

EFAD Policy Paper on The Use of Fiscal Measures on Food to Improve Food Environments

In recent years attention has turned to the possibility of applying fiscal measures to promote better diet-related health. This policy paper aims to provide recommendations to policy makers and national authorities for the benefit of wider society by the application of fiscal measures on food and beverages across Europe that may provide a triple win - for consumers, for the agri-food industry and for public health.



This policy paper has been produced by the European Specialist Dietetic Network on Public Health (ESDN PH) of EFAD and its major contributors have been Elena Carrillo, Zeynep Begüm Kalyoncu Atasoy and Manuel Moñino

Public Health ESDN has the mission of promoting the role of dietitians in Public Health and supporting people to prevent disease through healthy and sustainable food choices across Europe, to support dietitians in developing evidence-based practice, tools and research in the field of Public Health Nutrition and Dietetics.

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BACKGROUND

Diet related non-communicable diseases are among the major public health issues with an alarming prevalence of obesity, diabetes, cardiovascular diseases, liver disease and cancer among others. There is an unequal burden on people depending on factors such as income, education and gender (1, 2). In the period 1990–2017, the attributable annual burden of high body mass index (BMI) was 2.4 million deaths and 70.7 million disability adjusted life years (DALYs) in women and 2.3 million deaths and 77 million DALYs in men globally (3). Reducing obesity and other NCDs would decrease direct and indirect costs associated with healthcare expenditure and contribute to economic development (2).

To shift current food patterns towards a healthier and more sustainable diet, less dietary energy intake should come from saturated fats, free sugars, and consumption of salt should decrease. This can be achieved by reducing the intake of ultra-processed foods and increasing consumption of fresh and low-processed vegetables, fruits, legumes, whole-grains, nuts and choosing healthier fats. A healthier diet is associated with lower rates of non-communicable diseases (NCDs) and their risk factors such as obesity, high blood pressure, dyslipidemias and metabolic syndrome. Public health policies must ensure available healthier food environments so that the healthiest option is the most accessible and affordable one, as well as ensuring that the most vulnerable groups have access to them on equal conditions (4).

Since policy approaches are one of the most efficient and cost-effective population-based means of addressing the diet related inequalities, approaches such as taxation on foods known to be unhealthy and subsidies on foods which contribute to a healthier diet could be part of a package of public health policies including regulation, education/guidance, and legislation to reverse the current rates of obesity and NCDs and make food systems healthier, fairer and more sustainable for everyone (5).

Fiscal measures were first purposely applied in the first half of the 20th century with taxes applied to tobacco and alcohol. The WHO identified the use of taxes as “highly cost-effective actions that should be undertaken immediately to produce accelerated results in terms of lives saved, diseases prevented and heavy costs avoided” (6). Since then, most countries have used fiscal measures in tackling behavioral risk factors related to product acquisition. To give an example, food taxation policies make the taxed food more expensive and until 2000's, the main aim of taxing food was generating revenue for governments. In 2000 Brownell and Jacobson reported that taxing a penny for a can of soft drink could generate \$US 1.5 billion dollars each year without significantly affecting the consumption (7). In 2009, Brownell and colleagues published a paper that detailed the taxing strategies with an aim to reduce the consumption of unhealthy foods and beverages (8). Until then sugar-sweetened beverages (SSBs) were taxed but the tax rates were too low to affect sales. Therefore, the proposed strategy was implementing an excise tax that would increase the price of soft drinks by at least 20%, and they advocated to use the extra revenue for public health programs instead of putting all the money in general funds (9,10).





While taxes on sugary beverages have been the most commonly implemented, some countries have taxed other products like sugar, sugar-added to foods and beverages, salt, and fats (11). In Europe, Norway (1981 and 2017), Finland (2011), Hungary (2011), France (2012), Belgium (2016), Portugal (2017), Spain (Catalonia, 2017), United Kingdom (2018), and Ireland (2018) introduced SSB taxes (12). Other than SSB taxes, Denmark implemented a tax for products containing more than 2.3 g per 100 g of saturated fat from 2011 till 2013 (13), while Hungary implemented a tax on prepackaged foods that are high in salt, sugar or caffeine (11). Outside the EU, Mexico introduced a tax on non-essential, energy-dense foods (14).

WHO has been urging countries to implement sugar tax as part of its Global Action Plan for the Prevention and Control of Non-Communicable diseases and their risk factors such as obesity (15, 16). World Obesity recently published a policy dossier on the topic, containing considerations for European policymakers to implement SSB taxes (17). There is public support for the taxes, especially when applied to SSBs. For example, SSB taxes were endorsed by citizen votes in the US, and 69 % of Australians were found to support the tax policy if the revenue was earmarked for healthcare-related programs (18). More survey results showed that consumers are willing to approve SSB taxes if revenues are used for programs such as school nutrition and physical activity despite opposing taxes on sugars and SSBs if the revenue just contributes to general funds.

PROBLEM STATEMENT

In recent years, as dietary risks have emerged as a leading cause of the global burden of disease, attention has turned to the possibility of applying the lessons learnt in the management of tobacco and alcohol to dietary risks through fiscal measures.

The general objectives of food and beverage related fiscal measures are lowering or increasing prices of specific food groups to control their consumption (19). Since their first introduction in Norway in 1981, evidence has been accumulating on the health improvement effect of fiscal measures influencing food and non-alcoholic drink consumption in Europe (12). The implementation of fiscal measures is now used as a means of promoting healthy nutrition mostly in the form of taxes that are applied differently in various countries. However, conclusive evidence for an European-wide policy scheme is still lacking, even though food taxation and the use of other fiscal measures has been recommended by the WHO and its European Regional Office as a means to promote healthier eating choices and environments (20,21).

Several points of controversy remain open, demanding a careful consideration before their systematic implementation. Unresolved questions and approaches to effectively apply fiscal measures include:

- ▲ the need for stronger evidence from real market situations about their effectiveness in terms of public health outcomes, especially considering substitution effects
- ▲ the optimal level of taxation to be applied that provides enough health benefits





- ▲ the need to establish evidence-based criteria on how food and nutrients are taxed and how taxes are applied
- ▲ how to achieve the provision of untaxed or subsidized substitutes that encourage healthier choices with the additional provision of dietary education
- ▲ how to achieve the equitable distribution of optimal health effects across all demographic and socioeconomic groups
- ▲ what might be the response of the food industry to maintain their sale and trade objectives
- ▲ could fiscal measures encourage the food industry to reformulate products to help consumers benefit from healthier food and drink choices

The questions and doubts may be causing confusion among consumers, the agri-food sector and policy-makers, contributing to the seemingly divided society when it comes to attitudes towards fiscal measures as a means for achieving healthier diets for all.

OBJECTIVES

This policy paper aims to provide recommendations to policy makers and national authorities for the benefit of wider society by the application of fiscal measures on food and beverages across Europe in the context of their public health strategies that would provide a triple win - for consumers, for the agri-food industry and for public health.

ANALYSIS OF OPTIONS

▲ Compensation effect

An important issue when analyzing food taxes is the compensation effect. In this way, when consumers are confronted with an increase of price in their regular purchases, they could switch to other options which may or may not be healthier. Evidence from modelling studies, experiments and former implementations provide input on the matter. For example, a modelling study in the UK estimated that a 20% price increase on SSBs would decrease their purchase by 15-16%, while causing a rise in the consumption of milk, water, fruit juice and diet sodas (22) An experience from New Zealand investigated the effect of introducing taxes on saturated fats, salt, sugar and/or SSBs, while subsidizing fruit and vegetables. They observed that while SSB tax and the fruit and vegetables subsidy had non-significant increases in the consumption of both groups, the saturated fat and the salt tax resulted in substitution effects through which an increase in fruit and vegetables was observed, but also an increase in sugar as a percentage of total energy. In Berkely (California), the introduction of a penny per ounce SSB excise tax decreased the consumption of such products (9.6%, while it increased 6.9% in control locations) and sales of water, fruit, vegetables and tea drinks and plain milk increased by 15.6%, 4.37% and 0.63%,





respectively (23). Evidence from the SSB tax implementation in Chile showed that consumers would switch from regular to diet sodas (24), while the experience in Mexico resulted in an increase of bottled water sales (25).

In 2012, France implemented a €0.0715/L tax on SSBs which applied to all sweetened drinks, including sugar substitutes used in diet drinks, and is paid by manufacturers, processors and importers. Consumption analysis showed modest reductions in soft drinks consumption of about half a liter per capita per year, which has been found to be consistent with a low-tax rate (26). Mexico was also one of the first locations to implement a SSB tax, concretized in 1 peso/L excise tax that was fully passed to the consumers through increased prices. Evaluation analysis showed a 7.6% decrease in consumption with the effect higher in households at the lowest socioeconomic level. Simulation models suggest that the tax would have a significant effect on the decrease of morbidity and mortality of NCDs such as diabetes (27). The SSBs tax in Catalonia was introduced in 2017, with a 100% pass through the tax to the final consumer. The tax increase on the final product was dependent on the sugar content (0-5g/100ml, 0 increase; 5-8g/ml, 0.08€/L; >8g/ml, 0.12€/L). The Bill mandated tax imposition on all beverages containing caloric added sweeteners and therefore soda drinks, fruit juices, sport drinks, teas and coffees, energetic drinks, sweetened milks and shakes, vegetal drinks and flavored waters were taxed. Yoghurts and drinkable fermented milks were not affected by the tax (28, 29). Evaluation of such measures showed a reduction of 22% in SSB consumption, while part of it was displaced to diet/light sodas. In 2011, Hungary introduced a tax targeting prepacked foods that are high in salt, sugar, or caffeine, at varying tax rates, which has been associated with a 5-16% reduction in consumption of unhealthy food (30). Different from SSB tax, the short-lived saturated fat tax in Denmark reduced the saturated fat sales by 4%, which was estimated to reduce deaths from NCDs by 0.4% from 2011 till 2013 (13).

Reformulation

With respect to reformulation, UK's SSB tiered taxation scheme was designed to favor product reformulation and multiple manufacturers made commitments for reformulation in response to SSB tax (31, 32). However, as much as taxes could motivate industry to reformulate their products by lowering the content of unhealthy ingredients, taxing could also motivate companies to add other detrimental ingredients that are exempt from taxing in order to maintain palatability (8). Since taxing foods or food ingredients alone could be inadequate for achieving public health benefits, a multi-component structural strategy would be advised (33).

Subsidies

Subsidies constitute a different type of fiscal measure, which can be used alone or in combination with taxes on unhealthy foods. In this way, subsidies aim to promote the consumption of healthier foods by



making them more economically accessible. An example is the EU School Fruit Scheme, which was combined with the School Milk Scheme, and through which 20 million children received over 250Mkg of fruits and vegetables. The allocated budget to support the EU School Fruit Scheme was of 150M€, therefore contributing to the development of the agriculture sector (34). A similar experience in the US, where SNAP¹ participants received 30 cents back for every dollar they spent on targeted fruits and vegetables, reported an increase in the amount families in the program spent on these foods, and a general increase in the fruit and vegetable sales in the participating stores (35). Along these lines, the EU is proposing, in its Farm to the Fork Strategy the implementation of a VAT reduction on eco-foods, as a means to support organic fruits and vegetables, and to target the environmental impact of food production, transportation and distribution (36).

Counter arguments against food taxes

“The fact that public health programs must be funded through general taxation, not with earmarked revenue is one important counter argument used by the food industry against the implementation of food taxes” (7, 37). It is true that food taxes provide important revenues to governments to use in public health policies, but reinvesting them will result in public health policies to improve food environments. To give just one example, the excise taxes applied in Hungary to food containing unhealthy levels of sugar and salt, has generated €200 million in 3 years to be used in financing public health services (29). Since taxing is among the leading threats to companies’ profitability, industry is spending huge sums on opposing taxes and other policies as front-of-package nutrition warning labels (38).

One of the most common counter arguments is that excise taxes are regressive and take a larger percentage of income from low-income than from high-income earners and thus affects people with low incomes more severely than people with high incomes. However, modelling studies have demonstrated that the financial cost of the proposed taxes affects high- and low-income households fairly equally (39). The main argument against those opponents to taxes because of any regressiveness is the higher responsiveness to taxes by low-income families because results are “progressive” on the health benefits and reduction of health costs, as this population consumes the highest amount of SSBs and have the highest prevalence of NCDs and their risk factors (40-42). A sugar tax of €1/kg could reduce the incidence of type 2 diabetes on average by 13% and it also leads to a reduction in coronary heart disease. Importantly, the health effects appear to be most pronounced for low-income individuals, and the tax may therefore reduce health inequality. This effect undermines the traditional regressivity argument against the heavy taxation of unhealthy food (43, 44). Reinvestment of revenue into interventions that benefit lower socio-economic strata would further enhance the positive impacts for disadvantaged individuals and families on reducing NCDs and their risk factors (18). Regarding the unequal effect of

¹ Supplemental Nutrition Assistance Program (SNAP): Federal program in the United States that provides food-purchasing assistance for low- and no-income people.



excise taxes on different population groups, there is also evidence that excise taxation has a greater effect on youth consumption (45-47).

Other commonly used counter arguments mainly promoted by the food industry against sugar taxes is the allegedly lack of evidence between sugar or sugar containing food & beverage consumption and obesity. As obesity and other nutrition related chronic diseases are caused by multiple factors, food and beverage companies have been trying to highlight causes other than their products (7). Some companies have funded and supported theories to exonerate their products in a very similar fashion to the tobacco industry, spending great amounts of money to put the blame on lack of physical activity and the role of energy balance on rising obesity rates at the expense of public health (48). Scientific evidence, from prospective studies and randomized controlled trials, implicate regular SSB consumption with an increased risk of long-term excess weight gain for both adults and children (12). Consumption of sugary drinks is also a key risk factor for tooth decay in children. In Australia, one in two 12-year-old children presents with dental decay in their adult teeth from free sugars intake (19), of which SSB is a major contributor (20). Daily consumption of SSB increases the risk of developing type 2 diabetes by 26% compared with occasional SSB consumers (21) along with a number of other non-communicable diseases (7, 18).

In a modelling study that used global data from national dietary surveys, more than 184.000 deaths a year were found to be attributable to SSB consumption. Of the attributable deaths/year, 133.000 were from diabetes, 45.000 from cardiovascular disease (CVD), and 6.450 from cancers. Close to 80% of the SSB-attributable deaths occurred in middle income countries (49). A recent meta-analysis found sugar-sweetened soda drinkers had a 12% increased risk of developing hypertension compared to non-SSB drinkers (450). A modeling study from Argentina demonstrated a 10% decrease in SSB consumption with caloric compensation from 2015 till 2024 would reduce diabetes incidence by 1.7 to 3.6% compared to no change in SSB consumption. A similar reduction would decrease myocardial infarctions by 2.500 to 5.100 events and all-cause mortality by 2.700 to 5.600 deaths (51).

The financial costs of introducing a new sugar tax system on the government and citizens, has been used as another counter argument against food taxes. Currently, the most common internationally recognized tax principles are those developed by the Organization for Economic Co-operation and Development (OECD), which include neutrality, efficiency, certainty, simplicity, efficacy, flexibility, and equity (52). However, modern taxes are used to achieve multiple objectives instead of the traditional objective of raising revenue.

Another further counter argument to the implementation of food taxes is the potential reduction in employment due to the variations in producing and selling unhealthy products. In its policy brief "Health Taxes: a premier" (2019), the WHO argues that reductions in employment due to product taxation (they refer to SSBs, but also to alcohol and tobacco) may be compensated by job creation in other domains when people who reduce consumption of unhealthy products spend their money on other goods and





services, and when governments invest tax revenues to energize other areas of their economy (53). Modelling studies have shown that, in fact, the substitution effect after taxation (i.e., when consumers substitute taxed SSBs with other non-taxed alternatives), would actually slightly increase job creation and economic activity from tax revenue in two US states (54). This data is also consistent with the empirical evidence from Mexico, where the tax on nonessential energy-dense foods produced no change on neither employment in the manufacturing industry nor stores selling the taxed goods (55), and with synthetic analysis from Philadelphia, showed no changes in employment after two and a half years of tax implementation on selected beverages (56).

▲ Technical aspects of taxation

As identified in the problem statement, unsettled issues regarding the implementation of food taxation include the level of sugar that should be taxed, the type and level of tax, or the entity who should be taxed. After an extensive literature review, the World Obesity Federation describes what current evidence suggests are best options (17). Based on food consumption and the main contributors to sugar intake among the population, proposed items to tax include sugar-sweetened sodas, flavoured milk, energy drinks and flavoured waters. Non-caloric sweetened beverages should also be considered, as broadening the taxation within the same food groups reduces the chances of unhealthy substitution by equating the price change - therefore eliminating the price incentive to purchase of non-taxed products. Specific excise taxes of around 20% of price increase which is collected as an industry levy (rather than at retailer level) may be the most effective type of tax to be applied. Nutrient Profile Models to establish the level of sugar subject to taxation are recommended for transparency purposes.

RECOMMENDATIONS

Accumulating evidence has demonstrated the impact of fiscal measures to modify consumer behavior and they can be an effective health policy when implemented in the context of multicomponent strategies. Enacting evidence-based fiscal measures and financial incentives for ameliorating health behaviors as well as using targeted media campaigns, harmonizing front of pack nutrition labeling, etc. would support the efforts of healthcare professionals who are the main actors of healthcare systems. Counter arguments for their implementation are weak and easily revoked. Taxing schemes and subsidies have been shown to nudge consumers into making the healthier choices as default options. However, food taxation is underused as a policy framework, despite the evidence points to it being an effective measure to impact consumption and health.

Based on the current evidence the European Federation of Associations of Dietitians makes a call to policy makers and national authorities to seriously study the implementation of fiscal measures on food and beverages in the context of their public health strategies and policies across Europe, prioritize SSB taxes, and combine food taxes with subsidies on healthier foods and reinvest tax revenue to improve





food environments and to increase the population access to dietitians by either covering the consultations fees or providing reimbursements, as dietitians are the most appropriate health-care professionals to tackle NCDs through dietary behavior modification.

Furthermore, EFAD emphasizes that the EU has a unique opportunity to openly and transparently address this matter in the framework of the farm-to-fork strategy, as there is a commitment to use fiscal measures to incentivize healthier food consumption, throughout the application of new rates of value-added tax (VAT) for healthier and environmentally friendly products (57). Given the strong focus of the strategy on producing and facilitating the consumption of healthy-eco-friendly foodstuffs, actions on taxation should go further than using VAT by establishing a set of guiding principles on their application. Regulation of prices via taxation and food subsidies would provide an incentive to improve food environments without limiting choices with a long-term goal of ensuring food and nutrition security, especially for vulnerable groups.

EFAD also encourages academia to continue investigating to ensure that lower-income households are not negatively impacted through food taxes and to implement measures to prevent any negative consequences.

The European Dietetic Workforce is eager and committed to contribute to the success by facilitating transition towards healthier and more sustainable dietary patterns and improving population's food literacy.

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