**IB ECONOMICS** STANDARD LEVEL

**Title of the article**: Study: Sales Saw Rebound After Chicago-Area Soda Tax Repeal

**The source of the article**: U.S. News & World Report

**Link for the article:** www.usnews.com/news/health-news/articles/2021-01-07/when-soda-tax-repealed-soda-sales-rebound-study

**News Article access date**: 19 February 2021

**Article publish date**: 7 January 2021

**Commentary writing date**: 26 February 2021

**Word count of the commentary**: 797

**Unit of the syllabus**: Microeconomics

**Key concept**: Intervention

*THURSDAY, Jan. 7, 2021 (HealthDay News) -- After a short-lived tax on sugar-sweetened and artificially sweetened beverages was repealed, consumption of sugary drinks in an Illinois county escalated again, according to a new study.*

*The tax was pitched to reduce Cook County budget deficits. It lasted four months – from Aug. 2 to Dec. 1, 2017, the researchers said.*

*"We know that the tax worked to bring down demand for sweetened beverages significantly while it was in place," said lead author Lisa Powell, director of health policy and administration at the University of Illinois at Chicago School of Public Health.*

*"The repeal of the Cook County Sweetened Beverage Tax was a missed public health opportunity," Powell said. "If it had stayed in place, we could have seen a lasting reduction in consumption of sweetened beverages, which are linked to obesity, type 2 diabetes and cardiovascular disease, which, in turn, have recently been found to be associated with increased risk of severe illness from COVID-19."*

*For the study, the researchers compared the price and volume of sweetened beverages sold in the county while the tax was in place, for the two years prior to the tax and for the eight months after the tax was repealed, with sales in St. Louis, which did not have a similar tax.*

*The price of the beverages increased by 1.13 cents per fluid ounce in the county while the tax was in place and dropped by 1.19 cents per fluid ounce after the repeal. The volume sold dropped by about 26% under the tax and increased by about 30% after the tax was repealed, the researchers said.*

*But, ultimately, the investigators found no net change in the volume of sweetened beverages sold pre-tax compared to after the tax was repealed.*

*"Volume of sweetened beverages sold in Cook County went right back to pre-tax levels following the repeal of the tax," Powell said in a university news release.*

*The results suggest that the tax worked to bring down demand for sweetened beverages through price point alone, she noted. It did not appear to change perceptions regarding the harms linked to consuming sugary beverages. Public messaging about the tax focused mostly on proceeds being used to address budgetary deficits rather than on public health.*

*"We don't know if public messaging were more focused on health benefits if there would have been some lasting impact of the tax, but as it stands, we see that the substantial impact from the tax fully disappeared once it was repealed," Powell said.*

*The study was published online recently in JAMA Network Open.*

**Commentary**

The article discusses the changes in the market of "sugar-sweetened and artificially sweetened beverages" (soda) in the imposition and repealing of a soda tax. The analysis will center around concepts such as tax and market failure, more specifically indirect tax, and the negative externalities of consumption. The lens through which the analysis will be conducted is the concept of intervention, in this case by a government, which manifests in the form of a soda tax. The aim of the analysis is to investigate and evaluate the changes in the soda market, and its possible implications and effects on different parties.

Figure1. The revenue change of suppliers in the soda market

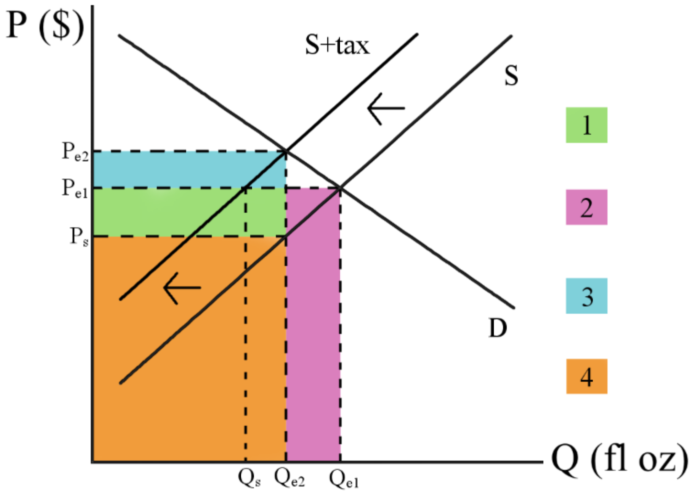



Figure1 showcases the change in the soda market with the imposition of the soda tax. As demonstrated in Figure1, the tax is specific, as the increase in price is constant (1.13 cents). The imposition of the tax results in a decrease in supply of soda (S→S+tax). Consequently, at price $P_{e1}$ there is excess demand ($Q_s$-$Q_{e1}$), as there is a larger quantity demanded ($Q_{e1}$) than supplied ($Q_s$). The soda market then corrects itself, resulting in a new market equilibrium ($Q_{e2}$,$P_{e2}$), where the new supply meets the demand. The intervention results in a decrease in revenue for the suppliers, as before the imposition of the tax, the revenue earned by the suppliers is the area (1+2+4), and after, only 4. This decrease in revenue is due to the elastic nature of demand, caused by the large variety of substitute products and tax revenue. The decrease in revenue incentivizes the suppliers to adjust, in order to maximize their profits, encouraging innovation and change. Furthermore, the intervention generated tax revenue (area 1+3) for Cook County.

Figure2. Negative externalities consumption in the soda market

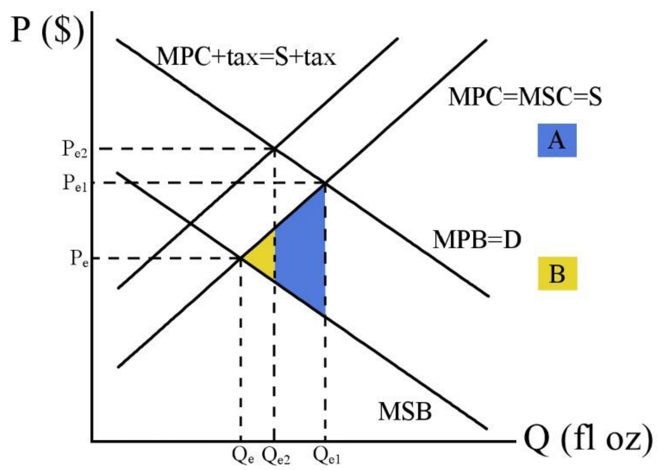
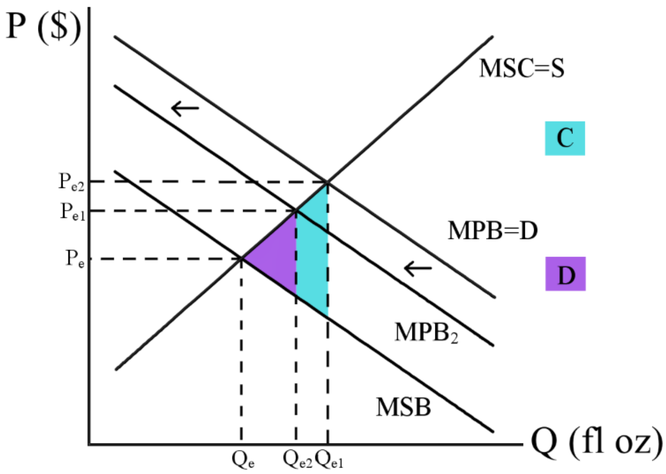



Figure2 illustrates the change in negative externalities of consumption associated with the process in Figure1. Since the marginal private benefit of soda (MPB) is higher than the allocatively efficient marginal social benefit (MSB), allocative efficiency is not reached. As Pareto optimality ($Q_e$,$P_e$) is not achieved, consumer and producer surplus are not maximized, which means that there is welfare loss (A+B). This welfare loss, due to the overconsumption of soda, causes the soda market to fail, and create negative externalities. Negative externalities of soda consumption are unwanted consequences on third parties due to the consumption of soda. Examples of the negative consequences of consuming soda would be “obesity” and increased risk of “type 2 diabetes and cardiovascular disease” that negatively affect the quality of labour provided by those consuming soda, which affects other producers, as the decreased quality of labour will negatively impact the quality and efficiency of their production. The Cook County government is also affected, as tackling the problems through the healthcare system have opportunity costs.

Before the intervention, the overconsumption of soda resulted in negative externalities of consumption, illustrated by the area A+B. The area is the welfare loss of the society, as a part of the community surplus is lost. This market failure is the reason for government intervention, which is the imposition of the soda tax. As shown in Figure2, the intervention pushed the market into a new equilibrium ($Q_{e2}$,$P_{e2}$), that reduced the negative externalities of consumption to only area A. Although allocative efficiency is still not achieved, the welfare loss has been decreased and the community surplus has been increased. The benefits of the soda tax also include the tax revenue gained by the government of Cook County, which can for example be used to tackle the health issues and welfare loss arising from the overconsumption of soda.

Despite the apparent benefits, the tax was still repealed, and the 26% decrease in demand reverted to its original levels. As the tax was advertised as a method to tackle budgetary deficits, the fully market-based policy failed to bring about lasting changes in the soda market or the general public health, only generating some tax revenue to the government. The case shows the importance of educating the public about the negative health effects of soda, with which the market-based policy could have been accompanied to great effects. However, the intervention was an effective method to tackle the market failure, and would have resulted in beneficial and lasting changes if not repealed. Since the tax has already been repealed, the best method to tackle the negative externalities would be to spread information about the health problems associated with soda consumption, and ideally the process illustrated in Figure3 will take place:

Figure3. Future soda market




The disincentivized consumers lead to a decrease in demand (MPB→$MPB_2$), resulting in a decrease in welfare loss, illustrated by area (C+D) becoming C. The reimplementation of the tax in the near future is not favourable, as the public perception of the tax has already formed. This shows the importance of proper execution of intervention. However, the reimplementation could be considered in the distant future, but only after the process in Figure3 has taken place.