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Anna Pļuta, BICEPS
Marija Krūmiņa, BICEPS
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A Potential Broadening of the Excise Tax on Food Products High in Sugar and Salt: The Case of Latvia

Overweight and obesity are significant public health issues, contributing to various chronic diseases such as cardiovascular diseases, diabetes, and certain cancers. Latvia's second-highest share of overweight adults in the EU is a compelling reason for public health measures. These should aim to discourage excessive consumption of high-calorie foods and beverages. Excise tax is one of the tools in a complex approach to encourage a balanced diet and promote positive health outcomes. Motivated by evidence from Hungary, currently the only country in Europe imposing a tax on pre-packaged food products high in sugar and salt, we simulate the short-term impact of the introduction of a differentiated broad-based tax on food products in Latvia. We conclude that to influence consumer behaviour, price increases should be at least 10 percent, which implies introducing tax rates that are at least 1.5 times higher than those in Hungary.

Extremely High Overweight and Obesity Rates in Latvia

Overweight and obesity are serious public health challenges across Europe. Together with an unbalanced diet and low physical activity they contribute to many non-communicable diseases (NCDs), including heart diseases, diabetes and certain cancers (WHO, 2022). For many individuals, being overweight is also linked to psychological problems.

Overweight and obesity rates are extremely high in all EU countries. In 2022, more than half of all adults in the EU (51.3 percent) were overweight (including pre-obese and obese). Latvia has the 2nd highest rate of overweight adults in the EU (60.4 percent). This puts significant pressure on Latvia's health care system and social resources.

Recognizing that overweight and obesity has multifactorial causes, a comprehensive approach is required to effectively tackle this problem, involving experts from various fields and addressing the issue from multiple angles.

One potential tool in a complex approach is an excise tax on foods and drinks high in sugar and salt since excessive consumption of such foods and drinks represents a major risk factor for NCDs (WHO, 2015a). Such a tax could help to reduce excessive consumption, encourage healthier eating, and improve public health outcomes.

The Intake of Added Sugars

According to data from the EFSA Panel on Nutrition, Novel Foods and Food Alergens (EFSA, 2022), the main source of added sugar intake in almost all European countries is sugar and confectionery. The numbers for adults (18–64 years) range from 20 percent in Austria to 57 percent in Italy (48 percent in Latvia). For children aged 1–18 years, sugar and confectionary contribute to 36 – 44 percent of added sugar intake in Latvia.

In Latvia, other key sources of added sugar are fine bakery wares, processed fruits, and vegetables. The contribution of sweetened soft and fruit drinks to total added sugar intake is only 8 percent for adults (18–64 years) and 3–7 percent for children (1–18 years).

Excise Tax on Soft Drinks

As of 2024, 14 European countries have implemented taxes on sugar-sweetened soft drinks. In Latvia, the tax was introduced in 1999 and was mainly motivated by the financial needs of the state budget.

The evidence from international case studies (WHO, 2023) shows that taxes on sugar-sweetened soft drinks can be effective in reducing consumption in the short term, particularly when the tax leads to significant price increases that reduce affordability. However, the overall evidence on whether these taxes successfully reduce sugar intake is inconclusive. In a review by the New Zealand Institute of Economic Research (NZIER, 2017), the authors conclude that methodologically robust studies show only small reductions in sugar intake, too small to produce significant health benefits, and easily offset if consumers switch to other high-calorie products. On the other hand, studies reporting a meaningful change in sugar intake often assume no compensatory substitution. At the same time, experience from Hungary suggests that a sugar tax imposed on a wide range of products is effective in reducing the overall consumption of products subject to the tax, and in encouraging healthier consumption habits. The impact assessment conducted 3 years after the introduction of the tax in Hungary showed that consumers of unhealthy food products responded to the tax by choosing a cheaper, often healthier product (7–16 percent of those surveyed), consuming less of the unhealthy product (5–16 percent), switching to another brand of the product (5–11 percent), or substituting it with another food item – often a healthier alternative (WHO, 2015b).

The Short-term Effect of a Broad-Based Excise Tax in Latvia

Approach

Motivated by the evidence from Hungary, we simulate the short-term impact of the introduction of a similar differentiated broad-based tax on food products high in sugar and salt using the approach applied in Pļuta et. al (2020). First, we use AC Nielsen monthly data from 2019 to 2023 on sales volume and prices of pre-packaged food products of selected categories in the modern trade retail market to estimate the price elasticity of demand for these products. The selected product categories included:

- Pre-packaged sweetened products (e.g., breakfast cereals, cacao, chocolate bars, soft and hard candies, sweet biscuits, etc.)
- Sweetened dairy products (e.g., ice cream, yoghurt, condensed milk, curd countlines, etc.)
- Salted snacks (salted nuts, salted biscuits, etc.)
- Ready-to-eat and instant foods (e.g., pizza cooled and frozen, frozen dumplings, vegetables and canned beans, etc.)
- Condiments (e.g., dehydrated instant and cooking culinary, dehydrated sauces and seasonings, dressings, ketchup, mayonnaise, etc.)

Second, we simulate different scenarios to assess the increase in price, reduction in sales and budgetary effect using the estimated elasticities and assuming different degrees of tax pass-through rate to retail prices (100 and 50 percent, respectively). Our results represent a short-term or direct fiscal effect, meaning we do not account for any second-round effects that may arise due to changes in domestic production and employment, which could in turn generate additional tax revenues.

The Tax Object and Rates

In defining the scenarios to be considered when modelling the potential broadening of the tax base, we use the Hungarian Public Health Product Tax (PHPT) as a practice example. As a basis, we use the list of product categories under taxation by the PHPT, the two-tier tax system and the PHPT rates as of 2024. In addition, we are also looking at other product categories (such as sugar sweetened dairy products, sweetened cereals and vegetables and beans containered), expanding the tax base even more. In total, we simulated four scenarios for taxing the food products high in sugar and salt. The scenarios consider a two-tier tax system, meaning products with lower sugar or salt content are taxed at a lower rate, while those with higher content face a higher tax. For condiments, only a high rate is applied due to the, usually high, salt content. A differentiated tax rate is expected to stimulate the industry to drive down sugar and salt content in their products, i.e., offering sugar and salt-reduced options. The scenarios differ from each other in the applicable rates.

- Scenario 1: Uses the same tax rates as Latvia's excise tax on non-alcoholic beverages (as of March 2024) – EUR 7.40 per 100 kg (low rate) and EUR 17.50 per 100 kg (high rate).
- Scenario 2: Uses Hungary's PHPT rates – in the general case, the low rate is EUR 17 per 100 kg, and the high rate is EUR 54 per 100 kg.
- Scenario 3: Sets rates 1.5 times higher than Hungary's rates.
- Scenario 4: Doubles Hungary's rates.

Assumptions

Unfortunately, the retail price and sales time series used in the analysis are not disaggregated into groups according to the sugar and salt content in the product. As a result, we apply assumptions to estimate the potential range of tax impacts.

To calculate the lower bound of the expected impact, we assume that 100 percent of sales in each

product category are subject to the new sugar and salt tax, but all products have low sugar and salt content and therefore qualify for the lower tax rate.

To calculate the upper bound, we assume that 25 percent of the sales volume is taxed at the lower rate (due to low sugar and salt content), while the remaining 75 percent of sales are taxed at the higher rate, reflecting higher sugar and salt levels in those products.

Results

According to our estimations, the application of an excise tax on food products high in sugar and salt could lead to a price increase and sales decrease of taxed food products. The magnitude would depend on the type of food product (i.e., average retail price in the country) and scenario assumed (i.e., tax rates). Within each single scenario, the largest impact is expected for condiments. This is because we simulate only the high tax rate applied to them (not a two-tier system), as is the case in Hungary. The tax makes up a larger share of their price, and due to high price sensitivity, the decrease in sales is also greater.

Based on previous research, we conclude that price increases need to reach at least 10 percent to meaningfully influence consumer behaviour. This level of change is achieved in Scenario 3, which assumes tax rates 1.5 times higher than those used in Hungary.

Below we present the obtained estimations under Scenario 3. The estimates for Scenarios 1 and 2 are not included here because the price increase caused by the tax does not reach 10 percent for several product categories. Under Scenario 4 the price changes could exceed 10 percent but this scenario may also provide stronger incentives for manufacturers to reformulate their products (and in this case, the average price increase within a given product category will be lower). The results for Scenario 4 are available in a recent BICEPS report (Pļuta et al., 2024).

Under Scenario 3, with full tax pass-through (100 percent), the estimated reduction in sales volume is:

- 3.0–8.1 percent for pre-packaged sweetened products;
- 3.6–17.1 percent for sweetened dairy products;
- 0.9–4.7 percent for salted snacks;
- 10.4–54.1 percent for ready-to-eat and instant foods;
- 11.0–11.8 percent for condiments.

If only 50 percent of the tax is passed through to retail prices, the sales reductions would be approximately half as big.

The estimated revenue from the excise tax in this scenario would range between EUR 15.0 million and EUR 54.9 million. The resulting change in VAT revenue would range from a loss of EUR 0.7 million to a gain of EUR 1.1 million.

Conclusion

Although overweight and obesity rates are extremely high in all EU countries, Latvia, in 2022, had the second highest rate in the EU. In this brief, we explore the use of the excise tax as one of the tools in a complex approach to discourage excessive consumption of foods and beverages high in sugar and salt and encourage a balanced diet and promote positive health outcomes. Based on findings from previous studies, a price increase of at least 10 percent is needed to influence consumer behaviour. In Latvia, this would require tax rates approximately 1.5 times higher than those applied in Hungary, i.e. in the general case equal to EUR 25.5 (low rate) and EUR 81 (high rate) per 100 kg of product. Under such a scenario, the estimated revenue from the tax could range from EUR 15.0 to 54.9 million. For comparison, in 2024, Latvia's excise tax on soft drinks generated EUR 15.6 million. To remain effective, tax rates should be adjusted over time in line with growth in disposable income.

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Anna Pļuta

Baltic International Centre for Economic Policy Studies (BICEPS)
anna.pluta@biceps.org
www.biceps.org

Anna Pluta is a Research Fellow at the Baltic International Centre for Economic Policy Studies (BICEPS) and a doctoral degree candidate at the University of Latvia. Her main research interests include labour taxes and social benefits, and consumption taxes.

Marija Krūmiņa

Baltic International Centre for Economic Policy Studies (BICEPS)marija@biceps.org
www.biceps.org

Marija Krumina is a Research Fellow and Director of the scientific institution at the Baltic International Centre for Economic Policy Studies (BICEPS). She is a doctoral degree candidate at the University of Latvia and a leader of the Global Entrepreneurship Monitor (GEM) team in Latvia. Her research interests include entrepreneurship, health economics, labour markets, and migration policy.

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