manufacture, distribution, and marketing of tobacco products" (FDA). The scope of the act was to address the point that "past efforts to restrict advertising and marketing of tobacco products have failed adequately to curb tobacco use by adolescents, comprehensive restrictions on the sale, promotion, and distribution of such products are needed" (TCA, 2009).

However, like other documents have shown, the definition of a cigarette is what made it unable to be applied to vaping. "The term 'tobacco product' means any product made or derived from tobacco that is intended for human consumption, including any component, part, or accessory of a tobacco product (except for raw materials other than tobacco used in manufacturing a component, part, or accessory of a tobacco product). ''(2) The term 'tobacco product' does not mean an article that is a drug under subsection (g)(1), a device under subsection (h), or a combination product described in section 503(g)" (TCA, 2009).

Vaping Regulation. Like with cigarettes, vaping products could sell in any desired flavors and varieties for maximum customer immersion. The sale and distribution of flavored vape products was unrestricted until 2020 when all flavorings except tobacco and menthol were banned because flavors were revealed to have an inordinate impact on encouraging youth to try these products initially. As seen in *Figure 5*, the appeal to flavors within vaping products was distinct and is very similar to cigarettes.

Implications. This regulation was also applied late to cigarettes considering the *Master Settlement Agreement* was passed 10 years earlier. Despite this, it took until 2020 for flavored vaping products to be banned at the federal level. This allowed many youths to become addicted to vaping products due to flavors and try them when they likely would not have otherwise.

Event Sponsorship

Definitions and Purpose. Event sponsorship was a central component of traditional tobacco marketing programs. From the NFL to Women's Tennis, NASCAR, concerts and more, tobacco advertising and brand reinforcement were staples at these events. As seen in *Figure 6,* these events featured tobacco brands through the brand names, color schemes, and even distribution of tobacco products to minors. The integration of tobacco and event marketing was a normal occurrence and contributed to tobacco use being intertwined with most aspects of society.

Tobacco Regulation. Event sponsorship was banned via the 1998 *Master Settlement Agreement*. The language in this regulation is: "(A) advertising of the Brand Name Sponsorship event shall not advertise any Tobacco Product (other than by using the Brand Name to identify such Brand Name Sponsorship event); (B) no Participating Manufacturer may refer to a Brand Name Sponsorship event or to a celebrity or other person in such an event in its advertising of a Tobacco Product" (MSA, 1998).

Vaping Regulation. Like targeting youth and other vulnerable populations, the language in this regulation was tied to the previously provided definitions for tobacco products as seen in other regulations. Thus, the level of specificity was too narrow to apply to vaping products and no federal regulations currently prohibit vaping brands from sponsoring events in this manner.

Implications. The commonplace integration of tobacco products into popular and highly publicized social events helped create a world where tobacco use was normal, and exposed children to its brand imagery and the unhealthy misperceptions this created. By not regulating the sponsorship of similar events by vaping companies, regulators have contributed to the creation of a new generation of nicotine addicts who also suffer negative health consequences from their addictions. Nothing was apparently learned by regulators from the detrimental consequences associated with event sponsorships by earlier marketers of tobacco products.

Age-Verified Distribution

Definitions and Purpose. The sale of tobacco products to audiences of all ages was once widely accepted. For instance, vending machines without age-verification sold cigarettes as commonly and easily as soda or candy. Similar methods existed for vaping as well via online channels. Open access without age-verification has led to youth being able to easily access and use these products despite being underage. The younger someone starts to use the products, the

more likely they are to become lifelong users, which means limiting open access to these products is critical.

Tobacco Regulation. The *Regulations Restricting the Sale and Distribution of Cigarettes and Smokeless Tobacco to Protect Children and Adolescents Act*, passed in 2010, served to limit youth's access to tobacco products. Specifically, it spoke to the "prohibition on the sale and distribution of certain tobacco products to persons younger than 18 years of age; restrictions on access, which consist largely of requirements concerning the sale of cigarettes and smokeless tobacco" (FDA, 2013). The key measure of this regulation was to ban vending machines and self-service displays where minors were present.

Language from the act itself shows part of the ruling specifically defines the products that it encompasses. This includes the fact that these regulations apply to "some, but not all, tobacco products. Specifically, the regulations apply to cigarettes, including roll-your-own tobacco; cigarette tobacco; and smokeless tobacco" (Regulations Act, 2010). Additionally, the Tobacco 21 legislation, signed in December of 2019, now requires consumers be 21 years or older to purchase tobacco and vaping products (T21, 2019). The act also defines cigarettes with limiting language seen in other pieces of regulation.

Vaping Regulation. The *FDA's Center for Tobacco Products Compliance Policy* of 2016 banned access to minors by requiring photo ID for online channels, formally disallowing vending machines that sold vaping for all ages and heightening online age-verification protocol.

Implications. Like other acts before it, this act did not allow itself to be applied to anything beyond this narrow definition to activities like vaping. It took until 2016 for similar action to be taken against vaping. In this time, youth of all ages had easy access to vaping simply by using e-commerce and claiming they were adults with little to no verification steps taken. This open access allowed millions of youth unfettered access to vaping products, amplified its acceptance in our culture today, and increased the number of lifelong users.

Taxation

Definitions and Purpose. The taxing of tobacco products proved to be an effective way to curb the public from purchasing them. Simply increasing the price to the consumers dissuaded

many from smoking at all or encouraged them to smoke less. Additionally, such excise taxes also help state and local governments contribute money to schools and other community ventures.

Tobacco Regulation. The first modern federal tax on tobacco products came from the *Revenue Act of 1862*, which was passed due to funding needs created by the Civil War. This act placed excise taxes on items like tobacco, liquor, and playing cards (ATF, 2016). Every state has also since passed an additional tax on tobacco products, which is levied to consumers in addition to the current federal tax of $1.01 per pack. Importantly, this tax was like other "sin taxes," such as those on alcohol, that were designed to raise tax revenue rather than curb consumption.

Vaping Regulation. Currently, there is no federal tax on vaping products. Some states have passed individual taxes, but it is at their own discretion. According to the *International Journal of Environmental Research and Public Health*, "On average, a price increase of 10% on a pack of cigarettes would reduce demand for cigarettes by about 4% for the general adult population in high income countries" (Bader et. al, 2011). Applying this same logic to vaping, a tax of similar proportions would have a substantial effect on reducing the amount of people who vape today.

Implications. The lack of a tax at the federal level for vaping products makes it more accessible since the price remains at a lower level. This also means it is more available to youth who often have less discretionary money, and with a tax would otherwise have a harder time affording such products. Additionally, the federal government does not profit from the vaping industry like it does cigarettes since it lacks a federal tax.

DISCUSSION

Why has e-cigarette regulation been delayed?

Regulatory agencies like the FDA have been limited in their efforts to curb the rise of e-cigarettes in America due to:

1. Economic harm taking priority over threat of public injury.

In late 2008, the FDA obtained a batch of early e-cigarettes and determined they were medical devices to administer nicotine that had not been approved. In response, vaping manufacturers took the FDA to court and claimed their products were like traditional cigarettes, which could not be regulated by the FDA without new legislation (Sharfstein, 2019). The FDA then responded that these products looked like nicotine inhalers, which are indeed regulated. The FDA also presented data showing harmful chemicals in vaping products. Despite this, the FDA was restrained by the rulings of the court that sided with the vaping industry to curb the spread of vaping and was accused of having a "tenacious drive to maximize its regulatory power" (Sharfstein, 2019).

Additionally, there was a push from academic researchers examining the potential harm some of these regulations could cause to the vaping industry. Some scholars, like those with *Tobacco Regulatory Science (TRS)*, a journal dedicated to the dissemination of research towards the increased regulation of tobacco products, voiced the concern that "Public health policies are often enacted without adequate consideration of the existing market structure or their impacts on that market structure" (Levy et. al, 2019). Thus, while they did not wish to dismiss the concerns of vaping, they also did not want to limit the market to only those more powerful companies. Furthermore, they professed the FDA's "Deeming" regulations regarding vaping products "could make it difficult for smaller companies to remain in the market and could discourage new companies and new product innovations from entering the market" (Levy et. al, 2019).

2. Courts favored private enterprise over health concerns voiced by health agencies (FDA).

In 2010, the FDA brought the case *Smoking Everywhere, Inc. v. US FOOD AND DRUG, 680 F. Supp. 2d 62 (D.D.C. 2010)* arguing that e-cigarettes were an unapproved combination with potentially dangerous health consequences. The court sided with the industry and ruled the FDA did not have the authority to regulate e-cigarettes. The FDA appealed this court decision on

the grounds that little weight had been given to public health concerns, with these claims receiving substantial support from health authorities like the *American Lung Association* and the *American Cancer Society* (Sharfstein, 2019). They also argued the court decision could increase tobacco use among youth by introducing nicotine through unregulated vaping products. Furthermore, vaping products could be marketed towards children and flavors could be used to accomplish this, which ultimately did happen (Sharfstein, 2019). Despite this, the FDA also tried to explain regulation would not kill the vaping industry. Rather, they just wanted to ensure specific conditions were met. The FDA's goal was to phase in new standards and restrictions on things like flavors and balance their use among smoking cessation versus new nicotine addiction from youth (Sharfstein, 2019). However, the FDA lost their appeal, with the appellate court also siding with the vaping industry. Additionally, the FDA was not given the necessary authority by Congress to write legislation since they required legal directives by Congressional acts or sponsored legislation. The newly passed *Tobacco Control Act* would require years before the FDA could impose meaningful restrictions.

There was sizable opposition among academic researchers regarding this issue as well. Like before, scholars from *TRS* had concerns about how the FDA would impact the vaping industry, specifically the smaller companies within it. They also addressed how established tobacco brands like RJ Reynolds and Phillip Morris had entered the vaping market. Their concerns with the vaping industry were that "cigarette companies, unlike independents, have financial incentives to protect their cigarette sales from being replaced" (Levy et. al, 2019). Additionally, they feared additional requirements brought about by further FDA intervention could affect "product innovation, availability, marketing and pricing in the NVP (Nicotine Vapor Product) market, as well as alter the role of cigarette companies relative to independents" (Levy et. al, 2019). Essentially, instead of allowing the market to compete within itself to continuously produce safer products as well as compete against the cigarette industry, these scholars suggested regulations would stifle the market and only allow established cigarette brands with conflicting interests to dominate. While these arguments towards maintaining a free market have some validity in a theoretical stance, the issue remains that vaping companies of all sizes, including the smaller companies as referenced by the *TRS* scholars, were performing similar unethical marketing tactics for their vaping products. Even though bigger vaping companies had more

power and exposure, the argument of limiting the vaping market is largely invalid since the unethical practices remained.

3. Growing E-Cigarette industry, with help from Big Tobacco, leveraging political power.

The FDA's research and regulations on flavored vaping products made strong steps forward in 2014 when regulations were put in place to remove most flavored vaping products effective in 2016. The vaping industry fought back by noting research from industry scientists and lobbyists showing how vaping customers would protest flavor bans (Sharfstein, 2019). Therefore, when the FDA passed its *Deeming Rule* in 2016, flavoring regulations were not included. In the meantime, Juul entered the vaping market, and with its focus on teen-friendly marketing and flavors with high concentrations of nicotine delivery, they dominated the vaping market (Sharfstein, 2019). The number of youths regularly vaping increased tremendously in 2018-2019, effectively reversing earlier progress in reducing youth tobacco consumption.

In addition to direct political power leveraged by the vaping industry, there was also indirect power. According to an article from the *New York Times*, the political power for the vaping industry came from "intense lobbying efforts by the e-cigarette and tobacco industries, fears of a political backlash in tobacco-friendly states, bureaucratic delays, and a late reprieve by an FDA commissioner who had previously served on the board of a chain of vaping lounges" (Thomas, 2019). Furthermore, political figures within the presidential administrations of both President Obama and President Trump ended up making decisions that ultimately benefited the growing vaping industry.

Recommendations for Future Regulations

FDA regulators should allow e-cigarette marketing to be governed by the same laws that govern other tobacco products. It is necessary to more broadly interpret current regulations based on the targeted health outcomes when evaluating current and future products rather than specific product forms. Regulations should ban any device designed to deliver harmful tobacco-derived chemical. Laws should specifically define e-cigarettes as nicotine delivery vehicles that extend to vaping or any other product form achieving the same outcome. Thus, e-cigarettes would have relevant regulations constructed to apply to current and future products to avoid the necessity of passing further regulations new product forms emerge (Lempert et. al, 2019).

Additionally, the *Public Health Law Center* and *Vaping Prevention Resource* in their *Policy Playbook for E-Cigarettes* explain how definitions within regulations should "state which tobacco products are covered, yet be broad enough to anticipate and capture future product innovations" (PPFEC, 2020). An excellent example of this comes from the physical appearance of e-cigarettes themselves. When vaping was first introduced, they resembled cigarettes. However, vaping products now come in many different designs. Constructing regulations so they can be broadly interpreted would avoid this change becoming an issue and allow future products that are not even on the market to fit under these laws.

Many states today have laws that define e-cigarettes must require nicotine. Others have laws that state e-cigarettes must have tobacco to be classified a tobacco product. Furthermore, some even specifically exclude e-cigarettes from traditional cigarettes due to their lack of tobacco (Lempert et. al, 2016). These laws are overly-specific by requiring nicotine or tobacco, which renders them ineffective to deal with the wide variety of vaping products on the market. This is in large part due to intervention by the vaping industry to alter laws to fit their interests.

Furthermore, some vaping products no longer rely on tobacco-derived nicotine. Thus, regulations that revolve around nicotine from tobacco would be irrelevant. Essentially, "a definition that covers only products that contain tobacco-derived nicotine may be inadequate and would likely make enforcement difficult" (PPFEC, 2020). In addition, vaping cartridges are often interchangeable and work with synthetic nicotine and other substances. This means a comprehensive definition should avoid specifically denoting tobacco or nicotine as components of vaping devices like electronic cigarettes.

Some states, like Minnesota, have determined their state laws apply to e-cigarettes just as they apply to tobacco products. Other states, such as North Carolina, have tax laws that create different tax categories for what they classify as "vapor" and "tobacco" products. Other states do not specify if vaping products are included with tobacco products (Lempert et. al, 2016). This confusion could be eliminated with more uniform federal tax laws for vaping products.

Taxes are an important tool for reducing demand for e-cigarettes. Recent research found increasing the price of e-cigarettes by 10% results in a "10 to 18 percent reduction in demand or consumption of e-cigarettes – a higher price elasticity compared to combustible cigarettes" (PPFEC, 2020). Additionally, increasing the price of such products most greatly impacts youth

since they are more price-sensitive. It is also possible to tax specific parts of vaping products, such as the nicotine cartridges themselves or accessories like carrying cases (PPFEC, 2020).

CONCLUSION

Vaping is currently a key health problem for youth that can be reduced through appropriate regulations and education. Unfortunately, marketing of vaping products, like e-cigarettes, have severely increased nicotine usage in recent years, reversing decades of advances by earlier public health initiatives. This thesis concludes that (1) banned tactics from the tobacco industry were resurrected by the vaping industry; (2) many years passed before laws governing tobacco applied to stop practices for vaping; (3) vaping still lacks regulation at the federal level; (4) regulatory agencies like the FDA have been limited in their efforts to curb youth vaping; (5) regulation should include vaping and e-cigarette products to avoid circumvention.

Figure 1

Required Warning Labels for Traditional and e-Cigarettes

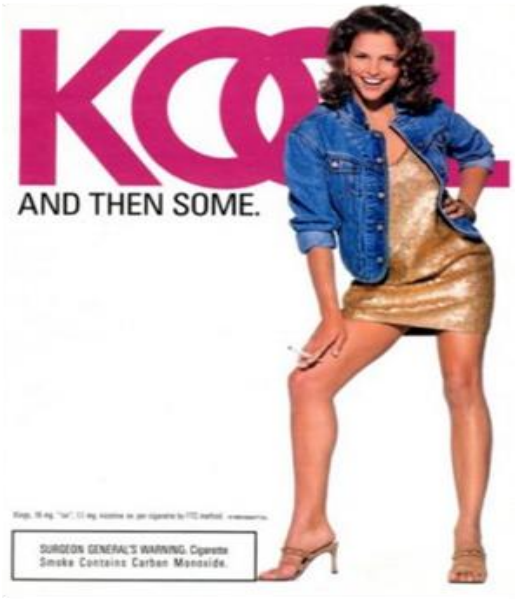
Warning labels required by the Federal Cigarette Labeling and Advertising Act (1965) mandated language designed to reduced smoking.

Vaping warning labels implemented in 2018 because of the FDA's Deeming Rule (2016) employed weak language that is unlikely to reduce vaping demand.

Figure 2

Prohibited Advertisements on Television and Radio

Advertisements on television and radio were prohibited by the Public Health Cigarette Smoking Act (1970) that sought to reduce the presence of cigarettes on popular media outlets.



There are currently no such prohibitions for the advertising of vaping products, including on television, radio, and social media to limit youth exposure to vaping marketing.

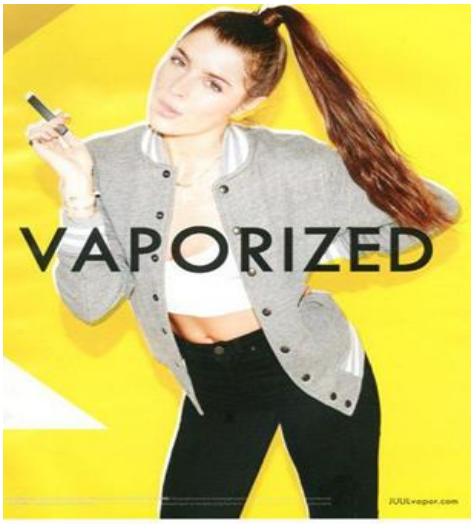


Figure 3

Banned Light, Low, and Other Misleading Health Descriptors

Misleading health descriptors like ‘light’ and ‘low’ were prohibited by the U.S. v. Philip Morris et. al decision (2006) to stop misleading consumers into believing healthy smoking options existed.

Similar descriptors were banned for vaping products by the FDA’s Deeming Rule (2016) which prohibited vaping products from claiming they were safer than smoking cigarettes.

Figure 4

Banned Marketing and Advertising Practices that Targeted Minors

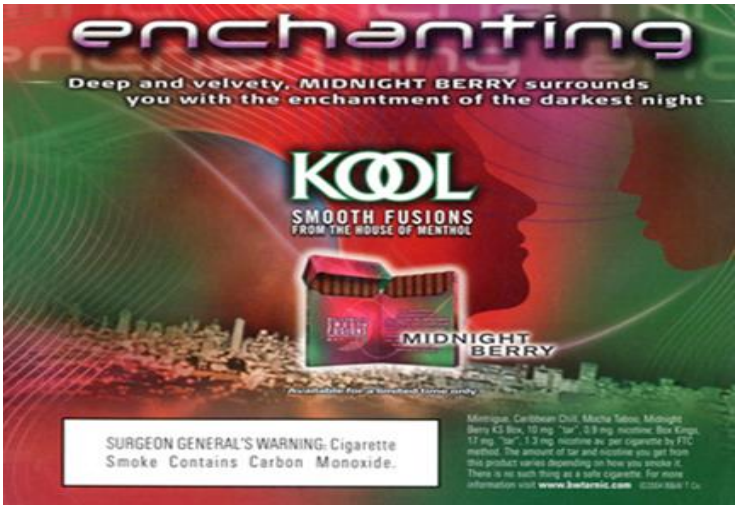
Marketing and advertisings practices that targeted minors were banned by the Master Settlement Agreement (1998) to curb youth smoking.

There are currently no such restrictions on the targeting of youth by vaping companies through marketing and advertising practices.

Figure 5

Banned all Cigarette Flavors Except Menthol

All flavors of cigarettes except menthol were banned by the Tobacco Control Act (2009) to stop youth from experimenting with flavored cigarettes and becoming addicted.

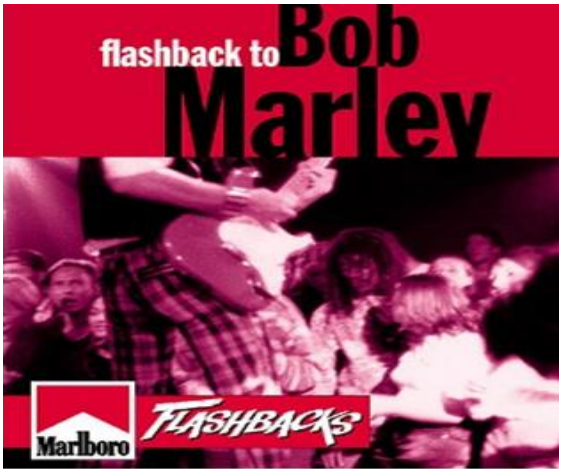


Over a decade later, all flavors of vaping products except tobacco and menthol were banned by the FDA's Enforcement Policy to stop youth from trying e-cigarettes based on flavors.

Figure 6

Banned Tobacco Brand Sponsorships of Sporting Events and Concerts

Tobacco companies were no longer allowed to sponsor events like sports and concerts via the Master Settlement Agreement (1998) to limit youth exposure to tobacco brands.



Event sponsorships are still currently permissible for vaping companies to perform despite the definitive ruling on cigarettes in this regard over twenty years ago.

Figure 7

Banned Cigarette Sales via Vending Machines and Other Self-Service Displays

The sale of cigarettes through vending machines and other self-service mechanisms were banned by the Regulations Restricting Sale and Distribution of Cigarettes (2010) to limit youth access.

Access to minors was banned by requiring photo ID, disallowing all-ages vending machines, and heightening online age verification via the FDA Center for Tobacco Products Compliance Policy (2016) after vaping products had open access to youth for the preceding decade.

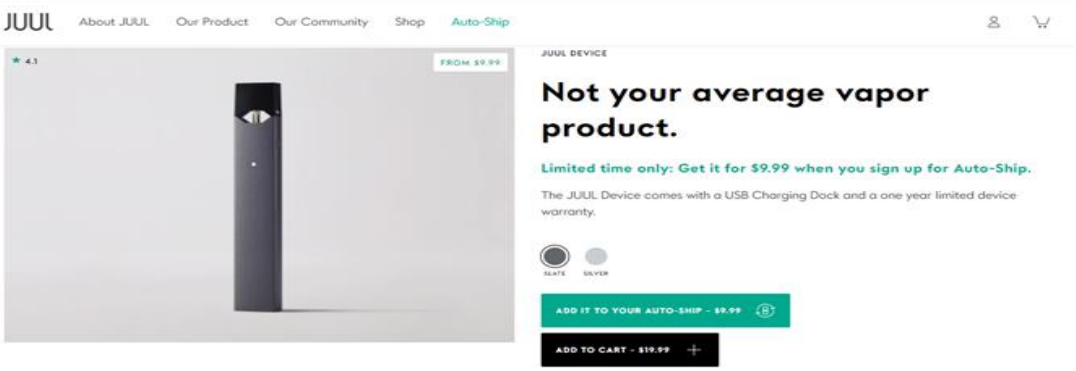
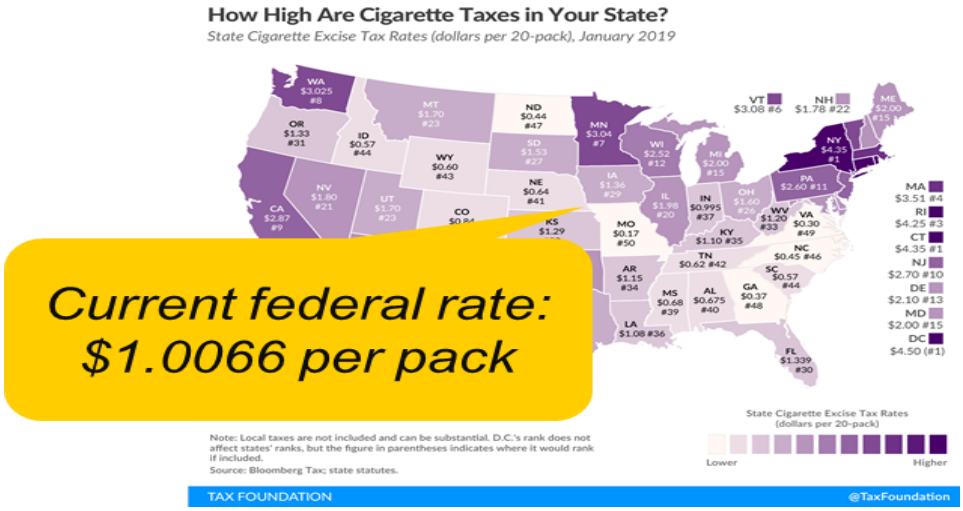


Figure 8

Federal Excise Tax Applied to Cigarette Sales

A federal excise tax was levied on cigarettes via the Revenue Act of 1862 to raise money for the Union in the funding of the Civil War, with various state and local taxes also applied today.



There is currently no such federal tax levied on vaping products, although several states have levied various taxes on vaping products.

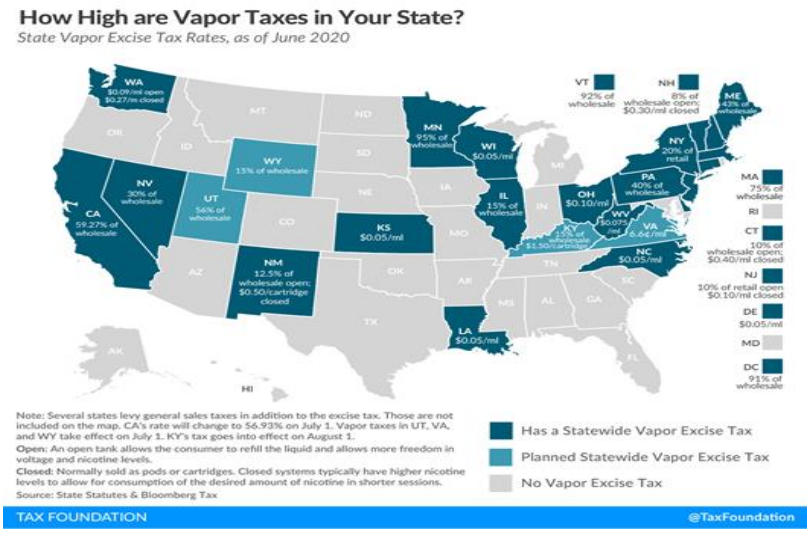


Table 1

Regulations Levied Against Cigarettes

1862	*Revenue Act of 1862*	First modern federal tax on tobacco products passed due to the Civil War.
1965	*Federal Cigarette Labeling and Advertising Act*	Required the warning "Caution: Cigarette Smoking May Be Hazardous to Your Health" be placed in small print on one of the side panels of every pack of cigarettes.
1970	*Public Health Cigarette Smoking Act*	Requiring a sterner warning on all cigarette packages, "Warning: The Surgeon General Has Determined That Cigarette Smoking Is Dangerous to Your Health."
1971	*Public Health Cigarette Smoking Act*	Banned cigarette advertising on television and radio.
1984	*Comprehensive Smoking Education Act*	Required four specific health warnings on all cigarette packages and advertisements: 1) SURGEON GENERAL'S WARNING: Smoking Causes Lung Cancer, Heart Disease, Emphysema, and May Complicate Pregnancy. 2) SURGEON GENERAL'S WARNING: Quitting Smoking Now Greatly Reduces Serious Risks to Your Health. 3) SURGEON GENERAL'S WARNING: Smoking by Pregnant Women May Result in Fetal Injury, Premature Birth, and Low Birth Weight. 4) SURGEON GENERAL'S WARNING: Cigarette Smoke Contains Carbon Monoxide.
1998	*Master Settlement Agreement*	Banned transit and billboard advertisements, paid brand product placement, cartoons, tobacco brand sponsorships

		of sporting events and concerts, and overall practices that targeted minors.
2006	*U.S. v. Philip Morris et al federal court decision*	Banned use of "light, low, and other misleading health descriptors" as part of the U.S. v. Philip Morris et al federal court decision, which concluded a violation of federal racketeering laws by major cigarette companies.
2009	*Family Smoking Prevention and Tobacco Control Act*	Granted FDA regulatory authority on tobacco products.
2009	*Tobacco Control Act*	Banned all flavored cigarettes except menthol.
2010	*Regulations Restricting the Sale and Distribution of Cigarettes and Smokeless Tobacco to Protect Children and Adolescents Act*	Vending machines and other self-service displays were banned where retailers could not ensure people below the age of 18 were present or allowed entry at any time.
2016	*FDA Deeming Rule*	FDA was given authority to oversee all tobacco products, including cigars and e-cigarettes; restrict sales to youth, prohibit flavors, and take other actions to protect public health.

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