

Ending the obesity epidemic: multidimensional challenges and effectiveness analysis of increasing taxes on fast food

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Abstract:

With the continuous development of society, fast food has become a daily choice in modern society due to its high convenience. However, its high-calorie, high-sugar, high-fat, and low-nutrient characteristics significantly increase the risk of obesity. According to statistics, over 2.5 billion adults worldwide are overweight, and fast food consumption is recognized as an important factor driving the rise in obesity rates. This article delves into the multidimensional impact of fast food consumption on the global obesity rate and the effectiveness and challenges of controlling obesity through increasing fast food taxes. These policies face many difficulties in implementation, such as economic penalties that make it challenging to change consumption habits completely and may exacerbate the burden on low-income groups. In addition, Denmark's saturated fat tax practice has shown that although tax policies can bring specific results, they have also caused problems such as increased unemployment and cross-border shopping. The article points out that relying solely on raising taxes is challenging to solve the problem of obesity, and multiple factors need to be considered comprehensively. The convenience, addiction, and extensive advertising coverage of fast food make it difficult for consumers, predominantly low-income and adolescent groups, to resist its temptation. Therefore, the government, businesses, and consumers need to work together to address the challenge of obesity through comprehensive measures such as strengthening health education, promoting healthy eating habits, and improving food production and processing technologies. This article also emphasizes that although tax increase measures can, to some extent, guide consumers to reduce their fast food intake, their effectiveness is limited and may lead to social and economic inequality issues. In the future, more innovative and comprehensive strategies should be explored to address the global obesity epidemic effectively.

Keywords: fast food ;obesity epidemic; tax.

1. Introduction

As of now, the global trend of obesity growth is exceptionally severe. Statistics from 2022 show that there are over 2.5 billion adults worldwide who are overweight, with over 890 million adults being deeply troubled by obesity. This global health issue not only significantly increases mortality rates and the risk of chronic diseases but also imposes a heavy burden on the economic development of the international community in the long run.

Although the causes of obesity are complex and diverse, including genetic factors, it cannot be ignored that the popularity of fast food consumption has become an important factor driving the increase in obesity rates. Scientific research has pointed out that excessive intake of fast food will significantly increase the risk of obesity, which will lead to a series of severe health problems, such as type 2 diabetes, heart disease, stroke, and a variety of cancers. Faced with the rapid spread of fast food culture worldwide and its potential threat to public health, gov-

ernments worldwide have taken various policy measures, including imposing heavy taxes, to curb this negative trend and improve the health status of their citizens. For example, in response to the increasingly severe obesity problem, the Indian state of Kerala has taken the lead in announcing a 14.5% "obesity tax" on fast food items such as hamburgers, pizzas, tortillas, donuts, sandwiches, and pasta sold by fast food restaurants and food retail chains. However, this article deeply analyzes the limitations of heavy taxation measures in addressing obesity issues. It points out that relying solely on heavy taxation of the fast food industry is not enough to end the obesity epidemic. On the one hand, economic penalties often face many difficulties in practical operation, making it difficult to achieve the expected results. On the other hand, consumers' dietary habits and desires cannot be solely influenced by economic factors, so simple economic means make it difficult to solve the problem of obesity fundamentally. In summary, this article believes that to effectively address the global obesity epidemic, governments, businesses,

and consumers need to work together and adopt comprehensive measures and strategies, including strengthening health education, promoting healthy eating habits, improving food production and processing technology, strengthening market supervision and law enforcement, etc. Only in this way can we fundamentally solve the problem of obesity and ensure the health and well-being of the public.

2. Fast food and obesity

Fast food, a rapidly rising way of eating in modern society, has become a daily choice for many people due to its convenience in preparation, preheating, and pre-cooking, catering to the needs of a fast-paced life^[1]. Fast food giants such as McDonald's have demonstrated strong influence globally with their large consumer base and market share. As of 2023, McDonald's has over 41800 restaurants worldwide, attracting millions of customers daily and generating nearly \$25 billion in sales.

However, behind the convenience of fast food, there are health risks that cannot be ignored. The characteristics of high calorie, high sugar, high fat, and low nutrient content make fast food one of the important factors leading to obesity. With the rapid development of the fast food industry and the increasing frequency of fast food consumption, the opportunity for excessive intake of high-energy, high-fat fried foods has also increased, significantly increasing the risk of obesity. Taking McDonald's burgers as an example, a Big Mac burger now has a sugar content of 9 grams, more than three times that of 1989 (2.6 grams).

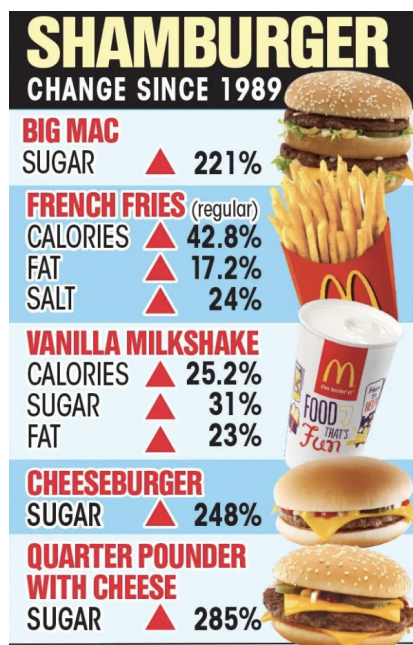


Figure1: The fat-causing ingredients in mainstream fast food are seriously exceeding the standard

Multiple scientific studies have confirmed the close relationship between fast food consumption and obesity^[2]. Chou et al. (2004) found a significant positive correlation between the per capita number of fast-food restaurants in each state of the United States and the obesity rate among residents. Rashad et al. (2006) also obtained similar results using data from the National Nutrition Survey in the United States^[3]. Morgan Spurlock revealed the immense harm of long-term consumption of McDonald's to the body through personal experiments in the documentary "Super Me." In just 30 days of McDonald's diet, his weight skyrocketed by 24.5 pounds, his body fat percentage jumped from a healthy 11% to 18%, and his cholesterol levels also significantly increased, reaching the 230 alert line. This series of astonishing physical changes not only indicates an increase in heart health risks but may also trigger serious illnesses such as depression, emotional fluctuations, and fatty liver.

3. The impact and limitations of increasing the tax burden on fast food

The rapid popularity of various fast food brands, led by McDonald's, is gradually becoming a severe challenge to global human health. Therefore, many governments have imposed consumption taxes on sugary drinks and high-sugar foods to guide residents to change their consumption habits^[4]. In Mexico, a tax on sugar-sweetened beverages (SSBs) was implemented in 2014. Two years following its introduction, there was an average reduction of 7.6 percent in household purchases of these seniors, with lower-income households exhibiting a more substantial decrease of 11.7 percent. The Soft Drinks Industry Levy, the sugar tax, was introduced in the UK in April 2018, and in the US, Berkeley and California implemented taxes on sugar weekends in 2014. Philadelphia's sugar drink tax has successfully reduced the number of purchases by these seniors without causing unincorporated increases in the consumption of non-taxed foods or beverages^[5]. Scholar Silver et al. (2017) conducted an in-depth analysis of the implementation effect of California's first-year sugary beverage tax. The conclusion is that the tax policy effectively reduces the sales and sales of sugary drinks and saves considerable medical expenses for diabetes patients, showing significant economic and health benefits^[6]. Similarly, Allen (2019) emphasized the positive significance of the "sugar tax" in reducing sugar consumption and changing consumer preferences through his prediction and analysis of Australia's sugar beverage tax^[7].

Although the policy of increasing taxes on fast food and high sugar, high-fat foods theoretically have the poten-

tial to guide healthy consumption and improve public health, its actual effect is influenced by various complex factors, making not all similar policies able to achieve the expected results. For example, Denmark imposed a tax on saturated fat in October 2011, taxing foods with a saturated fat content exceeding 2.3%, including butter, milk, cheese, pizza, meat, oil, and processed foods. However, the tax faced significant challenges and was abolished in January 2013. Firstly, high administrative costs are one of the important reasons why this policy is difficult to sustain. It is estimated that at least 10% of tax revenue will be used to manage, monitor, and enforce the taxation process. Secondly, taxation has led to the loss of approximately 1300 job positions, which has negatively impacted local economic development. In addition, this tax has directly led to cross-border shopping, with many Danes purchasing high-fat foods in neighboring countries such as Germany and Sweden to evade taxes. Other scholars have also found the situation of cross-border shopping through their research on the sugar tax in Berkeley, USA. In the United States, Berkeley began imposing a sugar tax on sugary drinks, including soda water, in 2015. One year after the policy was implemented, sales of taxed drinks in the Berkeley area decreased by 9.6%, while sales in non-Berkeley regions increased by 6.9%. This “tax avoidance” behavior indicates that simple economic penalties may not completely change consumers’ long-term dietary habits and preferences.

4. The non-price mechanism of fast food tax affecting consumption

From the perspective of price mechanism, increasing taxes on fast food may guide consumers to reduce their consumption of fast food, but according to some studies, this effect is less effective than expected. This article further conducted a relevant analysis of nonprice mechanisms to analyze better the effects and mechanisms of increasing the fast food tax burden.

Firstly, the convenient and addictive nature of fast food creates its inherent demand. Fast food is so popular because its quality and price fully meet the needs of consumers in fast-paced and high-pressure environments, especially low-income groups. Compared to healthier foods, the affordability of fast food makes it easier for families, especially those in poor or low-income areas, to rely on these low-priced but nutritionally low-value foods. The convenience of fast food undoubtedly caters to the busy lifestyle of modern people and has become the first choice for those who work or have lived in urban areas for a long time. In addition, its high sugar, high fat, and high salt properties can easily trigger consumers’ craving for

addiction, similar to their dependence on addictive substances, making it particularly difficult for them to break free from this consumption habit. Therefore, for many low- and middle-income consumers, fast food has become a source of satisfaction that is cheap, convenient, and even somewhat addictive. In this situation, if heavy taxes are imposed on fast food, the tax policy will inevitably have a significant income-regressive nature, which means that low-income individuals will bear a relatively high proportion of the tax burden, undoubtedly exacerbating the social wealth gap and causing the “robbing the poor to help the rich” effect. At the same time, the increase in tax burden will force fast-food producers to adjust prices to maintain profit margins, thereby shifting this cost onto consumers, especially the middle and low-income groups, further increasing their living burden and weakening the overall welfare level of consumers.

Secondly, the rapid development of fast food brands and the continuous placement of marketing advertisements have made it more convenient for consumers to consume fast food, further strengthening the impact of fast food on obesity. Since KFC entered the mainland market in 1987, Western fast food represented by KFC and McDonald’s has rapidly become popular. As of 2023, KFC has more than 10000 stores in China, and McDonald’s has 5903 stores in China. Many scholars have found that the popularity of high-calorie foods such as Western fast food is an important factor that has increased obesity rates^[8,9]. Meanwhile, research has shown a strong correlation between exposure to fast food advertisements and increased opportunities for teenagers to eat fast food, resulting in a high overweight rate, with 84% of respondents in Mexico. Chou et al. (2005) used the American Youth Nutrition Survey data to analyze the relationship between the number of Western fast-food TV ads and the incidence rate of adolescent obesity. They found that banning fast food advertisements significantly reduced the incidence of obesity among teenagers^[10]. Moreover, while skepticism often follows, McDonald’s has trimmed to rebrand some of its items as healthy choices, and McDonald’s advertisements are known to be aggressively aimed at children. In this case, economic interventions may only be possible but also ineffective for the treatment of childhood obesity as children are generally not price sensitive. At the same time, fast food brands often use various methods to induce consumers, especially teenagers, to develop product preferences. For example, McDonald’s well-known slogan, “I love it,” and KFC’s slogan, “With KFC, life tastes good.” Through such marketing strategies, Western fast food companies have cultivated an increasing number of highly loyal customers with unique preferences for Western fast food. Realize its accelerated expansion^[11].

Still, government regulation of fast food to control obesity faces numerous challenges. First, the fast food industry is a significant economic driver, providing millions of jobs and generating substantial tax revenue. This leads to resistance from the industry and consumers who value convenience and affordability. Legal and political factors complicate the regulatory process, such as the First Amendment rights of commercial speech. This means that governments must ensure that legislation is crafted in a manner that will not lead to legal challenges since conflict issues may exist. For example, some restaurant owners, with selfish purposes, have chosen to keep the menu labeling system that the government has put forward to assist consumers in understanding the nutritional values of foods. There is also considerable public opposition because most people believe that restrictions on fast food infringe on their rights. Furthermore, the complex food contexts, influenced by socioeconomic factors and food accessibility, indicate that simple limits on fast food may not necessarily change the population's food patterns. Measures to limit access to fast food in low-income neighborhoods have mixed results, which proves that the problem requires a complex solution. Therefore, the UK government has introduced new measures to restrict the promotion of foods high in fat, sugar, or salt (HFSS), emphasizing the placement and pricing of the foods.

5. Conclusion

This article profoundly analyzes the limitations of heavy taxation measures in addressing the issue of obesity. It points out that Although high taxes can be used to reduce obesity, the mere use of penalties in the form of taxes will not be enough to reverse the obesity trend. Consumers find it difficult to quit fast-food restaurants because of convenience, persuasive advertisement and ingrained eating habits. On the other hand, governments face economic, legal, and social challenges when seeking to regulate fast-food sales.

In summary, this article believes that to effectively address the global obesity epidemic, governments, businesses, and consumers need to work together and adopt comprehensive measures and strategies, including strengthening health education, promoting healthy eating habits, improving food production and processing technology, strengthening market supervision and law enforcement, etc. Only

in this way can we fundamentally solve the problem of obesity and ensure the health and well-being of the public.

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