

USING REGULATORY FEES TO COMBAT THE ADVERSE EFFECTS OF SUGAR-SWEETENED BEVERAGES

INTRODUCTION

The prevalence of overweight and obesity in the United States has steadily increased over the past few decades. Along with this increase in weight have come increases in the prevalence of weight-related medical problems for adults and children and a drastic increase in related health care costs.

Scientific evidence has shown a strong link between consumption of **sugar-sweetened beverages** and obesity.¹ Charging a regulatory fee on sugar-sweetened beverages could help prevent the health problems associated with these beverages, both by providing a critical source of funding for obesity prevention and treatment programs and by potentially reducing consumption.

Much of the discussion nationally has focused on **taxing** sodas or sugar-sweetened beverages. At least eight jurisdictions have excise or license taxes that apply specifically to soft drinks or soft drink syrups.² Under California law, a **regulatory fee** is an alternative funding mechanism with several distinct advantages.

Unlike some taxes, regulatory fees are charged to the business that manufactures or distributes a harmful product. The business can decide whether and how to pass those costs on to the consumer. The proceeds generated by a fee may be used only for regulatory programs that mitigate the harm caused by the product – so a fee ensures that prevention and treatment programs will receive a sustained source of funding that cannot be redirected to address other issues.

Distinguishing Taxes and Fees

A **tax** is a government-imposed levy on a person or property to raise revenue for general public needs.³

A **sales tax** (also referred to as a **sales and use tax** or **transactions and use tax**) is imposed on consumers who purchase goods at retail; it is usually measured as a percentage of the overall sales price.⁴ Although the seller is responsible for collecting the tax on behalf of the state or local government, an essential element of a sales tax is that it is passed on to the consumer.⁵

An **excise tax** is imposed on the performance of some act or the exercise of some privilege, and is often imposed on the business selling a consumer product.⁶ For example, most state “tobacco taxes” are excise taxes. An excise tax on the sale of sugar-sweetened beverages would be charged to the business for the privilege of

selling these beverages; the business can, and often does, pass this charge to the consumer by increasing the base sales price of an item by the amount of the excise tax.

A **regulatory fee** can be imposed by state or local governments under their general police power. It is charged on a defined class of businesses (or other fee payers) to fund regulatory activities related to those businesses’ operations. The fee can be no higher than the amount necessary to carry out the purposes of the regulation (including mitigation of past, present, and future effects of the fee payer’s operations), and the amount of the fee must be reasonably related to the economic value of the harm done by the product. A regulatory fee is not a tax because the revenue is raised to fund specific regulatory activities, not general public needs.

EFFECTS OF SUGAR-SWEETENED BEVERAGES

Obesity Over the Past 30 Years

The obesity rate in America has dramatically increased over the past several decades. The prevalence of adult obesity has more than doubled: in the late 1970s 15 percent of Americans were obese, and by 2004 that number had risen to 32 percent. In California, obesity rates have risen from only 9 percent in 1984 to 22 percent in 2006.⁷ Adult obesity is associated with many other severe health problems, including type 2 diabetes, heart disease, several types of cancer, and asthma.⁸

Overweight and obesity rates are increasing even faster among children. The obesity rate for children ages 6 to 11 has more than quadrupled over the past 40 years.^{9, 10} Today more than 16 percent of children and adolescents in the United States ages 2 to 19 are obese,^{11, 12} and researchers estimate that 28 percent of California children in grades 5, 7, and 9 were overweight in 2004.¹³

The effects of obesity on children are dramatic. Type 2 diabetes, previously only seen in adults, is rising in children, and analysts predict that one-third of American children born in the year 2000 will develop type 2 diabetes in their lifetime.¹⁴ Meanwhile, 60 percent of obese children ages 5 to 10 have early signs of heart disease.¹⁵ The risk of becoming an obese adult is at least twice as high for obese children as it is for children of a healthy weight.¹⁶ If current adolescent obesity rates continue, there will likely be more than 100,000 additional cases of coronary heart disease attributable to obesity by 2035.¹⁷

Although obesity and overweight affect all races and income groups, low-income people and ethnic minorities experience greater obesity rates than the overall population. Low-income communities typically have half as many grocery stores as middle-class or wealthy areas, and predominantly African American neighborhoods often have only a third as many grocery stores as predominantly white neighborhoods¹⁸ – translating into decreased access to healthier foods for people of color and people of limited economic means. Moreover, children in low-income areas often have limited access to safe play areas, and the areas that are available often are littered with trash, drugs, and gang activity.

Sugar-Sweetened Beverages

Sugar-sweetened beverages are any carbonated or non-carbonated non-alcoholic beverages with added caloric sweetener. Coffees, hot chocolate, or any beverage containing milk are usually excluded. This category includes but is not limited to non-diet carbonated soft drinks, energy drinks, sweetened teas, sports drinks, and non-carbonated fruit-flavored drinks with added caloric sweetener such as “ades” and punches.¹⁹

Sugar-Sweetened Beverage Consumption Over the Past 30 Years

Since the 1970s, Americans have increased their caloric intake by 278 calories per person per day²⁰ – an increase that would result in more than 20 pounds of weight gain per year for a person, enough to explain the entire obesity epidemic. Americans across all age groups increased their caloric intake *from sugar-sweetened beverages alone* from 70 to 190 calories per person per day over that same time period (1977–2002), an increase of 120 calories. This increase in sugar-sweetened beverages represents 43 percent of the increase in average daily calorie consumption.²¹

The average American now consumes 50 gallons of soda and other sugar-sweetened beverages each year.²² Sugar-sweetened beverages are the largest single source of added sugar in the American diet, with 17 teaspoons of sugar in every 20-ounce serving – far surpassing the recommended total of five to nine teaspoons per day.²³ Children ages 2 to 18 now consume a greater percentage of their daily calories from sugar-sweetened beverages (10 percent) than from milk (8 percent).²⁴ In California, 41 percent of children ages 2 to 11 and 62 percent of adolescents ages 12 to 17 drink one soda or more per day.²⁵

Increased portion sizes, marketing, and accessibility are likely contributing to the growing consumption of sugar-sweetened beverages. The average soda portion size significantly increased between 1977 and 1996 from 13 fluid ounces to 20, an increase of 50 calories that alone accounts for 10 to 25 percent of the increase in adults’ average caloric intake. Looking back to the 1950s, this trend is even more striking: the average soda portion size then was 6.5 ounces. Today many businesses sell sodas in 32- and even 64-ounce sizes.²⁶

Consumption of Sugar-Sweetened Beverages Contributes to Obesity

People must consume a certain number of calories each day to fuel activity and to take in important nutrients the body does not produce naturally. Once these requirements are satisfied, any additional calories are known as “discretionary calories”: they do not contribute to the body’s basic energy and nutrient requirements. Sugar-sweetened beverages are discretionary calories because they are usually consumed beyond what the body needs in order to function and do not have any nutritional value.

A particularly unique characteristic of beverage calories is that the human body does not compensate as well for their consumption. In other words, liquid calories do not “register” in the human body as solid food calories do. Liquid calories are consumed and digested much more quickly than solid calories, and most beverages do not contain fiber and other macronutrients that make a person feel full.²⁷ As a result, sugar-sweetened beverages are consumed as if they are water, despite their high calorie content.



Portion sizes have continued to increase over the years



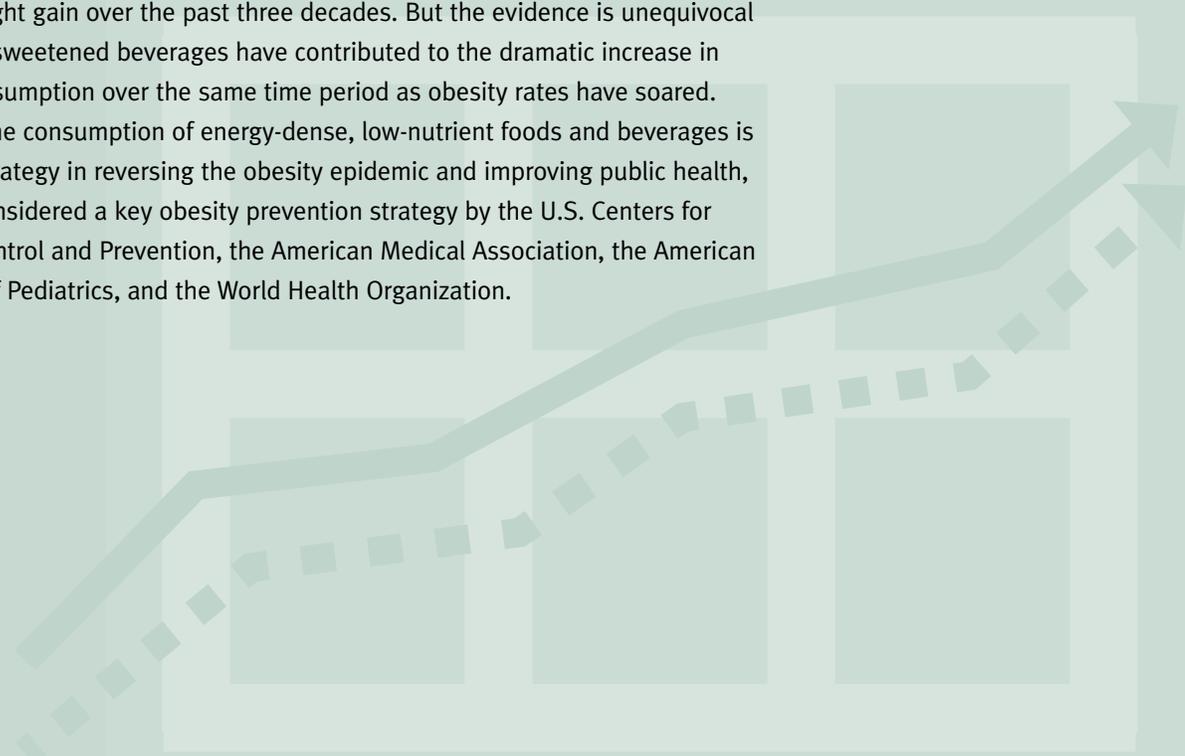
Equivalent of 17 cubes of sugar in every 20 oz soda (average portion size in 1996)

The scientific evidence is conclusive: consumption of sugar-sweetened beverages has contributed to the obesity epidemic over the last several decades. All lines of scientific evidence – studies describing and analyzing national intake trends; mechanistic studies examining response to liquid calorie challenges; observational studies involving cross-sectional and longitudinal associations between sugar-sweetened beverage intake, calories and adiposity; and intervention trials manipulating the intake of sugar-sweetened beverage intake and measuring the change in body weight that results – consistently support this conclusion.²⁸

In a study of weight gain throughout childhood, normal-weight children gained one excess pound each year over ten years, carrying about 10 pounds of excess weight as teenagers. Overweight children gained on average six excess pounds each year over the same period, resulting in 50 to 65 extra pounds in their teenage years. If the overweight children had cut back their calorie consumption by 110 to 165 calories per day, or one 12-oz sugar-sweetened beverage, they could have avoided the excess weight gain.²⁹

While the increased consumption of sugar-sweetened beverages is associated with weight gain, the opposite is proving true as well. Early studies are showing that reducing the consumption of sugar-sweetened beverages leads to a decrease in body fat, and the effects tend to be most significant in people who are already obese or overweight.³⁰

Sugar-sweetened beverages are not the only factor contributing to Americans' steady weight gain over the past three decades. But the evidence is unequivocal that sugar-sweetened beverages have contributed to the dramatic increase in calorie consumption over the same time period as obesity rates have soared. Reducing the consumption of energy-dense, low-nutrient foods and beverages is a critical strategy in reversing the obesity epidemic and improving public health, and it is considered a key obesity prevention strategy by the U.S. Centers for Disease Control and Prevention, the American Medical Association, the American Academy of Pediatrics, and the World Health Organization.



The Cost of Obesity

Overweight and obesity cost states money in terms of medical and prescription drug costs as well as in lost productivity.³¹ In California alone, the annual economic cost of obesity in 2006 was \$11.7 billion.³² About \$7 billion of this cost is a result of the increase in obesity from 1984 to 2006. If even as much as half of the increase in calories from sugar-sweetened beverages was compensated for by a reduction in the intake of other foods and beverages (a conservative estimate based on the published research), sugar-sweetened beverages would have accounted for at least one-fifth of the increase in calorie intake over this time period.

Given that available data suggest that physical activity levels have changed very little in recent decades, it is reasonable to conclude that sugar-sweetened beverages account for at least one-fifth of the weight gained between 1977 and 2001, or at least \$1.4 billion of California's obesity-related costs. A regulatory fee on sales of these beverages therefore could collect revenues at least up to this conservative \$1.4 billion estimate.

Industry-Sponsored Studies

Opponents of taxes or fees on sugar-sweetened beverages point to studies that show no correlation between these drinks and obesity, overweight, or attendant health effects. In fact, studies that are funded by the beverage industry are more likely to find no negative association between consumption of sugar-sweetened beverages and weight or other health problems.³³

Two recent studies often cited in opposition to beverage taxes conclude that there is no correlation between sugar-sweetened beverage consumption and negative health effects. The first study, funded in part by the American Beverage Association, is a meta-analysis of multiple studies examining the consumption of sugar-sweetened beverages and weight gain in children.³⁴ This study was repeated by the Harvard School of Public Health without beverage industry funding; the independent reanalysis came to the

opposite conclusion, finding a positive correlation between the consumption of sugar-sweetened beverages and increased weight gain in children.³⁵ The second study cited in opposition to beverage taxes examined the eating patterns and behaviors of adolescents and did not show a correlation between consumption of sugar-sweetened beverages and weight gain in those adolescents.³⁶

Competing evidence does not limit the legislature's ability to levy a fee on sugar-sweetened beverages if it so chooses. Legislatures have broad authority to weigh the evidence provided in the legislative record and determine the best course of action for the state. As the U.S. Supreme Court has repeatedly stated, it is the legislature's duty to weigh and evaluate the evidence before it when considering legislation, which must be upheld if the evidence reasonably supports the legislature's conclusion.³⁷

A SUGAR-SWEETENED BEVERAGE FEE: THE ECONOMICS

Consumption is affected by price. Economic theory tells us that, in general, demand for a particular product (such as soda) changes as a function of price. If a product becomes more expensive, less will be sold.

Economists are able to determine how *much* demand for a product will change as prices change by measuring the elasticity of demand for the product. Some products are so necessary to daily life that people will continue to purchase them, even if the price increases substantially. Other products are not as necessary, so people will not purchase them as often if the price increases. Sugar-sweetened beverages likely fall into the latter category.

Researchers estimate that a 10 percent increase in the price of sugar-sweetened beverages would reduce consumption by 8 to 11 percent.³⁸ For example, if a can of soda costs a dollar and a regulatory fee results in a price increase to \$1.10, people would buy about 10 percent fewer cans of soda.

Because a regulatory fee would most likely be assessed on beverage manufacturers or distributors, it is uncertain the extent to which these entities would (1) spread this cost across other products, (2) increase the price of only sugar-sweetened products, or (3) absorb the cost of the fee without increasing beverage prices.

Fees can alleviate the “spill-over” effects of consumption. Obesity impacts the broader society in several ways. It decreases worker productivity, contributing to greater absenteeism and “presenteeism” (employees actually showing up for work but not being fully engaged and productive, mainly because of personal health and life issue distractions).^{39, 40} Overweight and obesity account for \$147 billion in health care costs nationally, or 9 percent of all medical spending, *per year*.⁴¹ Nearly half of this dollar figure is borne by Medicaid and Medicare, which are funded by federal taxes.

In other words, everyone – no matter their weight – is bearing the financial burden of obesity. Given that sugar-sweetened beverage consumption contributes substantially to obesity rates, sugar-sweetened beverage production creates what is known as a “negative externality.” In simple terms, a negative externality occurs when a person or business engaging in a particular activity does not bear the full cost; the cost “spills over” to other people or businesses. For example, if your neighbors play loud heavy metal music at 3 a.m., you won’t be able to sleep. Your neighbors’ actions create a negative externality for you.⁴²

Economists consider negative externalities to be market failures, which can be alleviated through public policy intervention.⁴³ Policies that address negative externalities force the person (or business) causing the externality to bear an economic burden for its actions. In the case of the obnoxious neighbors, a policy that creates a fine or penalty for playing loud music at late hours would force your neighbors to pay for the negative effects of their behavior.

A policy that levies a fee on sugar-sweetened beverages would ensure that the **beverage industry compensates society for the portion of the economic burden of obesity for which their products are responsible.**

A SUGAR-SWEETENED BEVERAGE FEE: CALIFORNIA LAW

Whereas the government's power to tax is generally viewed as a way to raise revenue, laws imposing regulatory fees stem from what is known as the "police power," under which the government can adopt laws to protect the public health, safety and welfare.⁴⁴ A regulatory fee could be imposed on manufacturers, distributors, or retailers based on the volume of sales of sugar-sweetened beverages and their sugar content. **The fee proceeds could only be used to fund programs to mitigate the adverse effects of the product.**

As part of the government's police power, the legal framework for regulatory fees has been established by the courts. In the seminal case of *Sinclair Paint Co. v. State Board of Equalization*,⁴⁵ the California Supreme Court reviewed a regulatory fee imposed on lead paint manufacturers (among others), which was designed to fund programs to diminish and eliminate lead poisoning in children.

In 1991, by simple majority vote, the California State Legislature enacted the Childhood Lead Poisoning Prevention Act to provide evaluation, screening, and medically necessary follow-up services for children who were deemed potential victims of lead poisoning. To fund this regulatory program, a fee was imposed on historic and current manufacturers of products that contribute to environmental lead contamination.

One lead paint manufacturer challenged the law, arguing that the regulatory fee was actually a tax that required a two-thirds vote of each house of the state legislature under the California Constitution. But the California Supreme Court upheld the fee, finding that "the [Childhood Lead Poisoning Prevention] Act imposed bona fide regulatory fees, not taxes, because the Legislature imposed the fee to mitigate the actual or anticipated adverse effects of the fee payers' operations, and under the Act the amount of the fees must bear a reasonable relationship to those adverse effects."⁴⁶

The Court recognized the state's inherent police power to impose the fee to fund mandatory remedial measures to mitigate the past, present, and future adverse effects of the fee payer's operations, when there is a causal connection (or "nexus") between the product and the adverse effects to be mitigated.⁴⁷

Taxes and Fees: Procedural Differences

In California, a law imposing a regulatory fee requires a majority vote of the legislative body – the state legislature, county board of supervisors, or city council. Under Proposition 13, adopting a state tax requires two-thirds of the vote in each house of the state legislature.⁴⁸ This requirement applies to all taxes, whether general taxes (the proceeds of which can be used for any governmental purpose) or special taxes (the proceeds of which are earmarked for specific programs). For cities, counties, and special districts, all taxes must be put to a vote of the people in the jurisdiction; for general taxes, a majority vote is required, and for special taxes, a two-thirds vote is required.⁴⁹

Legal Requirements

The *Sinclair Paint* case established the legal requirements for a valid regulatory fee: a **nexus**, **proportionality**, and **earmarked funds**. Each of these requirements is discussed in this section, followed by its applicability to sugar-sweetened beverages.

Nexus

There must be a causal relationship, or nexus, between the product being regulated and the adverse effects the fee is designed to mitigate.

Applicability to Sugar-Sweetened Beverages: Research shows that consumption of sugar-sweetened beverages leads to overweight and obesity, justifying a fee imposed on those who manufacture, distribute, or sell such beverages to fund programs to combat these conditions.

The nexus requirement does not require that a product be the sole cause of a problem in order to justify the fee. The regulatory fee supporting the Childhood Lead Poisoning Prevention Act was upheld despite the fact that some known significant sources of lead contamination were not assessed a fee – for example, water distribution systems with lead pipes and solder used to join lead pipes. The fee was levied on manufacturers of only three products causing lead exposure.⁵⁰

Likewise, sugar-sweetened beverages are not the sole cause of the increase in overweight and obesity. However, since the evidence demonstrates a clear causal relationship between sugar-sweetened beverages and overweight/obesity and attendant conditions, there is a sufficient nexus to support the fee. If scientific research shows a similarly clear causal relationship for other food or beverage products, a nexus would justify a regulatory fee on those products, too.

Proportionality

The structure of the fee must be designed so that the payer bears no more than its fair share of the cost to mitigate the adverse effects of the regulated activity. To demonstrate this, the government must show both (1) the overall costs of the services and programs that will mitigate the adverse effects of the regulated activity; and (2) the basis for apportioning those costs to ensure a reasonable relationship between the fee and the payer's contribution. The total amount of fees collected by the government cannot exceed the total cost of the regulatory program.

Applicability to Sugar-Sweetened Beverages: This requirement promotes fairness: businesses selling products that cause harm must pay for the social and economic burdens created by their products, and must do so in proportion to their contribution to the problem. Research showing that sugar-sweetened beverages contribute to obesity or other adverse health effects in proportion to their caloric or sugar content justifies a fee imposed in proportion to a beverage's caloric or sugar content. The total amount of the fee for each business could be calculated based on the volume of product sold.

Legal requirements
for regulatory fees:

1] Nexus

2] Proportionality

3] Earmarked Funds

The government also must be able to calculate the costs of the regulatory programs it proposes so that it can apportion those costs among the fee payers. Each aspect of the regulatory program – such as screening, prevention, and treatment of health conditions – must be designed to mitigate the harm caused by the product.

Importantly, *Sinclair Paint* establishes the principle that proceeds from the fee can be used to prevent a product’s *future* harmful effects.⁵¹ Since the harm is obesity and related health problems, the proceeds of the fee also could be used to create general programs to combat obesity, such as community-based programs to increase access to healthier food and beverages, enhanced physical education programs in public schools, and health care programs to educate consumers and prevent, diagnose, and treat obesity and resulting conditions.

Earmarked Funds

A regulatory fee cannot be used solely to raise revenue; the proceeds can only be used to fund the regulatory program established to counter the past, present, and future adverse impacts resulting from use of the product.

Applicability to Sugar-Sweetened Beverages: This requirement essentially earmarks funds for specific public health purposes; the funds cannot be redirected to unrelated purposes. A regulatory fee thus provides a dedicated source of funding to mitigate the negative effects of the product – through treatment programs, for example, and obesity prevention programs (such as school-based physical education classes or community-based programs to increase access to healthy foods and physical activity).

Who Can Be Charged

A fee can be levied at different points along the chain of distribution, from a product’s manufacturer down to the retailer. The appropriate point of intervention depends on several factors, including the level of government charging the fee (e.g., state, county, or city) and how the fee will be administered and collected.

The sugar-sweetened beverage industry involves a complex network of syrup manufacturers (Coca-Cola, Pepsi, Cadbury Schweppes, and others), in-state bottlers and distributors that use the syrup to package and distribute products to a variety of vendors, and the vendors (including restaurants, grocery stores, and vending machines) that sell the products in various formats such as fountain drinks, cases or six-packs, or single-serving bottles.

In general, a government may only levy a tax or a fee on an entity within its jurisdiction,⁵² and the charge must be apportioned to fairly reflect the activity that takes place within the jurisdiction.⁵³ In the case of a regulatory fee, the fee would most likely be assessed based on volume of sales of syrups or individual beverages within the state, county, or city that is levying the fee. The state would have relatively broad latitude to levy a fee on any manufacturer, bottler, distributor, or retailer on the business conducted by that entity within the state.

A fee can be levied at different points along the chain of distribution.



Manufacturer



Bottler



Distributor



Retailer

A local government would be more constrained: it could only levy a fee on local businesses based on volume of sales or other economic activity within the county or city.

Deciding which point along the distribution chain to levy the fee is largely a policy decision, and how efficiently the fee can be administered ought to be taken into account. For example, there are many more sugar-sweetened beverage retailers than distributors in California; a state-level regulatory fee would likely be more efficient than a local government fee, because the state can levy the fee on a relative handful of distributors that ship sugar-sweetened beverages throughout the state. County or city governments would have to levy a fee on the multitude of retailers (restaurants, grocery and convenience stores, vending machines, etc.) within their jurisdiction.

Calculating and Assessing the Fee

The fee will usually be based on volume of sales of the harmful product by whatever entity is being charged. There are a variety of ways to calculate and assess the fee, so long as the “nexus” and “proportionality” legal requirements are met. For example, depending on what specific harm factors are identified (such as caloric content, or sugar content), the fee amount could be graduated for drinks with higher caloric or sugar content. Alternatively, the same fee amount could be applied to all drinks that exceed a threshold caloric or sugar content.

Whatever method is chosen, it is important that the total amount of fees collected does not exceed the total costs of the regulatory programs supported by the fees.⁵⁴

Creating a Legislative Record to Support the Fee

The legislative record must contain evidence that satisfies each of these legal requirements. Sometimes the nexus is plainly evident: for example, if the fee is funding a simple permit program, it can be relatively easy to calculate the costs of administering and implementing the permit system and the fee amount that results.

But for more complex analyses – for instance, tying past consumption of soda and sugar-sweetened beverages to future health conditions, and creating a multipronged regulatory program – the best way to create this legislative record is through a “nexus study” that is specifically prepared to support the fee.

A strong legislative record is important because the government is entitled to great flexibility in fashioning the regulatory fee and the fee-funded programs so long as the record shows that the basic requirements of *Sinclair Paint* are met.⁵⁵ Moreover, legislative decisions are given great deference by courts of law, which are reluctant to overturn legislative actions supported by a strong record.⁵⁶

The government has great flexibility in fashioning the fee and its funded programs so long as the basic requirements of *Sinclair Paint* are met.

UPHOLDING FEES

California courts have upheld regulatory fees imposed by local governments to fund a variety of programs, as these examples show.

Sources of Industrial Pollution

County Air Pollution Control District adopted an “emissions-based” formula for apportioning permit fees, based on the amount of emissions a stationary pollution source discharged. The court upheld the regulatory fee because the total amount of the fees was limited to the costs of the District’s regulatory programs, and the allocation of costs based on emissions related fairly to each fee payer’s burden on the District’s program.

San Diego Gas & Electric Co. v. San Diego County Air Pollution Control District, 203 Cal. App. 3d 1132 (1988).

Alcohol Retailers

City imposed fee on alcohol retailers (except for certain restaurants) to fund a program to abate nuisance conditions and criminal activity associated with the sale of alcohol. Even though state law preempts cities from regulating alcoholic beverage sales, the court upheld the fee as a valid exercise of the city’s police power.

City of Oakland v. Superior Court of Alameda County (California Beverage Retailer Coalition), 45 Cal. App. 4th 740 (1996).

Apartments

City imposed fee on landlords, per rental unit, to fund and administer an administrative hearing procedure established by the city’s rent control ordinance. The California Supreme Court rejected the notion that the fee was actually a “tax,” because the proceeds were used solely to fund the administrative hearing program.

Pennell v. City of San Jose, 42 Cal. 3d 365 (1986).

Transit Impact Development

City imposed a fee on commercial office development to offset the developments’ impacts on the municipal transit system. Court upheld the fee even though new retail developments were exempt, despite the fact that they also increase the burden on the city’s transit system.

Russ Bldg. Partnership v. City and County of San Francisco, 199 Cal. App. 3d 1496 (1987).

Landfill Assessment Charges

County charged a fee on certain land uses based on estimated amount of waste generated by those uses, to fund landfill operations. Court upheld the fee as a valid police power function of encouraging proper waste disposal and reducing illegal dumping.

Kern County Farm Bureau v. County of Kern, 19 Cal. App. 4th 1416 (1993).

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