Social and Economic Impacts of the Proposed New Taxes on Some Foods

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Abbreviations

EC – European Commission

EAPH – European Alliance of Public Health

EFSA – European Food and Safety Authority

BMI – Body Mass Index

IHME – Institute for Health Metrics and Evaluation

MH – Ministry of Health

WHO – World Health Organization

NSI – National Statistical Institute

NCPHA - National Centre for Public Health and Analyses

PWC – PriceWaterhouse Coopers

EXECUTIVE SUMMARY

The content of this report aims at reviewing the arguments *in favor* of the new *unhealthy food tax,* its goals and the likelihood of them being achieved or compromised as well as at reviewing the possible and probable social and economic impact of the introduction of the tax. The report also aims at contributing to the discussion on the so called Bill on the Taxation of Unhealthy Food which is to take place in September, as promised by the Ministry of Health to journalists.

A tax with unclear purpose and implementation

It is not clear why the tax would be introduced, what would it be like and what its rate would be. It was first said that the rate would be 10%, then it was said it would be 3%. Despite the change in percentages the expected new revenue has remained unchanged. Initially it was expected that the National Health Insurance Fund would collect BGN 200 million incremental revenue. Later on, however, when the idea of a rate reduction to 3% was introduced the expected revenue was not reduced by 70% but by 25% - to BGN 150 million.

This optimistic budget revenue forecast is based on the intention to tax a broad spectrum of products with a relatively high tax rate. The label *unhealthy* though is very difficult to apply because of the very simple fact that, on the one hand, it is very easy to find a substitute to different foods and, on the other hand, for people with low income, the supposedly unhealthy food, in as much as they consume it, could be an alternative to not feeding. If this is the dominating argument, then the new tax is not going to have direct impact on human health, but it would be a purely fiscal proposal.

This lack of clarity makes the consequences of a potential price increase on food difficult to forecast. Moreover, if these intentions are serious and consistent, the list of taxable foods would have to be expanded.

One of the issues is that tax regulation of behavior is the most ill-suited approach possible. Taxes on certain types of products are a kind of price regulation. It is not much different from direct administration of different quasi-prices (tariffs, fees, etc.), from setting pricing formulae and rules and establishing *price limits* and *threshold*s. When this does not affect all goods and services the typical issues which arise from that are discrimination, implicit state aid, supply and demand migration to substitutes and increased costs on state control and accountancy.

One can judge about the economic, administrative and political issues which stem from price regulation by the issues related to the tariffs used for freelance professions, *the price* of electricity on the regulated market, etc.

Foreign experience

This lack of clarity can be observed clearly in plenty independent analyses of foreign experience.

Such a tax, only on foods with saturated fat (such as butter and margarine), was introduced in Denmark for the period October 2011- January 2013, but it was abolished after that. The idea behind it was to: a) curb demand on *unhealthy food*; b) decrease the number of cases of diseases such as diabetes, cardiovascular diseases, etc.; c) increase life expectancy; d) reduce healthcare costs and e) increase state revenue.

The tax was abolished because none of the initial goals was met. 80% of the consumers did not change their behavior. Consumers used to buy products from neighboring countries where these products were cheaper and at the same time this resulted in a certain decrease of domestic sales. Costs for producers and traders increased and according to some of the most conservative estimates about 1 300 jobs were put to risk. Fiscal goals were not achieved. There was a shift in consumption towards replacement with cheaper products of lower quality and/or with products which did not fall within the scope of the tax. This means that there were no clear prospects of achieving the goals related to health. If taxation had continued it would have even been possible for human health to have deteriorated. Moreover, the price increase of staple products (butter and margarine) reduced the efficiency of the value added chain because it increased the prices of other products.

On top of that in Denmark there was also a tax on soft drinks. It was in force (having been amended a number of times) from 1930 to 2014. The reasons for that are that despite the change in taxation rates there was no change in consumption and prices of both high quality beverages and their low quality substitutes increased. At the same time, despite the fact that this tax was implemented for more than 80 years, in Denmark there is a deterioration of the Body Mass Index indicators.

In Hungary for four years now approximately the same foods and beverages as the ones foreseen to be taxed in Bulgaria plus aromatized beer and spirits, jam and marmalade are already being taxed. The budgetary goals there-with more consumers and higher disposable household income- are humbler and yet have not been achieved and there is no progress or relation to the accomplishment of health-related goals. What a survey conducted by PricewaterhouseCoopers (PwC) in 2013 shows, however, is the following: consumption of taxed foods did not decrease, their prices decreased (of chocolate bars by 3.9%, of confectionary by 6% and of salty foods by 12%), but the consumption of foods containing the same *unhealthy* ingredients increased. At the same time tax revenue dropped because of non-payment of taxes, substitution of ingredients for nontaxable ones and additional costs both for the administration and control authorities and for producers and traders. It is interesting to point out that registered sales even of substitutes shrank and they shrank even more than the sales of taxable products i.e. consumption retention and increase parallel to decreased sales is a certain proof of the market going grey and it also points to the reason for the decrease of state revenue from the newly introduced tax. According to PwC about 10% of the market went into the grey sector and the loss of VAT revenue amounted to EUR 25.6 million.

Out of the four EU Member States with similar taxes one abolished them and in the other three the taxes show unsatisfactory results, especially in terms of the initially declared health-related goals. The fiscal goals are accomplished in only one of the countries (Finland). For these reasons another four countries have decided against the introduction of such taxes. The claim of the proponents of the reform that experience with similar taxes both in the EU and globally is positive is incorrect.

Everywhere this tax has led to increased production and sales costs, loss of competitive advantages, substitution with foods of lower quality and higher consumption of the latter in households of lower income (which are eventually the ones to pay the increased prices)[1].

[1]See: Ecorys, Food taxes and their impact on competitiveness in the agri-food sector (Client: DG Enterprise and Industry),Rotterdam, 14 July 2014, at:http://ec.europa.eu/DocsRoom/documents/5827/attachments/1/translations/en/renditions/pdf

Health-related goals

It is certain that health-related goals are not going to be achieved.

In the case of foods with salt about 1% of the intake is going to be taxed[2]. The other 99% come from the consumption of bread, cheese, sausages and salami, bought and home-made preserves which are not covered by the scope of the tax.

Energy drinks consumption contributes to about 1% of the average caffeine intake. If there is any health hazard it is related to the consumption of energy drinks with spirits which are already levied with a high excise duty. The new tax will at most stimulate substitutes of lower quality.

If there is any impact on nutritional habits and consumption in terms of foods containing sugar (soft drinks, preserves, ice cream, etc.) at all, this stimulated abstention is going to affect not more than 6% of consumption.

If there is any health-related hazard it is in the 99 % and 94 % of the consumption of sugar and salt respectively and not in the foods which are planned for taxation. It is very likely that there is no such causal relationship at all. According to the food consumption data of the National Statistical Institute (NSI) the peak consumption of foods which are currently said to be unhealthy was in the middle of 1980s. It has been shrinking constantly ever since by up to 20-25 % (depending on the type of food). It is enough for one to check online the global annual comparisons among UN Member States in terms of the Body Mass Index (BMI). According to them Bulgaria does on average more than twice better than the developed countries.

Moreover, according to studies of the Ministry itself, of the World Health Organization and other reputable sources on the situation with human health in Bulgaria most probably it is other measures, not taxes that are needed in order for the quality of healthcare to improve.

They are pointless as a tool in healthcare. That is why:

1. According to Eurostat, **Bulgaria is among the countries with the lowest average levels of obesity (11-12%) in EU**[3]and much below the average for the EU. If there is a problem with human health and the mortality rate it is somewhere else not with the diet or obesity.

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[2] If no other source has been pointed out consumption data comes from the statistics of NSI on household consumption. It does not reflect consumption of food and beverages in restaurants and other public food and beverage establishments. It, however, is valid for the conclusions on the staple diet of the population. We believe that the change in prices resulting from the new tax is not going to have significant impact in the food and beverage establishments and that it would be easier for them to find substitutes, including from their own and non registered production, when price incentives require that. Without a special survey of the matter it is impossible to estimate what the scope and volume of these substitutes would be. Further on, when looking into the fiscal effects, we take into account only macro indicators.

[3]EUROSTAT, Overweight and obesity - BMI statistics, at: http://ec.europa.eu/eurostat/statistics-explained/index.php/Overweight_and_obesity_-_BMI_statistics. This data refers to 2008. In 2011 another study (see: http://vizhub.healthdata.org/obesity/) confirmed the same findings.It is not clear what findings the claims of proponents of the new tax that obesity is an issue exclusively for the healthcare system are based on. Part of the problem consists in the fact that body mass, obesity and the respective indices are most probably the result of the overall caloric content of food and beverages in general and not only of the ones which are foreseen to be subject to the new tax. In relation to that, see the table and sources below.

2. According to the global health database of the Institute for Health Metrics and Evaluation (IHME)[4], the level of obesity in our country decreased from 25.3% to 20.1% in the period 1980 to 2013, i.e. **there is a clear downward trend in obesity**

3. **There is evidence of growth of obesity registered in Bulgaria among people with the lowest incomes in large cities**[5], where a major problem until recently was malnutrition and underweight. **Easy access to substitutes is going to worsen the consumption of low-income households** both in terms of quality and quantity. This effect is observed in countries where tax such as the one being proposed in Bulgaria is implemented.

4. **Bulgaria is the country with the lowest calorie intake per capita in Europe** – 2,760 to 2,900 kcal. **This is around the global average, 10% less than the levels in 1990** and about 20-25% less than the average in Europe.

5. **Consumption of sugar and other sweeteners per capita in Bulgaria (as with salt) reached its peak values in the 1980s** (1986 - 109 g / person / day) and has been steadily decreasing since then (2011 - 78 g/ person / day).

6. People with the lowest income do not have the opportunity to consume big quantities the foods and beverages planned for taxation – for them they are luxury goods and their consumption is very limited in this consumer group. **People at retirement and pre-retirement age are most affected by heart diseases, obesity, etc. They are also not among the consumers of the foods the Ministry wants to curb.** If low-income households and elderly Bulgarians consume more sugar, salt and perhaps fat, this is either due to the substitutes or to home-produced food the so called *economy of jars* (preserves for winter such as pickles, sour kraut, meat and fruit preserves, jam etc.)

Substitutes and alternatives (produced and consumed officially or unofficially) will most probably not affect the overall calories intake and ratio between calories in individual foods and their role for shaping the body mass. Here are some measurements of calories

Calories of some beverages[6]

Selected beverages	Calories per cup
Popular energy beverage	63[1]
Popular carbonated beverage	97[3]
Orange juice	105[1]
Apple juice	117[1]

[4]See: IHME, : http://vizhub.healthdata.org/obesity/

[5] NCBI: Prevalence of obesity and overweight among urban adults in Bulgaria: http://www.ncbi.nlm.nih.gov/pubmed/18410706

[6]See: Richard Williams and Katelyn Christ, Taxing Sin, Mercatus Center, George Mason University, No 55, July 2009, at: http://mercatus.org/publication/taxing-sin . Some energy and carbonated drinks have undergone a change in their sugar content since 2009.

Milk (2% butterfat)	120[2]
Homemade cocoa with low-fat milk	135[1]
Sweetened lemonade	131[5]
Chocolate milk	208[4]
Red wine	200[2]

Sources:
(1) http://www.dietbites.com/CalorieIndesDrinks.html/,
(2) http://; caloriecount.about.com/calories-wine-table-red-i14096/,
(3) http://caloriecount.; about.com/calories-coca-cola-classic-i98047/,
(4) http://caloriecount.about.com/; calories-milk-chocolate-fluid-commercial-i1102/,
(5) http://www.thedailyplate.; com/nutrition-calories/food/generic/lemonade/.

The table shows that taxation of some beverages cannot affect the intake of calories with other.

Approach to the formulation of the new tax

We have already mentioned that that the simplest procedures and techniques for impact assessment, required by the law, have not been abided by. According to the requirements of the simplest principles of the Law on Legislative Acts and the Law on Restricting Administrative Regulation the very idea of the new tax has to be well-grounded i.e. it has to be proven that the benefits surpass the costs and that no property rights or free business initiative are violated. (art. 17 and art. 19 of the Constitution).

The BGN 200 ml state revenue which was initially mentioned by the Minister of Health could perhaps be indicative as an amount of the initial source- in April this year the Ministry of Finance forecasted that the NHIF deficit is going to amount to that.

Later on the NHIF and other sources suggested that as a result of the consolidation of hospital budgets and partial savings of subsidies for medicines the deficit is going to be BGN 50 ml less. It was then that the *plan* to collect BGN 150 ml instead of BGN 200 ml was hatched, as well as the explanation that the new revenue is going to be used to fund prevention.

Apparently it is preferred not to reform the way in which the healthcare system is funded but rather to come up with a new source of income for the old system. Just as our analysis has shown, this revenue is certainly not going to be collected, but the respective costs in the system are going to be planned, the deficit is going to be generated and it would once again be covered by transfers from the state budget. The belief that this revenue is going to be collected resembles a lot the hunch of the bear who thought that there would be plenty of pears in autumn because it felt like eating pears.

The food and beverages industry has not consulted. Nobody has asked independent experts either. Independent analysis of experience from other countries has not been sought.

What is going to happen with the tax revenue

Price regulation through taxes is the worst possible option for regulation. This idea cannot be implemented without discrimination against some producers and traders; and all of this along very dubious benefits to the *public health*.

There is precedence in Bulgarian legislation the goal of which is similar. These are the contributions for prevention coming from excise duties on wine, spirits and tobacco products. Neither the Ministry of Health nor any of its units has ever provided a public report on how these funds are spent and how this affects the quality of prevention and treatment of the respective diseases. Perhaps due to the increase in household income after 1997 the consumption with both groups in Bulgaria is growing. The positive changes (i.e. a decrease) in terms of that consumption in other countries are rather due to changes in lifestyle, fashion and increase in income and not a result of taxation.

One of the difficulties law-makers are going to face in terms of the rationale is connected with the estimate of the negative side effects. That is why we developed a special evaluation model for these effects. The assumptions and initial results can be described as follows.

If, being very optimistic, we assume that the main macro parameters remain the same as in 2014, that 100% of the planned taxes are indeed collected with 1% administrative costs, that the shift to substitutes does not decrease VAT revenue and we assume that the tax rate on unhealthy food which is being proposed is 3%, the overall fiscal effect is by far not going to be the one that is assumed.

Despite the optimism the new tax is going to decrease company turnover, value added in companies, gross profits and labor costs (the remunerations fund), the number of people employed and respectively the consumption of the employed. This is going to take place all along the supply chain- with suppliers, industrial consumers, traders and the business, servicing the taxed companies.

If the goal is to collect revenue of BGN 150 ml at a rate of 3%, the sales of these newly taxed foods and beverages have to amount to BGN 5 bl. According to the NSI, however, annually they amount to about BGN 2 bl. Let us forget for a second the real turnover of *unhealthy* food in the economy. The results of this calculation experiment are the following:

- in order to collect excise revenue (tax) of BGN 150 ml a turnover of BGN 5 bl of the taxable goods is needed.;
- saved costs on interest with a reduced budget deficit amount to BGN 1.3 ml;
- this scenario presupposes a loss of approximately 2 950 jobs;
- the turnover in economy which has been decreased by BGN 150 ml leads to lower gross value added, lower profits, lower overall remunerations fun, lower revenue from social security contributions and personal income tax, as well as to lower consumption as a result of which there are costs for the budget (not collected revenue from the above mentioned taxes) amounting to BGN 19.6 ml;

- in this scenario the net benefits for the budget are going to amount to not BGN 150 ml, but to BGN 131.7 ml.

This calculation exercise though does not take into account costs on compliance, replacement of taxable products with other goods, replacement import, part of the taxable value chain going into the grey sector, as well as the incremental administrative costs on the collection and management of this revenue, which is expected to be significant.

Let us now take more realistic initial data such as: the new tax being imposed on a turnover of about BGN 2 ml, tax rate of 3% and all of the revenue being collected. The results are the following:

- the revenue from the new excise duty is going to be about BGN 60 ml;
- gross revenue is not going to be BGN 150 ml, but BGN 60 ml;
- the loss of jobs will amount to approximately 1 180 jobs;
- turnover will decrease by approximately BGN 60 ml which will respectively result in a lower gross value added, lower profits, lower overall remunerations fun, lower revenue from social security contributions and personal income tax, as well as to lower consumption- as a result the revenue to the budget which are not going to be collected will amount to BGN 7.84 ml;
- to put it differently- in this scenario the direct net benefits for the budget will amount to BGN 52.68 ml.

This amount is about three times smaller than the estimated deficit of the NHIF and it equals 75-80% of the taxpayers` money which the government spends on a daily basis. If this amount is really to be allocated to the NHIF, the government can provide it by cutting costs.

If we decide to come even closer to reality we will have to take into account the most probable effect of the new tax- the replacement with import from Romania. This is an important factor. The VAT rate on food and other goods and services in Romania has recently been reduced to 9%. The effect on Romania will probably eventually be negative but we are now interested in the impact on Bulgaria.

Taking both hypotheses about the new tax into account, the margin between Bulgarian and Romanian prices will be between 18% and 25%. This is a powerful incentive to look for arbitration. If replacement amounts to 15%, then the real volume of sales would shrink to about BGN 300 ml i.e. the not collected VAT will amount to approximately BGN 60 ml.

In this situation the real not collected revenue in the central budget distorts the planned picture. The real revenue in the first scenario described here will amount to BGN 68 ml i.e. the net revenue to the state budget will not be BGN 150 ml, but BGN 88 ml. In the second scenario the not collected tax will amount to BGN 79.5 ml i.e. as a result of the exercise the budget will be at a loss of BGN 26.8 ml.

If the tax administration works flawlessly and the taxpayers are diligent contributors to the state budget, as usual, the scenarios, on the basis of the planned revenue, would lead to the following consequences.

Estimate of the budgetary and social and economic consequences

Scenarios / indicator	**3%/BGN 145.5 mlrevenue**	**3%/BGN 58.2 mlrevenue**	**9%/BGN 156.6 mlrevenue**
Social and economic			
Loss of jobs	2 864	1 145	3 076
Price increase	3%	3%	9-10%
Taxes not incurred	- BGN 15.0 ml	- BGN 6.0 ml	- BGN 36.7 ml
Loss for the budget			
VAT not collected	- BGN 3.2 ml	- BGN 1.3 ml	-BGN 24.0 ml
VAT not collectedbecause of substituting import	- BGN 60 ml	- BGN 60 ml	- BGN 0 ml
Costs to the business	BGN 4.4 ml	BGN 1.7 ml	BGN 4.7 ml

This calculation, however, does not include the negative effects of the compliance costs with the new tax, with the demand for and migration to non-taxable substitutes of lower quality, as well as costs on working with the government- in cash and working hours. It does not include the impact of the overall shift to the grey sector either, should some of the consumers resort to the *economy of the jars*- it is part of Bulgarian traditions anyhow.

- **INTRODUCTION: WHAT THE GOVERNMENT SUGGESTS**

Declarations

Dr. Petar Moskov, Minister of Health, has publicly declared that would introduce an 'unhealthy food' tax. It is not clear why it would be introduced, what would it be and how much would be. First, the Minister talked about 10%, then about 3%. While the percentage changes, the expectations for new revenues remained unchanged. At the beginning, the Minister said he was waiting for another BGN 200 million of revenues, however, with the idea of a 3% tax the expected revenues were not reduced by 70%, but by 25% - to BGN 150 million.

At the end of May it became clear that according to the Head of the National Health Insurance Fund its deficiency would be BGN 200 million. The calculations announced by the Government so far show that the objectives of the new tax are most probably purely fiscal – to fill the repeatable annual deficiency of the National Health Insurance Fund.

The optimistic prediction of the Minister that these funds would be collected probably originates from the intention, not clearly defined at present, to impose big taxes on food products, which for a reason or other may be labeled as 'unhealthy', irrespectively of the fact or may be exactly because people are increasingly consuming them.

Probably, it refers to excises or direct tax on foods of higher salt content, added sugar, caffeine, and trans-fats. However, along the chain of added value, the new tax will affect all foods and food product sellers.We say 'probably' because most of the information, including the above, is taken from interviews and press releases.[7] Again, media publications made it known that the Ministry of Health would present its draft for the new tax in the autumn, in September. Unfortunately, there is no official message about such intentions.[8]

The only document of a governmental body in this reference is the statement of Prof. Dr. Stefka Petrova 'About the Suggestion for an Unhealthy Food Tax' of the National Center for Public Health and Analyses (NCPHA).

The NCPHA's Opinion

This statement states two reasons for the emerging legislative idea. One of them comes from the field of healthcare:

'The suggestion of the Ministry of Health to impose a tax on the so-called 'unhealthy foods' aims at limiting the consumption of foods significantly contributing to the formation of an unhealthy model of public nutrition in Bulgaria, which increase the risk of nutrition-related chronic non-communicable diseases (obesity, heart diseases, type 2 diabetes, tooth cavities). The term often used to characterize these foods is 'unhealthy foods'.[9]

One of the mentioned reasons for the idea is that 'The World Health Organization (WHO), European Commission (EC), European Alliance of Public Health (EAPH) and a lot of other international

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[7] See: Mara Georgieva, Desislava Nikolova, Sweet and Salty Excise Duty of Moscov, Capital, 6 June 2015, at: http://www.capital.bg/biznes/kompanii/2015/06/06/2547711_sladko-soleniiat_akciz_na_moskov/ and Moskov: Unhealthy foods will be labeled as such, Trud, 29 May 2015, at:http://www.trud.bg/Article.asp?ArticleId=4793685 .

[8] See the message of BNR: http://bnr.bg/post/100592037/predstavat-proekta-za-danaka-varhu-vrednite-hrani-prez-septemvri.

[9] Opinion of Prof. Dr. Stefka Petrova, National Centre for Public Health and Analyses (no date), p. 1, at: http://ncphp.government.bg/files/Prof_Petrova-Danak_nazdravoslovni_hrani.pdf. We want to pay attention to the last sentence: it emphasizes the fact that "the harmfulness" and the causal links between nutrition and health, mortality etc. are hardly detectable, which leads to a change in terminology.

organizations recommend and support application of fiscal measures, such as additional fees (taxes) on foods known as 'unhealthy' as part of the package of public health policies'.

'Recommendation' is not a sufficient reason for a legislative and tax reform. The Bulgarian legislation (the Law on Normative Acts and the Law on Restricting Administrative Regulation and Administrative Control over Economic Activity, in particular) requires that legislative and, in general, statutory instruments be justified by impact assessment of the suggested amendments, and, if possible, by an analysis of benefits and costs from their adoption and application.

An additional argument according to Prof. Petrova is the comparative analysis of the international experience in this regulation. This argument reads as follows:

> *'Comparative analyses of the efficiency of the different strategies for improvement of public nutrition show in summary that obligatory reformulation of foods is more efficient than the volunteer, whilst legislative and fiscal measures are more profitable than information strategies, but they put far more political challenges.'*[10]

In our opinion this statement is slightly exaggerated and is contrary to the common sense and the results from the independent analyses of the mentioned international experience. On top of all, as showed further in the text, reputable enterprises manufacturing foods and beverages themselves reduce the ingredients suspected for being harmful. Voluntariness is always the better alternative of violent price regulation through taxes.

In the same place the statement adds the second argument, too:

> *'Big expenses related to treatment of common chronic diseases largely justify fiscal measures undertaken by the governments'.*

A similar argument is also presented in the interviews of the Minister of Health; in one of them he says that the expected additional revenues from the new taxes will finance prophylaxis of diseases.

Prof. Petrova thinks that:

„There is a reason for the scope of the unhealthy food tax act to include:
1. foods which are main sources of industrially produced trans-fat acids;
2. some foods with high salt content;
3. energy drinks and other caffeinated drinks and foods;
4. soft drinks and foods rich of added sugars.'

Assesment of Arguments: Objectives and Structure of this Study

Considering the information distributed by the NCPHA and the Minister of Health, this report, by reason of the above four types of foods and supplements, aims:

- to address the impartiality of the references to the international comparisons;
- to see to what extent it may be assumed that 'obligatory and fiscal impact' is more efficient than the volunteer 'reformulation' of nutrition habits of large groups of people;
- to find out if the ingredients included in 'the unhealthy food tax act' may have an effect on the health of the Bulgarian citizens and to what extent it is possible to be positive;
- to find the relation between these legislative ideas and the budget problems of the National Health Insurance Fund and the purposeful actions (policies) for better health and longevity of the Bulgarian citizens;

[10]Ibid, the emphasishereand the nextreferenceis by StefkaPetrova.

- to trace what will be the probable fiscal, economic and public effects of the suggested taxation on unhealthy foods.

This report is divided into four sections accordingly.

The first one makes a review of the international comparisons. Here the presentation comes from the EU countries, where a similar legislation has already being operating, and after that it states the arguments of the EU countries rejecting thereof. Finally, it outlines the experience of countries outside EU, where such policies are relatively new (USA) or still have some relatively old tradition (Mexico).

In the second section we check up to what extent the above four types of food and their taxation is a reason for a concern, special policy and regulation, and to assess to what extent the latter would contribute to some positive results.

In the third section we assess the correctness of the approach from the point of view of the fiscal history of the National Health Insurance Fund. And in the fourth section, assuming that 'obligatory' and 'tax' regulation is actually one and the same thing, we make a scenario of the social and economic effects from the new unhealthy food tax act.

Taxes and Foods: International Experience

Since the Ministry has not suggested any analyses and specifications in terms of why and which foods exactly would be taxed, the international experience shows give an orientation about the experience, analyses and potential impacts of the new tax suggested in our country.

In the recent decades the idea of governmental, including through taxes and quasi-taxes, modeling of the consumption of foods and beverages is gaining more strength. The reason is specious - the sharp increase in overweight and obese people and the care of the state for them. However, such a solution is so controversial that for decades none of the countries which has applied it may say positively if it brings more benefits or negatives.

This shows the experience of the countries which have introduced the controversial taxes, as well as the hesitations of other to do so or the definite decisions of third not to proceed with such steps.

The Basic Argumentation of the Government

Just in the opposite way by the Bulgarian advocates of the idea of Minister Moskov to introduce an 'unhealthy food tax'. The only official government document states as follows:

> *'Comparative analyses of the efficiency of the different strategies for improvement of public nutrition show in summary that obligatory reformulation of foods is more efficient than the volunteer, whilst legislative and fiscal measures are more profitable than information strategies, but they put far more political challenges.'*[11]

[11]Opinionof Prof. Dr.StefkaPetrova,National Centre for PublicHealth and Analysis(NCPHA, no date), p. 1, at: http://ncphp.government.bg/files/Prof_Petrova-Danak_nazdravoslovni_hrani.pdf. A similar opinion Prof.Petrovastatesin an interview for Mediapool.Bg (see here:http://www.mediapool.bg/vredni-hrani-sreshtu-vreden-danak-news236226.html). Unfortunately, there are no other attempts to justify the idea.

Purely fiscal ideas are showed through the statements of the Minister. But they are subject to another analysis. In expectation of more detailed estimates only some general estimates may be made and the common consequences described.[12]

Review of the General Regulation Status

The desire of a number of governments is understandable on the pretext of protecting human health and finding new sources to fill the budget. The problem is that such step is not absolutely correct either from the point of view of a healthy way of life, or in terms of the fiscal policy.

The contradiction comes from a few directions.

First, from the point of view of healthy way of life. Definitely, there is not a serious study in the world showing that such tax leads to less diseases and smaller percentage of overweight and obese people. In countries where such taxes have been operating for years, the trend towards the growth of overweight people is still going on. Limitation of some 'harmful' ingredients in foods is replaced by others, often far 'more harmful'. The goods which became more expensive because of taxes, are immediately replaced by others or their cheaper substitutes are found. The experience shows that all countries which have introduced food taxes make exceptions for some foods on account of others, which finally does not change the nutrition habits of people and they adopt such policy that takes care more of the fisc than their health.

Second, in a purely economic plan the contradictions from this type of taxes are far larger. The negative consequences are for:

- competitiveness,
- employment,
- equal market conditions,
- subsidy not allowed by the EU laws to some producers on account of others.

The practice shows that negative impacts are most often more than the positives even for the fisc, because the complex forms of this tax lead to significant administrative costs and costs of compliance arising out of the unexpected consequences for the consumer conduct, and often, though hard to be monitored, they may exceed even the revenues from it.

The review hereinafter shows the experience of EU countries, as the presentation is divided into Member States having such tax, and those who have rejected such taxation. Besides, we also present a brief outline of the situation in the USA and Mexico.

Four Philosophical and Economic Problems

In the experience summarized hereinafter the effects are dramatically close for the individual countries. It may be expected that they would be relatively the same for Bulgaria, too.

This community of impacts results from the principal defects of approach, tax regulation of separate goods and the condition of the public health.

One of the problems is that tax regulation of the conduct is as improper as possible. Taxes over certain groups of goods are a sort of price regulation: it is not much different from the direct

[12]See: Krassen Stanchev. Why do weneed an"unhealthy food" tax.- Manager, ed. 7(201), July-August, 2015, p. 114-115.

administration of different quasi-prices ('rates', 'fees', etc.), from prescription of formulae and rules on price formation and establishment of 'ceilings' or 'floors'.

Where it does not refer to all goods and services, the typical problems that occur are discrimination, hidden subsidy, migration of demands and supply towards substitutions and more expensive tax control and reporting.

It may be concluded about the economic, administrative and political problems arising in price regulation by the problems of applied rates for freelancers, 'price' for electricity in the regulated market, etc.

The second problem is related to the impact of substitutes of the products liable to taxation on the Elasticity of Demand.[13] Relatively a large number of substitutes, similar in qualities, of given goods or service leads to relatively large coefficient of elasticity, and vice versa, relatively a small number of substitutes results in a small coefficient of price elasticity. Since foods have substitutes which are relatively easy to be found, the impact of price regulation through taxes (e.g. excise), to be successful, it must encompass many or all foods. But this would mean not only taxation of the foods supposed to be 'unhealthy' – called by the Minister as 'harmful', but also taxation on most of the foods, i.e. the list of the foods subject to taxation (in order to achieve the objectives of the reform in terms of both national health and healthcare budgets) will have to be constantly extended.

But where taxes are imposed over a large range of foods, their general price level would grow up, and thus, cost of life would get higher, the share of the income for the households for non-food consumption less, and for the indigent households it would be impossible to find substitutes and would have to either reduce or deteriorate their nutrition.

The third major problem with food price (obesity and its related health issues, respectively) is that the actual root cause of obesity is the low price levels of food stuffs that results itself from another government policy - subsidizing the agriculture.

Fourth, the idea itself of foods subject to taxation with the intention to stimulate health behavior assumes faith in the government's right to interfere with such individual privacy of choice, such as health, on the one hand, and in the inerrancy of the concerned 'omniscient' on this matter 'scholars' and 'politicians'.[14]

Not accidentally, special research showed extreme inefficiency of taxation for the purpose of combating phenomena such as obesity.[15]

REVIEW BY COUNTRIES

Here is a brief overview of the EU countries and the world that have implemented this tax, its characteristics in each of them, as well as examples of countries that strongly oppose such a step.

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[13]"Elasticity of Demand" describes to what extent-in terms ofa product or service– it issensitive tochanges inother indicators(availability of substitutes, pricing, consumption taxes, etc.).

[14] More on the philosophical problems of this policy see: Boyan Rashev. "Unhealthy food" tax - the thin red line of one blue elector. - Dnevnik, 19 July 2015, athttp://www.dnevnik.bg/analizi/2015/07/19/2575169_danuk_vredni_hrani_tunkata_chervena_liniia_na_edin_sin/ .

[15] Richard Dobbs et. al., Overcoming obesity: An initial economic analysis, McKinsey Global Institute, November 2014, p. 5, at: http://www.mckinsey.com/insights/economic_studies/how_the_world_could_better_fight_obesity

EUROPEAN UNION: COUNTRIES WITH A FOOD TAX

Denmark

This is the country in Europe with the longest story of an 'unhealthy food' tax. However, it must be immediately emphasized that taxes on certain kinds of food and drinks are only one part of quite comprehensive programs for promoting and encouraging healthy lifestyles. The country has significant successes in this area, especially impressive results in the measures in the field of reducing cardiovascular disease.

Between 1985 and 2009 the number of deaths caused by cardiovascular diseases decreased by the impressive 70%. No other EU country has marked a similar decrease in deaths from cardiovascular diseases. There is no exact explanation of this development, but it is assumed that it is due to the better lifestyle.

Over the past ten years, however, a number of studies and facts show that these successes are not due to the applied taxes on some foods and beverages. Taxation of sweetened soft drinks has been in force in Denmark more than 80 years. The percentage of overweight and high Body Mass Index (BMI), continues to grow. The percentage of Danes having a BMI higher than 30 increased from 9.5% in 2000 to 13.5 percent in 2010. At the same time, numerous studies in the recent decades have failed to demonstrate a direct relation between the taking fatty foods (saturated fat) and cardiovascular diseases. No large study has proved such a relation. This, together with demonstrated a number of negatives resulting from these taxes led to the decision of the Danish government to cancel all such taxes in 2014.

The decision to cancel the tax is based on several studies and facts from the past ten years, showing that the results achieved are not due to the applied taxes on some foods, incl. drinks.

The specific development in the research, discussions and decisions is as follows.[16]

- In 2007, the Danish government established the so-called Preventive Commission, which, after about two years, in 2009, published a report with 52 measures that should improve the average life expectancy of Danes. This report has recommendations for implementation of a new tax on products containing certain amounts of saturated fat, as well as on other products, incl. alcohol, tobacco, those with added sugar and sweetened soft drinks. The introduction of new taxes, however, should be done with an overall reform of the tax system, incl. reduction of other taxes, in order not to burden the people more in the economic crisis all over Europe. The Government and the Preventive Commission then believe that the combination of a reduction and increase in some taxes and implementation of other will achieve keeping the overall tax burden for citizens. Their desire is understandable, as far as Denmark is one of the EU countries with high taxation. Over the last twenty years, taxes are between 48 and 50 percent of GDP for the country, as more than half of total tax revenues come from income taxation of citizens.

[16] See: Christopher Snowdon, The Proof of the Pudding: Denmark's Fat Tax Fiasco, London, IEA, May 2013; Olga Khazan, What the world can learn from Denmark's failed fat tax, The Washington Post, November 11, 2012; Food taxes and their impact on competitiveness in the agri-food sector, Final report (Client: DG Enterprise and Industry), Rotterdam, Ecorys, 12 July 2014.

- A tax reform was implemented on the basis of the report of the Preventive Commission that includes increase in the previously existing "unhealthy" food taxes, and the introduction of an entirely new tax. The tax on sweets, ice cream and chocolate has been increased by 25%, the existing tax on the sweetened soft drinks has been revised in proportion to the sugar content in them, and a new tax has been introduced on foods containing saturated fats.
- On 1 October 2011 Denmark also introduced a "fat tax" to fight against unhealthy lifestyle. The tax is 16 Danish kroner (about € 2.14) per kilogram of meat, dairy products, and vegetable oils containing more than 2.3% of saturated fat. Products with less saturated fat than 2.3% of 100 years, as most types of milk, are exempted from the new tax. It does not apply to food intended for export, and the food for animals.
- The tax was introduced after it became clear that in the period 1985-2009 there was 70% drop in mortality from cardiovascular disease, i.e. this positive effect has nothing to do with that tax, and it was introduced in spite of the clear positive trend in public health of the country.
- So, naturally, the new tax reform caused quite a broad discussion not only in the EU. It is interesting to underline that the 'unhealthy food' tax so introduced in Denmark provoked mixed reactions in the EU, as the European Commission even initiated an investigation to determine if the newly introduced tax in 2011 and canceled later was not a form of unauthorized subsidy for certain products and companies in the country. It concerns food manufacturers, who were not affected by the new tax.
- A little more than a year after the introduction of the tax in January 2013, the new Danish government canceled that tax due to the rather controversial results of its implementation. Now the EU Commission argues that some foods were improperly excluded from this tax, and thus manufacturers received unlawful subsidy, unlike their competitors. If the EU Commission draws the conclusion that the companies exempted from the tax had to pay it, they will be forced to do so together with all interests accrued thereon.
- At the outset, the introduced 'unhealthy food' tax caused a lot of debates and underwent a series of changes. Originally, it was proposed that tax be 25 DKr, or about 3.36 Euro per kilogram of saturated fat in the food. Meat and milk are exempted from this tax. However, it turns out that it was these two products from which majority of Danes consumed saturated fat - 18% of meat and 16% of milk. Even then, the EU Commission stated that the exemption of meat from the 'unhealthy food' tax violated the fair competition rule and constituted indirect subsidy.
- Then the government decided to reduce the tax to 13.50 DKr (€ 1.81) per kilogram of saturated fat in the food, the tax affected meat, too. For meat the tax was fixed on the basis of predetermined values of saturated fat, according to the type of animal from which the meat had been produced. Here is another contradiction, as specific pieces of meat from an animal have different content of saturated fat and equal tax makes pointless the user's desire to choose higher quality meat. Furthermore, it is clear that the predetermined levels of saturated fat in the meat of various animals were quite high.
- This form of tax came into force in November 2011 and was canceled already in August 2012. For this period DKr 1 billion or around € 134 million came into the fisc. There are no data how much the tax introduction was worth, but given its complexity there are assessments stating that it cost the private sector no less than EUR 30 million. The costs for its introduction made by the public sector were in addition.

- Right after the tax introduction one of its main effects became obvious - intensification of cross-border trade. It in turn led to a negative impact on the labor market. The Danish Chamber of Commerce and the Council for Agriculture and Food made a study showing that 80% of respondents had not changed their nutrition habits after introduction of the tax. At the same time, many people started to go on shopping of food products to neighboring Germany, and German stores begun to advertise with leaflets in mailboxes of the Danes. According to the same survey, for the first months of the tax introduction there were about 1,300 lost jobs. There were, however, other tax-related or side- effects, such as:
    a. increase in the prices of the basic products (e.g. butter and margarine) involved in the composition and pricing of other products,
    b. shifting the consumption towards substitution with cheaper and low quality products and / or those which do not fall within the scope of the tax,
    c. risk of increased consumption of carbohydrates or alternatives of worse quality of taxed products,
    d. as assumed, the tax on saturated fats applied to dairy products (butter, margarine and cooking fats) has led to consumer shifting towards cheaper brands or stores,
    e. increase in business costs and the associated risk of closing job positions in Denmark,
    f. negative social evaluation due to the strong sensitivity of consumers at higher prices for the goods.

The negative reactions of the public and businesses made the new Danish government to cancel the 'unhealthy food' tax in November 2012, which decision became effect in January 2013. Then it was decided also to eliminate tax on foods with added sugar as anticipated. A few months later the tax existing more than 80 years on soft drinks with added sugar was canceled too. With that tax there were two levels of taxation of soft drinks and juices, as these levels varied over the years, but before cancelation of the tax they were

- Standard level: 0.82 DKK per liter for products with sugar content > 0.5g / 100ml.
- Reduced level: 0.295 DKK per liter for products containing sugar <0.5g / 100ml.

Finally, the Danish Ministry of Agriculture announced that the so-called 'fat tax' proved to be 'the most harmful tax ever introduced in the country'.

Hungary[17]

In 2011, on the grounds of excessive salt consumption by the population, and that two-thirds of adults were overweight or obese, the Hungarian government introduced the so-called 'Product Tax for Public Health'. It aims at increasing the use of alternative and much healthier products and the production of food products with less content of fat, salt and sugar. By plan, the revenues from this tax should be allocated in the budget of healthcare and added to the remuneration of employees in the healthcare sector.

The tax affects:

- Soft drinks with added sugar over 8 g / 100 ml syrups or concentrates for soft drinks, syrups excluding these with fruit or vegetable content exceeding 25%;
- Energy drinks containing methylxanthines over 1 mg / 100 ml and taurine over 100 mg / 100 ml, and those containing methylxanthines over 15 mg / 100 ml;
- Confectionery in total and added sugar over 25 g / 100 g;

[S]See: Ecorys, Food taxes and their impact on competitiveness in the agri-food sector, Final report (Client: DG Enterprise and Industry), Rotterdam, Ecorys, 12 July 2014; Public Health Tax Study: Hungary, PWC, 2 September 2013.

- Chocolate with added and total sugar over 40 g / 100 g and cocoa content less than 40 g / 100 g;
- Salty snacks with salt content over 1 g / 100 g;
- Sweetened beer / alcohol with added sugar, with a total amount of sugar more than 5 g / 100 ml;
- Fruit preserves, except extra quality jam, extra quality jelly, marmalade and special jams.

Initially, the scope of the tax is larger and includes all products of fast food chains and products of the bakery, but after strong protests of manufacturers they were excluded from the tax scope.

In January 2012 the tax entered into force in its present scope. In 2013 the tax generated about EUR 61.5 million revenues. A public research shows that most Hungarians took the new tax as a means of filling the budget, and not as a measure to protect their health.

Soft and energy drinks responded to the tax introduced by quickly moving to the use of substitute ingredients in their products in order to avoid its payment. This substitution led, on the one hand, to constantly extension of the list, and, on the other hand, to additional costs both for administration and inspection bodies and the private sector - to "catch up" updating and to look for new alternatives. Business announced that the tax was a reason for closing jobs and discriminated part of producers.

A study of the health ministry in cooperation with the WHO shows that in 2013 the sales of the products affected by the tax dropped by 27%. According to 80% of respondents involved in the research reduced consumption was caused by the higher price of the affected products, and 20% believed that this was due to concerns about the public health.

However, the main declared aim of the tax - to limit the demand and consumption of the so-called ‘unhealthy food’ - is not fulfilled.

The questionnaire, however, does not give an answer if consumers use substitutes of the products levied with the new tax.

This is obvious from the above survey of PricewaterhouseCoopers, assigned by the Association of Hungarian Pastry. At the end of 2013 it found as follows:

- There is no conclusive research to prove benefits for the public health as a result of the introduced taxes;
- The lack of correlation between Body Mass Index and consumption of salty snacks and / or cakes may be due to the fact that not only taxed products might contain substances that the Ministry of Health considered unhealthy;
- Taxation of these foods can be considered as a form of discrimination;
- Sales of these products decreased, and thus decreased the net tax revenue in terms of such taxation;
- This continually and substantially reduction of sales has permanent negative consequences for the Hungarian producers;
- The process of tax tracking and reporting of the overall effects was impeded by the fact that different producers were producers of other goods too;
- Budget revenues are threatened by the growth of the grey economy and the fact that the new tax upgraded VAT and motivated some market players not to comply with the law both on as VAT and the ‘food tax’ (or with one and other laws).

Finland[18]

This is the country with the longest history of taxes on food products. This tax on foods with added sugar and soft drinks was imposed from 1929 to 1999. In 2000, however, the tax on "sweet foods" was dropped, and that on soft drinks remained. Then the tax excluded food using certain sweeteners instead of sugar. The EU Commission, however, concluded that it was discriminatory to other sweeteners not included in the change.

In 2010 a law was adopted returning the tax on 'unhealthy sweet foods'. Now affected by the new tax were products such as candy, chocolate and ice cream. Outside its scope remained foods such as biscuits, baked pastries, yogurts, puddings and jellies, as well as granulated sugar.

The new tax aims at increasing the budget transitions, for the multitude of exceptions no beneficial impact on human health was expected. This approach is also evident by the increase in this tax twice after its introduction - in 2012 and 2014. At present, a working group is discussing the possibilities for introducing a tax on the sugar content of products or on the amount of sugar contained in a product or on the weight of a product or something combined.

In both cases, however, the introduction of the new tax would be even a greater administrative burden and would lead to even higher costs at its introduction. The latest thing in Finland now is the decision that the tax on soft drinks should be applied to all beverages containing more than 0.5% sugar. In 2011, the tax on 'sweet foods' brought to the budget of Finland € 134 million - 35 million of soft drinks and over 100 million of sweet foods. In 2012 the revenues from this tax rose to EUR 197 million. Traditionally, the purpose of this tax was fiscal. And apparently they were fulfilled, the turnovers in different groups of taxed goods were relatively constant (or at least it cannot be said if there was a direct causal relationship between taxes and consumed quantities).

To date there is no analysis of whether the tax has had an impact on the nutrition habits of people. There is unofficial information that there was a decrease in sales and consumption of alcoholic beverages and foods with added sugar. In Finland there were also concerns that this tax gave advantage to some manufacturers than others, which violated the equal competition rule.

France[19]

In 2011 the French government introduced a 'tax on soft drinks'. The purpose was to reduce the consumption of glucose by the population. A little later, in January 2012, the tax was levied on soft drinks with sweeteners. It amounted to 11 euro cents per 1.5 liters of sweetened drinks. It was paid by manufacturers and importers of soft drinks with sugar and sweeteners.

The new tax generated revenue of about EUR 280 million per year. Already in the first year the tax burden was transferred to the price of drinks, i.e. on consumers, but with fruit drinks and flavored waters there were options the burden to be taken by some retailers and manufacturers. The price of the affected beverages increased on average by 5%, which was twice higher than the average increase in food prices in the country.

Still there is no study to show the effect of a tax on consumer health. However, there was a feeling of reduced sales of taxed sweetened drinks, as of January 2012 to May 2013 such reduction was more than 3%. But this did not reduce the consumption of sugar from other sources, wine, etc. Because of

[18] Ecorys, Op.cit.
[19] Ecorys. Op.cit.

the typical French local and domestic economy (i.e. 'Economy of Jars') the total consumption of sugar was not changed. There was no dynamics by the indicator Body Mass Index - BMI: France was among the countries with relatively low BMI. The legislative assembly of the country was also sensitive to weak physique, in April the same year a law was voted that banned ultra-skinny fashion models, with a BMI below a certain value, to participate in fashion shows and advertising.[20]

EU: Countries which Opposed to the Idea of a Food Tax

As can be expected with such a controversial measure as a tax on foods, the attitude towards it was different in the different countries. Even within the EU there are countries with an opposite opinion and opposing actions to such a tax.

Here are some examples of EU countries that strongly so far rejected the idea of such a tax on 'unhealthy' foods.

The United Kingdom[21]

Three years ago Prime Minister David Cameron made it clear that he was considering the introduction of tax on 'unhealthy' foods similar to that in Denmark, saying that he did not want to let people be as obese as in the USA. As can be judged by the press then, the idea was originally adopted with enthusiasm.

But the introduction of a possible tax on high content of sugar, salt and fat in food products proved to be not a one-way decision, as it seemed in 2012. And not just because of the failed experience of Denmark.

Today, a similar tax in the UK is seen as an unacceptable step, because experts say its effects are extremely negative. The tax would affect the competitiveness of companies in the agricultural and food sector, and in particular, small and medium businesses. Moreover, the analyses show that the potential tax could reduce consumption, but not necessarily that of the products on which it is imposed. Here the situation in the UK is expected to be the same as in other EU countries with a similar tax: reduction of consumption, turnovers and profits of more quality manufacturers, less taxes from them, migration of consumers to cheaper and bad quality substitutes and general negative consequences for food industry, agriculture and commerce.[22]

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[20]Michelle Persad, France Votes To Ban Models Under A Certain Body Mass Index, Huffington Post, 4-3-2015, at: http://www.huffingtonpost.com/2015/04/03/france-models-body-mass-index_n_6999244.html .

[21] Rob Lyons and Christopher Snowdon, *Sweet Truth – Is there a market failure in sugar?*, Institute of Economic Affairs, London, 2015; Dr Gavin Sandercock, Focus on fitness not fatness, University of Essex, BBC, February 2015; Paula R Trumbo and Crystal R Rivers, Systematic review of the evidence for an association between sugar-sweetened beverage consumption and risk of obesity, 'Nutrition Reviews', Volume 72, Issue 9, pp. 566–574, September 2014; Ecorys, Op.cit.; Nathan Grey, UK political party rules out sugar or fat tax, but takes aim at advergames, 10 July 2014, FoodNavigator.com; Prof Richard Tiffin, Director of the Centre for Food Security at the University of Reading, Britain needs action on obesity, but the evidence for sugar tax is thin, The Telegraph, 26 June 2014.

[22]See belowthe purposefulparagraphof the results ofthe studyassignedby the European Commission.

Belgium

Several studies in the country in recent months (e.g. NutriNet Santé of 18 May this year or that of Solidaris of June 2015, as well as a research at the University of Ghent in 2014) concluded that this type of taxes would not solve the problems of obesity of the population.

In Belgium, the prevailing opinion was that a tax on sweetened soft drinks, for example, would not work alone and without parallel implementation of many policies. The Belgian Government, and in particular, the Minister of Health Maggie de Block said clearly that they were against such a tax because it did not solve the problem of obesity. It is much more important and successful to deliver healthy food in schools and to create conditions for sport and physical activity.

According to some circles in Belgium a tax on 'unhealthy' foods would make sense only if its introduction reduced VAT on those foods considered as healthy, fruits and vegetables. Otherwise, the tax on 'unhealthy' foods would affect the Belgians with more modest financial resources without offering them healthier alternatives.

Understandably, producer organizations and businesses are strongly opposed to such a tax, saying that it would be primarily a fiscal experiment without proven positive impacts on the health of consumers. In contrary, the tax would lead to loss of jobs and favoritism of some products than others.

In Belgium, consumer organizations also opposed strongly to such a tax referring to the potential negative social consequences. It was clear that such tax would hit hardest on the poorest citizens of the country, further reducing their purchasing capabilities.

All this allowed the analysts to conclude: The tax on 'unhealthy' food and drinks will not be introduced in Belgium in the near future. To do this, there must be clearly demonstrated its effectiveness by large-scale studies, which were not scheduled yet.

Estonia

According to the Estonian government, the society in the country was not ready to adopt a new tax on foods containing more salt, sugar or fat.

A study of Eesti Paevaleht in 2014 showed that people began to be more serious about their nutrition habits and to have healthier lifestyle, as such trend did not have to be stimulated by taxes. The introduction of such tax would lead to a change in the prices of not only the taxed products but also many others associated with them, considered the social ministry of the country.

The Health Minister of Estonia is convinced that the main objective of the study should be the promotion of healthy lifestyles and high physical activity rather than levying the people with new taxes.

Germany

Here neither the government nor businesses are prepared to adopt taxes on soft drinks and 'unhealthy' foods. Recently, the spokesman of the German Federal Ministry of Agriculture and Foods wrote in Die Welt: 'It should be prohibited to use punitive taxes on food and drink, because this generates a political control over consumption and leads to the tutelage of consumers.' Punitive taxes on foods deemed as 'unhealthy' could not lead to changes in consumer habits. The German Ministry of Agriculture and Food reminded that the Danish government had abandoned this type of

taxes since the end of 2012 after it became clear that 'they could not change the nutrition habits of people.'

According to widely cited study of Silke Thiel, an economist at the Department of Economics of Food at the University of Kiel, the health effects of the application of a tax on 'unhealthy' foods in Germany were not clear. The study entitled 'Fat Tax – a Political Measure to Reduce Weight: the Case of Germany'?[23]analyzes the impact of replacing some foods with others in case of a possible introduction of a tax on foods containing saturated fats on the elasticity of food prices. There it clearly demonstrates that with households with lower incomes reduced consumption of carbohydrates and fat is not large.

At the same time due to the parallel reduction of the consumption of a number of nutrients, the overall effect on health remains unclear. Along with this, these are households with lower incomes who will suffer the greatest financial losses from such a tax. The result shows that if a tax on 'unhealthy' foods were introduced in Germany, it would lead to a change in the structure of the purchased foods. This might lead not only to reducing the amount of energy taken from food, but also to a smaller amount of nutrients essential for the organism, such as vitamin D and calcium, helping someone to fight against osteoporosis.

Especially for Germans, at a certain age people have a vitamin D deficiency and also consume less calcium than necessary. These conclusions, supported by a study of the German Society of Diabetics make the German government to be very careful when considering the effects of the taxation on 'unhealthy' foods.

The possible introduction of taxes on certain foods and beverages will also have health consequences and consequences for human welfare. Price elasticity shows that such a step would largely affect low-income households. This will cause changes in their decisions what to consume.

In Germany, the public is reluctant to accept punitive tax as a whole, because this tax will punish not only obese people, but those who do not need such care and may control their weight themselves.

There people are more inclined to adopt different health insurance contributions, as they are higher in people who are overweight and obese.

German experts point out that fat itself is not unhealthy and it is necessary for absorption by the body of fat-soluble vitamins like A, D, E and K. In this sense, it is not clear which of the many health effects will prevail in the tax impact leading to changes in nutrition.

The German government made it clear that before proposing a tax on 'unhealthy' foods it needed to have in-depth economic analyses, as well as those related to nutrition and substitution of some foods with others.

General Evaluation for EU[24]

According to a study assigned by the Directorate-General for Enterprise and Industry of the European Commission, taxes on food achieved reduction of consumption of taxed products, and consumers

[23] Silke Thiele Fat tax: a political measure to reduce overweight? The case of Germany, at: http://econpapers.repec.org/paper/agseaa115/116393.htm; Barbara Driessen, Zucker-Fett-Steuer Soll Fetleibigheir eindaemmen, Die Welt, 21.5.2014, at: http://www.welt.de/gesundheit/article128257815/Zucker-Fett-Steuer-soll-Fettleibigkeit-eindaemmen.html

[24] See: Ecorys, Op.cit.

started to buy their substitutes instead, not covered by the tax or cheaper foods at low prices and bad quality. Thus the consumption of 'unhealthy' foods was not reduced, as well as of the ingredients that the tax aimed to reduce. The study highlights the negative impact of the food tax on the competitiveness of the agricultural and food sector. It proves that the new tax would increase administrative costs, especially if they are based on certain ingredients in food or differentiated according to their quantity and thus become too complex for accountability and control.

Potential new food taxes will have a negative impact on profits, employment and investment in these sectors. So the competitiveness of companies affected by the tax on 'unhealthy' foods, especially within the EU, will be directly and adversely affected.

Transition of consumers to cheaper products, such an effect is observed, affects and will continue to have an adverse effect on the goods in better quality and therefore more expensive. Moreover, the shift of consumers towards products that are not subject to tax, often not healthier, but cheaper analogues, gives an advantage to some manufacturers over other.

In conclusion, the study states that taxes on 'unhealthy' foods, incl. drinks lead to diverse, and often negative consequences, and before proceeding to their introduction they needed very long and in-depth analyses.

Countries outside the EU

The USA[25]

Ideas for taxation against obesity in the United States date from the early 1940s when it was offered something like a fine for each pound of weight, defined as overweight. For obvious reasons, such a drastic taxation was not enough. But over the last ten years, the debate in the United States how to reduce obesity epidemic was extremely fierce. The problem is really serious, because two thirds of the adult population and one third of children are overweight, or the more severe form - obesity. Some limited trials are also made by introduction of taxes on 'unhealthy' food and drinks, too, but only at a state or even lower regional level. Today, the state and regional governments who have introduced or are leading a battle to introduce a tax on sweetened soft drinks are twenty.

In some municipalities in the United States there are various initiatives that do not rely on regulation, prohibitions and taxes and who are trying to improve the way of life through investments in urban and educational endeavors. An interesting example is Oklahoma City. There municipal authorities advocate the goal that the city should lose about 500 tons of body weight, implement a program of weight loss, which is based on the principle of competition, also covering public organizations, companies and schools (the program is called "The City Goes on a Diet"), it promotes changes in the urban environment by combining educational and health-oriented programs (such as "nice to walk",

[25]See: Richard Dobbs, Corinne Sawers, Fraser Thompson, James Manyika, Jonathan Woetzel, Peter Child, Sorcha McKenna, and Angela Spatharou, How the world could better fight obesity? McKinsey Global Institute, November 2014; Olga Khazan, What the world can learn from Denmark's failed fat tax, The Washington Post, November 11, 2012, Anemona Hortokollos, Failure of State Soda Tax Plan Reflects Power of an Antitax Message, The New York Times, July 2, 2010; Christiane Schroeter, Jayson Lusk, Wallace Tyner, Determining the impact of food price and income changes on body weight, Arkansas State University, College of Agriculture, State University, AR 72467, USA; Brian Wansink, Andrew S. Hanks, David R. Just, From Coke to Coors: A Field Study of a Fat Tax and Its Unintended Consequences, Cornell University, The Ohio State University, Cornell University - Dyson School of Applied Economics and Management, 2015; Barrie Craven, Michael L. Marlow, & Alden Shiers, "Fat Taxes and Other Interventions Won't Cure Obesity", *Economic Affairs* 32.2, 2012; Patrick Basham and John Luik, Hard Truths about Soda Taxes, Cato Institute, Human Events, July 2010.

"walkability" – for people and places) and they are trying to create an urban environment for young, educated, qualified people who are key for the economic growth.[26]

Since the beginning of 2015 in California a 'Fat Tax' has been operating. The new tax affects foods such as butter, milk, cheese, pizza, sweets, ready meals, if they contain more than 2.3% saturated fat. At present, it is too early to assess the impact of the new tax, but critics say that the higher price of many products taxed in comparison with their relative sold in the neighboring states of Nevada and Arizona has already led to the creation of a 'black market'.[27]

New York City also leads "war" against fat, restaurants are required to inform the calorie in their offered menus. The previous New York Mayor Mike Bloomberg introduced a ban on large servings of carbonated sweetened drinks in restaurants, but it did not stand in court. Now his successor Bill de Blasio says that he will continue to fight for the project of Bloomberg.

The opponents of the taxation on 'unhealthy' foods emphasize that their application had no effect, and the published calorie in menu did not change the nutrition habits of customers.

Unlike cigarettes, whose tax was increased early in the first presidential term of Obama by 62% and led to reduction of smokers by over 3 million people for 5-6 years, changing eating habits of Americans is far harder work. This is evident also by the almost failed program for supplying schools with healthy food and prohibition there on food with high content of sugar, salt and fat. Children massively stopped eating at school.

Many Americans think that even if some kind of a tax were introduced on soft drinks and 'unhealthy' foods, it was very doubtful what would happen with the collected money. For example, given the fact that only 5% of the money collected from higher taxes on cigarettes and tobacco articles since 1998 have gone to programs for quitting smoking.

In the American society there is an underlying mistrust that taxes can change eating habits of people. A study conducted by the media company CBS in January 2010 indicates that 60% of people are against the tax on sweetened soft drinks and the foods considered as 'unhealthy', and 72% of Americans do not believe that the tax will actually help in the fight against obesity.

According to the Cato Institute, there are five key problems with the introduction of a tax on 'unhealthy' soft drinks.

- The excuse for the introduction of a tax on soft drinks is the presumption that these drinks contribute most to obesity, especially in children. At the same time, there is no study, incl. made by institutions and organizations demanding to introduce the tax, which shows a direct relation between the consumption of soft drinks and obesity in children. In contrast, the results show that the BMI of children consuming more sweetened beverages does not differ from that of children consuming less such beverages.
- There is no evidence that the introduction of a tax on sweetened soft drinks will lead to the required results. There is no one study to show differences in the average BMI of the children or adults in regions without such a tax. For example, the tax on unhealthy foods introduced already in 1991 in Maine failed to break the upward trend towards higher percentage of obese population and it increased by 7.3% in the following years, and the tax was repealed. A

[26]See: http://www.oneillinstituteblog.org/snacks-city-local-innovation-obesity-prevention-policies/; https://www.ted.com/talks/mick_cornett_how_an_obese_town_lost_a_million_pounds?language=en; thiscityisgoingonadiet.com .

[27] See review: California Implements Nations First 'Fat Tax', at: http://nationalreport.net/california-implements-nations-first-fat-tax/

study on the eating habits of Americans, made by a team led by prof. Sturm ("Determining the Impact of Food Price and Income Changes on Body Weight." *Journal of Health Economics*) shows that the quantities of consumed sweetened drinks are affected more by the time spent in front of TV than the fact whether or not there was a tax levied on drinks in the region. In other words, "fat taxes" have not reduced the percentage of obese people in the regions where they are introduced and there is no evidence that they will be effective at a federal level.

- The introduction of a tax on 'unhealthy' foods and drinks has unexpected and undesirable consequences. Studies in the USA show that poorer consumers react to higher prices not by changing their eating habits, but by consuming even more unhealthy foods.[28]
- Such a tax is economically unjust. In the tax on sweetened soft drinks, for example, this injustice can be seen in two aspects. First, it affects more severely those with lower incomes. A family with an income of 20,000 dollars a year loses a little more than 47 dollars due to that tax, while one with an income of 100,000 dollars loses 24 dollars. Second, the tax is unfair because it affects obese and weak people, living actively and healthy and those who live unhealthy. As stated by Richard Epstein of the University of Chicago 'one who counts calories and plays sports is punished when eats a cake even as part of his diet'.[29]
- The introduction of such a tax is a threat to the autonomy of the individual. A democratic government respecting individual freedoms cannot afford to establish eating habits in people by punitive taxes.

Mexico[30]

On 1 January 2014 Mexico introduced two new taxes affecting sweetened soft drinks with added sugar and foods with high content of salt, sugar and fat. The tax on sweetened soft drinks is 1 peso per liter, or about 9-10% of the price. It excluded sweetened milk drinks.

The tax on foods with high content of salt, sugar and fat is 8% on the price and affects chips, sweets, chocolate and cocoa products, puddings, peanut butter, ice cream, popcorn and other products that have an energy content of more than 275 calories per 100 g.

A year later, the preliminary data showed that consumption of soft drinks decreased compared to the previous 2013 by about 7%. The data of the largest bottling company Coca-Cola Femsa for the last year showed a decline of 6.4% in sales.

According to different analyses, however, this is due to complex factors, not just to the new tax. The reports of another company for bottling of sweetened soft drinks, Arca-Continental, show a decrease in sales in 2014 by a little under 5%.

For 2014 the revenue from the new taxes are about 1.3 billion dollars, which the government says are aimed at programs for reduction of obesity and its associated diseases. Meanwhile, the business reported that only in the first year of operation of the new taxes 1,700 jobs were lost. According to some studies taxes on beverages and foods with high content of sugar, salt and fats have led to

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[28] See: JenKalaidis,Should the U.S. adopt a fat tax?, The Week, February 25, 2013, at: http://theweek.com/articles/467316/should-adopt-fat-tax, and alsothe recenteconometricanalysesproving thenegative effects of the'fat tax' on the poor: Adam Hoffer, Rejeana Gvillo, William F. Shughart II, and Michael D. Thomas, Regressive Effects: Causes and Consequences of Selective Consumption Taxation, Mercatus Center, George Mason University, March 2015, p. 4.

[29] Richard A. Epstein, The Classical Liberal Constitution: The Uncertain Quest for Limited Government, Harvard, Cambridge, 2014.

[30] See: Refresqueras eliminan 1,700 empleos por impuestos**,** Por: Ilse Santa Rita, 07 de julio de 2015 CNNExpansión; Mexico: Another fat tax fail, Patrick Lukiani, National Post, February 3, 2015 .

completely negligible reduction of calories taken by one person per day - 6.2 calories, which is equivalent to 1.6 g of sugar.

According to the latest data about Mexico[31] the consumption of taxed foods is increasing and the tax brings a significant contribution to the government budget.

THE SITUATION IN BULGARIA

HEALTH ARGUMENTS AND REASONS

The purpose of this part of the analysis is to seek health grounds for the introduction of the new tax[32]. The facts and conclusions essential and important for the discussion of the need for a new tax are indicated in the very text of the presentation below.

Facts about Obesity

It is assumed that obesity (BMI ≥ 30) is a global challenge, which leads to multiple health and social problems. The Ministry of Health justified the idea of imposing a tax on foods and beverages with added sugar and non-caloric sweeteners by the struggle against obesity.

- According to Eurostat, **Bulgaria is among the countries with the lowest average levels of obesity (11-12%) in EU[33]** and much below the average for the EU.
- According to the WHO, the level of obesity in our country is about 20%, which is again far below the average in the developed countries[34].
- According to the global health database of the Institute for Health Metrics and Evaluation (IHME)[35], the level of obesity in our country decreased from 25.3% to 20.1% in the period 1980 to 2013, i.e. **there is a clear downward trend in obesity**.
- There is a high growth in obesity with age - the percentage of obese among people of retirement age (55-75 years) is over 2 times higher than average level. This means that **the age structure of the population in Bulgaria is one of the reasons for "the visible growth" of obesityError! Bookmark not defined.**.
- There is a large concentration of obese women over 45 (about 30% of the population in the group).
- **There is evidence of growth of obesity registered in Bulgaria among people with the lowest incomes in large cities[36]**, where a major problem until recently was malnutrition and underweight

The data about obesity among children in our country are diverse and even the highest values are lower than those in the developed countries.

- According to IHME the level of obesity among children (2-19 years) in the country decreased by 8.9% to 6.8% in the period 1980-2013, i.e. there is a clear downward trend.

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[31] See: Alza de impuestos no frena el consumo de chatarra y refrescos, Nacion, 10-8-2015, at: http://www.eluniversal.com.mx/articulo/nacion/sociedad/2015/08/10/alza-de-impuestos-no-frena-el-consumo-de-chatarra-y-refrescos

[32] Stefka Petrova, op.cit.

[33] EUROSTAT, Overweight and obesity - BMI statistics, at: http://ec.europa.eu/eurostat/statistics-explained/index.php/Overweight_and_obesity_-_BMI_statistics. These data are for 2008. In 2011, another study (see: http://vizhub.healthdata.org/obesity/) confirms the same findings. It is not clear on whatobservationsare based statements thatinBulgariaobesityis an exclusiveproblemofhealth-care, as theadvocates of the new tax say.

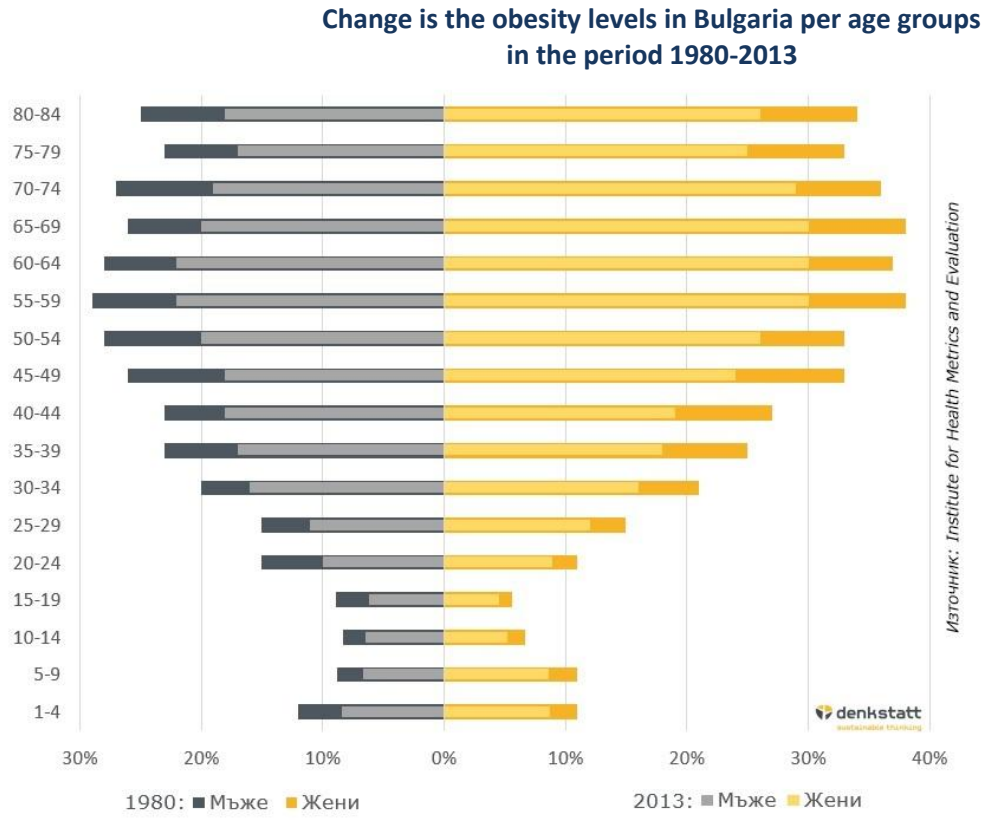
[34] WHO, Bulgaria WHO Prifile, at: http://www.euro.who.int/__data/assets/pdf_file/0020/243290/Bulgaria-WHO-Country-Profile.pdf

[35] See: IHME, : http://vizhub.healthdata.org/obesity/

[36] NCBI: Prevalence of obesity and overweight among urban adults in Bulgaria: http://www.ncbi.nlm.nih.gov/pubmed/18410706

- According to the latest Annual Report on the Health Status of Citizens and implementation of the National Health Strategy for 2013[37], the number of students (7-18 years) with obesity in 2013 was 11,183 (1.95%), observing a trend of decline (2011 - 2.22%; 2012 - 2.17%). These are the official and authoritative data from the preventive examinations of 86.6% of all students.
- **The above findings are much lower than those cited by NCPHA studies, but they do not show a clear trend for an increase in obesity among schoolchildren either.**

Figure 1: Age Structure of Obesity in Bulgaria



Grey: man
Yellow: women

Relation between Taking Added Sugar and Obesity

The Ministry of Health justified introduction of a tax on foods and beverages with added sugar by linking consumption and obesity.

- WHO associates obesity with total caloric intake, lack of physical activity and sedentary lifestyle, not with the consumption of added sugar.[38]
- The main vehicle of the large growth in caloric intake in the developed countries in the late 20th century was the agricultural policy that subsidized the production of corn, soybeans, wheat and rice, which made the main sources of meal, bread, meat and dairy products

[37]See: Annual Reporton the state ofhealth andthe implementation of theNational Health Strategy, 2013, Sofia, NCPHA, 2014, at: http://ncphp.government.bg/files/doklad_2013%281%29.pdf
[38] WHO, Obesity and overweight, Fact sheet No 311 (Updated January 2015, at: : http://www.who.int/mediacentre/factsheets/fs311/en/

cheaper compared to fruit and vegetables[39]. This policy still continues today in the USA, EU, including Bulgaria. Added sugar provides an average of no more than 5% of the caloric intake per person.

- The European Authority for Food Safety in its scientific opinion of 2010 regarding the referential values for the intake of carbohydrates reported that the evidence on the relationship between high intake of sugars (mainly added sugars) and obesity was controversial. EFSA has not set an upper limit of intake of total and added sugars.
- Bulgaria is the second country with the lowest calorie intake per capita in Europe – 2,760 to 2,900 kcal. This is around the global average, 10% less than the levels in 1990 and about 20-25% less than the average in Europe[40].
- Consumption of sugar and other sweeteners per capita in Bulgaria reached (as indeed is the case with the salt) its peak values in the 80s (1986 - 109 g / person / day) and steadily decreasing since then (2011 - 78 g/ person / day). This decline is most visible in the strong reduction of the direct consumption of sugar (from 8.7 to 7.5 kg / person / year), stewed fruits (from 19.5 to 10.1 kg / person / year) and bread and pasta (140.6 to 93.2 kg / person / year) in the period 1999-2014.[41]
- In comparison with the above figures, the growth in the consumption of sugar and chocolate products in Bulgaria over the past years is negligible. Moreover, people in the country consumed much less such products than in other countries in Europe. For example, in 2014 in Bulgaria we have chocolate consumption of 1.5 kg / person**Error! Bookmark not defined.**, while in many European countries - Slovakia, Estonia, France, Austria, and Belgium – they consumed chocolate more than 4 kg /person[42]).
- A similar trend of decrease in sugar consumption is observed in all developed countries. For example, in the UK it reached its peak a few decades ago (about 50 kg / person / year) and since then it steadily declined (less than 40 kg today).[43]
- In parallel, there it was observed a strong growth of obesity (from 15.5% to 25.8% in the period 1980-2013), which in no way could be due to the consumption of added sugar. A similar reverse correlation between the intake of added sugar and obesity levels was observed in other developed countries (USA, Canada, and Australia)[44].
- The contribution of sugar added to the daily calorie intake of students in Bulgaria is 6-7%**Error! Bookmark not defined.**. This value does not differ significantly from other countries and apparently cannot be the main driver of obesity in this age group, as far as any.
- The relative amount of added sugar in targeted foods and drinks targeted steadily decreased over time due to changes in the market demand. This is a global process that happens including in Bulgaria, too. Consumers buy more bottled water, juices without added sugar, ice tea and diet products (with non-caloric sweeteners).
- There is no statistically a significant correlation between calorie intake and obesity levels in the developed countries. In most developed countries caloric intake has not grown since

[39]NCBI: The Fat of the Land: Do Agricultural Subsidies Foster Poor Health?: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1247588/

[40]http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&plugin=1&language=en&pcode=t2020_rk100

[41]NSI: http://www.nsi.bg/bg/content/3255/%D0%B3%D0%BE%D0%B4%D0%B8%D1%88%D0%BD%D0%B8-%D0%B4%D0%B0%D0%BD%D0%BD%D0%B8

[42] EUROSTAT, Daily calorie supply per capita by source, at http://www.targetmap.com/viewer.aspx?reportId=38038

[43] Rob Lyons and Christopher Snowden, Sweet Truth: Is there a market failure in sugar? IEA DiscussionPaper No 62, London, July 2015, at: http://www.iea.org.uk/sites/default/files/publications/files/DP_Sweet%20Truth_62_web%20edited.pdf

[44] Ian W. Barclay 1 and Jennie Brand-Miller, The Australian Paradox: A Substantial Decline in Sugars Intake over the Same Timeframe that Overweight and Obesity Have Increased, *Nutrients* **2011**, *3*, pp. 491-504, at: http://www.mdpi.com/2072-6643/3/4/491

2000, but the level of obesity continues to rise, i.e. the latter is much more dependent on other factors[45].

Further data on soft drinks at European level[46]

• Since 2000-2013 calorific value of 100 ml of soft drinks has decreased by an average of 11.5%. European nonalcoholic industry continues to rely on innovations to develop new formulas in order to offer the consumers products with reduced calorific value;

• Industry offers a wide range of drinks, including drinks with and without reduced sugar content. Drinks that contain no calories reach 30% share of sales in many European countries;

• Industry is also working towards offering drinks in smaller packages - over 30 different types of packaging with capacity, including 150ml, 200ml and 250ml are used by industry;

• Even before the introduction of compulsory nutrition labeling, the soft drinks industry in Europe and the country is among the pioneers of voluntary submission of data on the amount of energy both per 100 ml, but also per specific consumer packaging using GDA labeling system for many years on a voluntary basis. Since December 2014, by virtue of the EU law, not only those using voluntary the scheme to provide additional information to the consumer on the calorific value of the drinks, but all manufacturers have been required to indicate on the labels of soft drinks energy value (calories) enabling people to make an informed choice about the products they choose for themselves and their families.

• Soft drinks contribute only 3% of caloric intake in the nutrition of the average European.

Effects from taxation of added sugar in foods and drinks on obesity

The Ministry of Health assumes that charging for the added sugar in certain foods and drinks will lead to limitation of their use, and therefore, reduction of obesity.

- There are many studies that clearly show that **taxation of added sugar leads to a change in the consumption of certain products in different directions, but ultimately, no measurable health benefits for the population can be observed.**
- No mechanism can be established to cover the measure - a tax on all sources of intake of sugars, and therefore, the measure has a limited and highly discriminatory effect, affecting certain product groups, mainly in industrial production. The decline in their consumption due to many factors, including the increased cost due to the introduction of an additional tax does not reduce caloric intake, change in eating habits, but to consumption of substitutes;
- As mentioned above, in Finland and Denmark there has been a tax on added sugar in foods and soft drinks since the early 20th century, which **in no way has limited the growth of obesity**, and therefore has been canceled in both countries[47].

[45]Eurostat, at: http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&plugin=1&language=en&pcode=t2020_rk100 и http://vizhub.healthdata.org/obesity/

[46] The sourse of the information in this paragraph is: UNESDA. See more: The British Medical Journal, Head to Head Debate on Sugar Taxes under the title Could a sugar tax help combat obesity?, at: http://www.bmj.com/content/351/bmj.h4047

[47] See: Ecorys, Op. cit.; in Finland,in spite of thetax,BMI has increased from 15to 23%for the periodfrom 1980 to2013 http://ec.europa.eu/DocsRoom/documents/5827/attachments/1/translations/en/renditions/pdf

- A tax in Mexico of 2013 led to initial fall in sales of soft drinks, but data from 2015 already showed a complete recovery of consumption.
- People with the lower incomes do not have the opportunity to use in big quantities the foods and drinks intended to be taxed - they are luxury goods for them and their consumption is very limited among that group of users. This means that **obesity in low-income groups cannot be associated with an excessive use of targeted food, including beverages, but it also means that they cannot afford the consumption of more expensive foods than are considered healthier.** The restrictions due to the low purchasing ability would only get higher, and the impetus towards cheaper substitutes and even to the consumption of food of unknown origin (products of the grey economy or speculative transactions) will increase;
- Taxation on foods with added sugar forces low-income people to migrate to cheaper, and therefore, bad quality substitutes.[48] It is likely these to be foods with higher content of cheaper fat so as to set off the caloric deficit, i.e. **the final result can be even unhealthier consumption.**
- **People at retirement age, most affected by obesity, also consume minimal amounts of potentially taxable food and beverages.**
- Consumption of alcoholic beverages per person in Bulgaria has increased by about 50% for the period 1999 to 2014[49] despite the excise duty on them, or in other words, **taxation in this case does not affect consumption**. It is not clear why it is assumed that a similar situation with the recognition of the substitutes, food tax would have another effect.
- On the other hand, **the voluntary initiatives of food industry to reduce added sugar, and thus, the caloric content in products lead to proven better results.** For example, an independent study on the fulfillment of the public duties of the Healthy Weight Commitment Foundation[50] (a coalition of 16 of the largest companies in the sector in the USA) shows that in 2012 they sold 78 kcal / person / day less than in 2007 (with absolute sales growth of products) thanks to the measures for reduction of the calorie content of products (less added sugar and saturated fat). Real results in this aspect are also reported in the EU (see previous paragraph) data. This trend still continues today, too.

Taxation on Drinks with Non-caloric Sweeteners

The Ministry of Health suggests that the tax should also cover beverages with non-caloric sweeteners (saccharin, aspartame, cyclamate, stevia, etc.).

- **Most of the consumption of soft drinks in Bulgaria is formed by beverages with non-caloric sweeteners.** In fact, all low-cost and affordable for the majority of the poor population in Europe drinks - those in the Bulgarian market are manufactured exactly with the use of non-caloric sweeteners.

- As clearly stated in the opinion of NCPHA all non-caloric sweeteners are subject to numerous safety studies and official scientific opinions about them are absolutely unambiguous - they do not have proven negative effects on health. **Therefore, imposing a tax on beverages with non-caloric sweeteners may not be justified on the grounds of medical health concerns.**

Relation between Physical Activity, Sedentary Lifestyle and Obesity

The Ministry of Health ignores the relationship between physical activity (time of physical exercises), sedentary lifestyle (time spent in a sitting position) and obesity.

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[48] EC: http://ec.europa.eu/growth/tools-databases/newsroom/cf/itemdetail.cfm?item_id=7668
[49] NSI, Income, Costs and Consumption of Households.
[50] Shu Wen Ng, Megan M. Shlining, Barry M. PopkinThe Healthy Weight Commitment Foundation Pledge, Calories Sold from U.S. Consumer Packaged Goods, 2007–2012, American Journal of Preventive Medicine, October 2014, Volume 47, Issue 4, Pages 508–519, at: http://www.ajpmonline.org/article/S0749-3797(14)00248-7/abstract

- **There is a direct correlation between lack of physical activity, sedentary lifestyle and obesity - a conclusion confirmed by all health professionals engaged in the research on the reasons for obesity.** This correlation is **most strongly expressed among old people** (especially women), children, adolescents and workers in certain economic sectors.
- **Bulgaria is a country that has the lowest level of physical activity in Europe - 78% of the population never plays sports (40% on the average in Europe).** Bulgaria is among the countries where **there is a trend towards reduction of the average level of physical activity**, which can be partly explained with aging of the population, too.[51]
- **Bulgaria is among the countries with the highest level of sedentary lifestyle.** For example, Bulgarians spend the most time watching TV in Europe - an average of 4:08 hours per day[52].
- As in the world and in Bulgaria, there is a high trend towards increase in sedentary lifestyles, which explains well the growth of certain diseases. A survey among OECD countries (the richest countries, where there are no significant differences in the caloric intake) showed a strong correlation - 10% increase in investments in information technology leads to 1.4% growth in obesity.[53]

On the other hand, there are two clear positive trends seen over the last few years:

- Strong growth in the number and participants in mass sporting events in Bulgaria - running, cycling, swimming, football, basketball, etc. Participants are mainly middle-aged people (25-45 years) whose work does not involve a high level of physical activity (office) in the large cities. Among the leading donors and sponsors of events for mass sport and active lifestyle in Bulgaria are the companies whose products are planned to be levied with the new tax. They are also leaders in conducting systematically information campaigns to promote physical activity among the population, setting forth messages in this regard in a predominant part of the advertising campaigns of the manufactured products.
- Strong growth of internal corporate policies and initiatives to promote active and healthy lifestyle actually in all economic sectors. This applies especially to the food industry, where health care and satisfaction of the modern consumer attitudes are leading.

Some Conclusions

- It cannot be argued that Bulgaria is among the countries where obesity is a leading health problem or that there is a strong trend towards growth of obesity among Bulgarians.
- Targeted foods and drinks do not significantly contribute to obesity. These products do not constitute major food sources of the diet and thus significant weight loss from their reduction cannot be expected.
- In Bulgaria there is a combination of relatively:

  a. low consumption of food (measured in calories)
  b. a low level of consumption of the targeted products,
  c. a low level of physical activity,
  d. a high level of sedentary lifestyle, and
  e. a large group of people with low income

- Among the leading reasons for obesity in Bulgaria are:

  a. lack of physical activity,

[51] EUROBAROMETER: http://ec.europa.eu/public_opinion/archives/ebs/ebs_412_en.pdf
[52] Bulgarians watch most TV in Europe, Dnevnik, p 2-7-2015, at http://www.dnevnik.bg/tehnologii/2015/07/02/2564973_bulgarite_gledat_nai-mnogo_televiziia_v_evropa/
Anusuya Chatterjee and Ross C. DeVol, Waistlines of the World: The Effect of Information and Communications Technology on Obesity, Milken Institute, August 2012, at : http://www.milkeninstitute.org/publications/view/531

b. sedentary lifestyle, and
c. lack of knowledge and the inability of people with the lowest incomes to eat properly

The proposed taxes are not interested in poor people at all, they even create incentives for more unhealthy nutrition, diseases and new problems with job finding

Facts about Salt and Health

The Ministry of Health accepts that excessive use of salt, the main source of sodium in nutrition, have adverse health effects - increased blood pressure, raises the risk of stomach cancer, disorders in kidney functions, complications in kidney diseases, osteoporosis. The idea of imposing a tax on foods with high content of salt (snacks, pretzels, chips, soups) is justified with the fight against excessive consumption of sodium.

- According to the WHO, the intake of sodium for adults should not exceed 5 g / day.[54]
- This figure is disputed in a number of new studies that suggest that the optimal intake of salt is between 5 and 10 g / day of salt, as intake below the lower limit is as harmful as excessive use.[55]
- When doing a strenuous physical activity and sweat (work, sports, game, hot day) the need for sodium for the body is steadily increasing. It is assumed that the body needs 1-2 g salt / hour of physical activity to recover the salt balance, i.e. physically active people need a higher intake of salt than the one recommended by the WHO.
- The official positions of the WHO and the national health authorities accept the existence of a positive correlation between salt intake, on the one hand, and high blood pressure, and hence, cardiovascular diseases, on the other. A lot of new studies, however, reject this relation (up to 12 g / day) and put in question the need for the "war against salt".**Error! Bookmark not defined.**

Actual Salt Consumption

The Ministry of Health says that the intake of salt in Bulgaria is extremely high.

- Eastern Europe is among the world's regions with the highest salt consumption per capita - around and above 10 g / day[56].
- **However, Bulgaria is among the countries with the lowest level of salt consumption in Europe** - 6-8 g / day - which is **below the average in the world**.[57]
- NCPHA cites data from a survey conducted in 2000 among the population in the district of Varna on excreted salt by individuals, indicating higher levels - the average salt consumption is estimated to 12.8-14.7 g / day. There are also clear trends, as more salt is consumed in winter by men among people with lower education and income, individuals with overweight and obesity[58].
- Intake of salt is determined primarily by the consumption of bread, meat (sausages) and dairy (cheese) and canned products. The contribution of targeted foods to the average daily salt intake does not exceed 1%.
- Considering the above, we can reasonably assume that **in the period 1999-2014, there is a significant decrease in salt intake in Bulgaria in parallel with the big drop in the direct consumption of salt, as well as bread and pasta, canned food and pickles**[59].

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[54] WHO: http://www.who.int/mediacentre/factsheets/fs393/en/
[55] Scientific American: http://www.scientificamerican.com/article/its-time-to-end-the-war-on-salt/
[56] NFS Journal: http://www.sciencedirect.com/science/article/pii/S2352364615000024
[57] EC: http://ec.europa.eu/health/nutrition_physical_activity/docs/salt_report1_en.pdf
[58] http://ncphp.government.bg/files/MZ_SALT_Press_24_Trud_254x190_PP_AM_2012_03_09_PRESS_2.pdf
[59] NSI: http://www.nsi.bg/bg/content/3255/%D0%B3%D0%BE%D0%B4%D0%B8%D1%88%D0%BD%D0%B8-%D0%B4%D0%B0%D0%BD%D0%BD%D0%B8

- According to the Ministry of Health, the most vulnerable to excessive use of salt are consumers who have already established diseases (patients suffering from hypertension, diabetes) and older people. These are not the consumers of the potentially taxed foods.
- According to the Ministry of Health, children and students are another risk group of consumers of salty products. By changes in the product range at schools there is a decline in the supply of chips and salty snacks from 73.7% in 2008 to 19% in 2013 and increased supply of fresh fruits and vegetables, yogurt and milk**Error! Bookmark not defined.**. These data show that young people eat more healthily without tax, too.
- The amount of added salt in targeted products has steadily decreased over time due to the market requirements and the efforts of the companies to comply with the requirements of the WHO. In fact, all global companies (Nestle, Mondelez, Unilever, Intersnack, etc.) have reduced the relative salt content in their products by 25-30% since 2000 and are committed to achieve even greater reductions in the future. This also happens in Bulgaria.

Some conclusions

- **There are no data confirming that today people in Bulgaria are consuming excessive amount of salt on a massive scale. If there is a problem like this, it has existed in the past or is restricted to some areas,** where yet large quantities of canned food, bread, meat and dairy products with high salt content are consumed.
- The targeted foods do not have a significant contribution to salt consumption in Bulgaria, and even less to salt consumption by the most endangered groups.

Energy drinks and health risks

MH is aware that the excessive use of energy drinks has got adverse effects on human health related to the high content of stimulants therein (caffeine, taurine, etc.).

- According to NCOZA, high and regular consumption of energy drinks containing high quantities of stimulants, such as caffeine and taurine, create health risks, especially for people with high blood pressure and cardio-vascular diseases. Regular consumption of energy drinks by children and teenagers can cause sleep disturbances, replacement of taking healthy food and drinks and can contribute to the insufficient consumption of unreplaceable nutritious substances, required for their growth and development. Another aspect of this problem is consumption of energy drinks in a combination with alcohol by young people and associated mental and behavioral disorders and health risks.
- Nevertheless, the research studies completed in Europe have not come to the conclusive statements about damages caused by the consumption of energy drinks. In 2009 the Scientific Panel on Food Additives and Nutrient Sources Added to Food has shown that the exposure to taurine and glucoronolacton at levels usually used in energy drinks, and even at higher levels, are not dangerous for consumers **Error! Bookmark not defined.**. With a similar conclusion comes Health Canada (Federal Health Care Department) when assessing the relation between the intake of caffeine, taurine and glucoronolacton **Error! Bookmark not defined.**.

- In their recent Academic opinion on caffeine safety, the European Food Safety Agency (EFSA) has reconfirmed their multi-year studies according to which the moderate intake of caffeine, from all sources – up to 400 mg a day, does not give rise to concerns regarding safety for adults in a standard health condition, except for pregnant and breastfeeding women (for whom the recommended level would be up to 200 mg/day). 400 mg of caffeine is equal to 5 cans (of 250 ml) of energy drinks per day or approximately 5 cups of filtered coffee prepared at home. For children (of age between 3 and 10) and youngsters (between 10 and 18) caffeine safety does not depend on the age, but rather on the body weight, and therefore EFSA are considering that a daily intake of 3 mg per kilogram of body weight is harmless. [60]

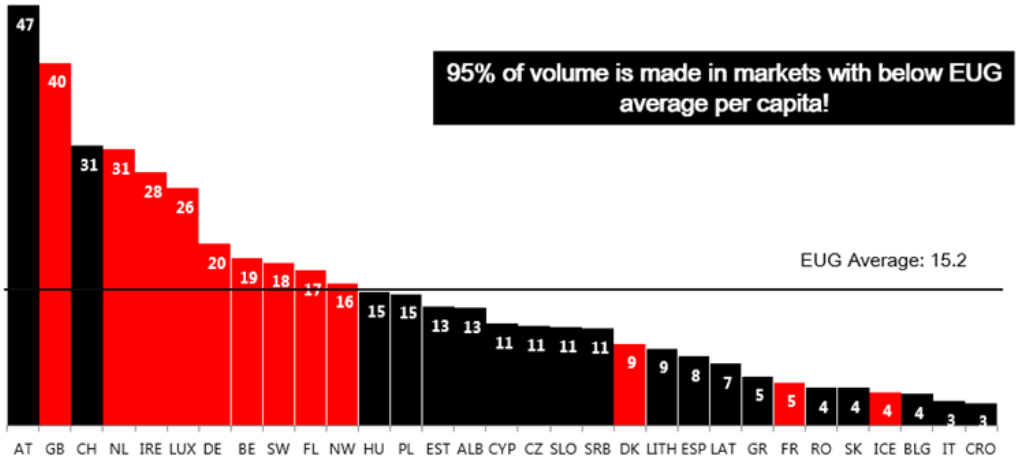
[60] EFSA: http://www.efsa.europa.eu/en/efsajournal/pub/4102.htm

- EFSA has also confirmed the safety of energy drinks and their ingredients, and has issued an opinion that it is hardly possible that caffeine can interact unfavorably with other typical ingredients of energy drinks. In addition, in their research opinion regarding caffeine safety. EFSA has ruled that the contribution of energy drinks in the total intake of caffeine is negligible for children and low for youngsters. The entire conclusion of EFSA demonstrates that there is no scientific justification why energy drinks should be treated differently from the major factors in the daily intake of caffeine for all age groups, i.e. coffee, tea, chocolate, etc.

Consumption of energy drinks and caffeine: Bulgaria in international comparison.

- Consumption of energy drinks on international scale shows an increase recently. On a global level, in the period 2005 – 2010 a 10% per year in average increase of consumption of energy drinks is observed.
- Regardless the above consideration, more than 99% of the intake of caffeine is due to the consumption of coffee, tea, chocolate, etc. The consumption of energy drinks plays relatively minor role [26].
- Energy drinks are functional non-alcoholic drinks, offered and consumed safely for more than 20 years all over the world – in more the 165 countries. A can of 250 ml, which is typically offered energy drink contains the same quantity of caffeine like a cup of filtered coffee (80 mg). For comparison reasons: coffee and coffee specialties (like cappuccino, late machito) which are widely offered and consumed in cafes – even a medium ones – contain twice as much caffeine;
- Information about the tendency in consumption of energy drinks and energy shots (extremely weakly presented on the market) in Bulgaria show gradual increase, however the quantities are pretty far from the European average. Moreover, Bulgaria is the country where the consumption in total for both categories – sport and energy drinks is equal to a little more than 1% of the total consumption of soft drinks, whereby this statistics do not cover the consumption of milk-based drinks and boza. The average annual consumption of energy and sport drinks in the country per capita is less than 2 liters.

Graph 1: Consumption of energy drinks in Europe



Source: Global Industry Estimates Database

- According to data for 2013, the average annual consumption of coffee in Bulgaria is 2.3 kg/person, which rates us fair below the average for Europe (4 kg/person) and around the average in the world. Thus, Bulgaria takes 34th place out of 50 countries subject to the survey in terms of coffee drinking[3].
- According to data provided by the industry, around 50% of sales of energy drinks take place in catering facilities[2]. If we assume that the consumption of energy drinks amongst young

people in Bulgaria follows a similar pattern, it is important to mention that alcohol cocktails are rather a luxury good with very low demand elasticity: at parties, in disco and bars, in a combination with hard and relatively expensive alcohol (Whiskey), where the price of the energy drink makes as low as 10-20 % of the total price of the consumed drink, notwithstanding the high surplus in this type of facilities. The total price of consumed drinks will not change dramatically with a tax on energy drinks between 3 and 10%, i.e. no change in consumption could be expected.

- Limited purchasing power of young people is a natural barrier before energy drinks consumption. Young people, who can afford to maintain a permanent high level of consumption, are an extremely small group.
- There is no information about significant and regular consumption of energy drinks by people with high blood pressure and cardio-vascular diseases in Bulgaria. The latter are concentrated amongst elderly people where the consumption of such drinks is rather an exception.

Since there are no comprehensive studies, international comparisons allow coming to conclusions by analogy. The reviewed Hungarian experience with introducing health tax on energy drinks has shown the following results:

- No correlation between the price of energy drinks and tax changes has been observed; moreover, a slight decrease of prices from 2011 to 2013 has been reported, which is rather connected with other market factors.
- Bypassing of the tax and replacement with ingredients which are not subject to taxation, leading to continuous growth of the list and to additional expenses, both for the administration and for inspecting authorities, and of the private sector to “catch up” with the updating.
- Changes in consumption and sales of energy and sport drinks follow market trends and is not greatly affected by the introduced fee.
- The idea of the new tax does not take into consideration that a significant contribution to the change of the diet have got the manufacturers as such. Labeling also for voluntary self-regulations of the industry, focused exactly on protection from consumption of energy drinks by children, category-sensitive groups and their non-mixing with alcohol and a marketing and ethics rule of practically all well-respected manufacturers. This fact has been underlined also in the referred opinion of Prof. Stefka Petrova.

Regarding the study of NCOZA about consumption of energy drinks by school students, the following notes and comments should be made.

- The reported data from the carried out in 2010 National study by the Public Health Protection Center amongst 5.000 school students from grades 1 to 12 in the country has also been analyzed by us. Without underestimating the importance of this topic and the efforts made by the Center, the reported results have given rise to a number of questions in terms of actual reliability of the data about consumption of energy drinks by school students. The comparison with the data about the market sales of energy drinks shows that if the generated through interviewing data comply with the reality, then energy drinks in the country are consumed solely by school students.

- According to statistical data (NSI) 6% of the school students from grades 1 to 4 are 15.200; 18% of the students from grades 5 to 8 are 38.790, or altogether these are nearly 54 thousand children. If we assume that just one drink is consumed by this particular group, 300 days a year (averaged and considerably lowered in comparison with the reported in the study assumptions about consumption), then in fact consumption of energy drinks by school students would be equal to 16.200.000 cans/bottles. With an average volume of 250 ml, the annual consumption would exceed 4 million liters. The total quantity of the sold in the

country energy drinks in 2011 has been equal to a little more than 5 million liters, and application of calculations using the reported in the study data from the interviews would classify school students as the only group of consumers of energy drinks in the country, something we could not agree with. Consumption of energy drinks in the country in the period after 2011 is showing a drop (in 2012 and 2013), and after keeping the levels in 2014, we can notice a minor growth within up to 2.5%.

Some conclusions

- Targeted drinks do not contribute significantly to the intake of caffeine in Bulgaria, because main sources of caffeine are coffee, tea, coke and chocolate.
- Targeted drinks most probably have got considerable contribution to the intake of caffeine amongst young people (13 – 29 year-old). This could be the case only for a highly limited group of young people with high purchase power, where a tax of 3 to 10% would not affect the demand thereof.
- Mixing of alcohol and energy drinks can cause negative consequences for human health for a certain group of young people, however this is rather behavioral issue, related to a specific culture, social status, and fashion.

Trans-fats and their effect on human health

MH accepts as existing that consumption of foods containing trans-fat acids considerably increases the cardio-vascular diseases risk.

- Trans-fats exist in a natural form in the composition of animal fats and their moderate intake does not involve considerable health risk[2].
- Partially hydrogenated (industrial) fats have been created in order to try to find a non-expensive replacement to saturated fats of animal origin.
- Promotion of trans-fats on markets in developed countries in 70-ies and 80-ies is a direct result of campaigns and recommendations of researchers, governmental agencies and health care volunteers against saturated fats of animal origin. Then they see trans-fats as "a healthier alternative" and to a large extend focus public opinion and the companies to switch to their extensive application (margarine instead of butter!). Nowadays, it has been realized to be a mistake[4].

Consumption

- According to WHO, the consumption of trans-fats must be under 1% of the daily calories intake.[4]
- Consumption of trans-fats since 2000 until now has decreased by more than 85% in the USA and Western Europe following voluntary actions of the companies, imposition of obligatory labeling and/or prohibitions for their use more than specified quantities. Margarines on developed markets do not contain anymore trans-fats. It is a different issue that their artificial replacements through interesterification of vegetable oils could also prove to be unhealthy[4].
- There are indications that reduction of consumption of trans-fats results in healthy benefits. For instance, it is believed that the prohibition to sale foods with trans-fats content exceeding 2% of the total content of fats in products in Denmark since 2003 has contributed to reduction of cardio-vascular diseases in the country[4].
- In Eastern Europe, trans-fats are still being widely used. In Bulgaria they are used for the production of margarine, as a replacement of cocoa butter in chocolate products, butter from cow's milk in mille-feuille bakery products, ice-cream production, wafers, crisps and any confectionary products, even in yoggurt[31].
- Consumption of foods with high trans-fats content is most widely popular amongst two major groups: a) consumers with the lowest income and the lowest health care culture; b) children as major consumers of the said products.

- The largest food manufacturers in the world are following policies for strong restriction and/or complete removal of partially hydrogenated trans-fats from their products: Unilever have removed them from all their products in 2012; Nestleare planning to remove them completely by the end of 2016; Mondelez are also planning their full removal.

NHIF budget and opportunities for contribution from the new tax into general health care funding

Notwithstanding whether the new tax on "unhealthy" foods would affect the diet and health status, it is focused on fiscal objectives.

A precedent with a similar objective in Bulgarian legislation are the charges for prophylaxis and prevention of diseases from excise duties on wine, alcoholic drinks and tobacco products. There are no public reports on how these funds are being spent and how this would affect the quality of prevention and therapy of respective diseases neither by the MH, not by any of its units. As we have mentioned above, consumption by both groups in our country is growing, perhaps due to the growth of real household income. Positive changes (i.e. reduction of tobacco and alcoholic beverages consumption) are rather a result of change in the mode of life and life styles, fashion and increase of income, and not due to taxes.

Whether they would be feasible or not does not depend on the general system of funding of health care, at the first place NHIF, distribution of newly allocated income to the respective items for affecting diseases, causing certain concern. In this part of our analysis we are trying to assess these opportunities.

For now, the idea has been spoken by the Minister of Health as follows: "The issue is about foods with proven harmful matters, such as salt, sugar, caffeine. These foods, according to the draft act, should be taxed with an additional excise tax. The forecasts say that this would bring an income from 150 and 200 mln. BGNs, which would be used for prophylaxis, for prevention. The basic is really these products widely consumed by our children, to be specially marked and to be publicly clear that they are harmful. Where there is a clear sign that this is harmful, we somehow get the behavioral idea not to buy it, because it is so written".[4]

Structure and mode of financing

Generally speaking, the paths are not items of NHIF budget or not exactly, the items are in fact sections (health insurance payments for primary out-of-hospital health care, health insurance payments for medical diagnostic activity, health insurance payments for clinical health care, health insurance payments for medicinal products, medical devices and diet food for specific medical purposes, etc.). Health care establishments apply for "x" budget, and then through clinical paths they absorb these funds and respectively, they must comply with it, i.e. to try to fit into it.

Clinical paths are not presented in the "balance" of accounts at the level of NHIF budget in the way it is adopted by the law-making assembly. However, they are in the balance sheets of health care establishments. If they are not compliant and are in deficit (which is the more often case), other channels for additional funding are being searched for (municipal and national budget), where the NHIF deficits are not included therein. The cost of every path is determined on an annual and centralized basis. MH does not pay for the activity of the health care establishment under clinical paths funded by NHIF or by the voluntary health insurance companies or by the patient. Patients treated under clinical paths for which the health care establishment does not have a concluded agreement with the NHIF, are referred to other health care establishments which do have a concluded agreement under the respective clinical path.

Ordinance No. 40 of MH determining illnesses clinical paths since its adoption in 2004 has been amended two-three times a yes, and the budgets of NHIF have been updated after 2011 minimum once in order to cover deficits. In general access no distribution of finances by NHIF under clinical paths can be found. This Ordinance is of more than 350 pages of content, but the orientation therein does not help to follow the expensed by clinical paths general for the country or by health care establishments. The other basic budgeting document - the annual National Frame Agreement (NFA) for health care activities is of 60- 70 pages average with more than 20 attachments. Certain orientation in health care establishments budgeting is provided by another document – "List of the lowest quoted price by groups of medical devices paid in the conditions of health care".

Binding objectives to budget allocations

Practically it is impossible to reveal on a national level what are the expenses for prevention which should be financed with the new tax (which is the Minister's idea):

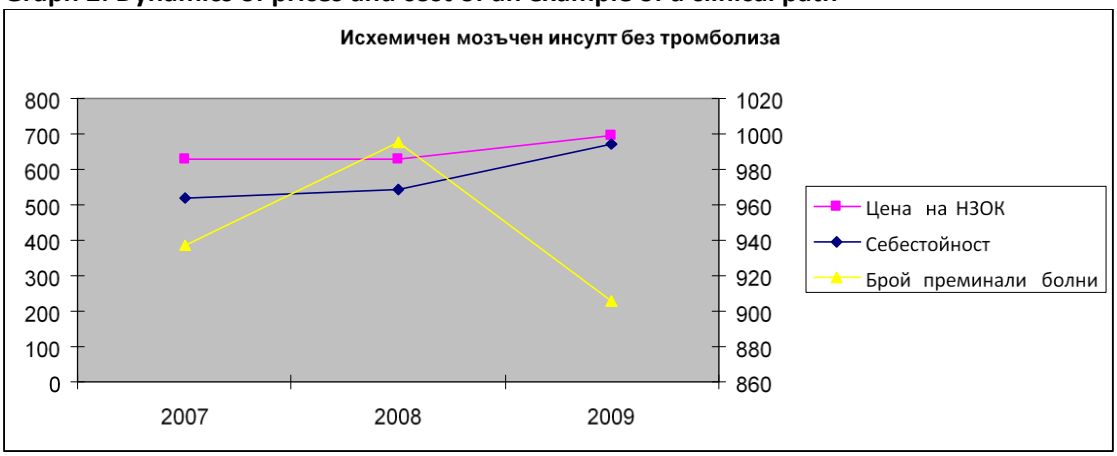
- There are single tracings at a health care establishment level by types of diseases (in view of finding out of the link – clinical path/diseases – financial result), however there are not statistics of which items/clinical paths/diseases generate deficits within the system as a whole. It can be easily explained exactly because the missing link between them lays in the method and philosophy of system financing and functioning, which has got its accountancy reflect in the annual budgeting itself. This can be seen also in the conclusions made by Dr. Hristo Hinkov and co-authors, who analyze financial management of an individual hospital, but register accurately some defects, typical for the entire system. Here the following is meant:

- „Costing of clinical paths is not well balances, around two third of clinical paths generate deficits, part of them are considerable deficits, and the remaining one third generates excess, part of which not too little, either. Within the frame of a large hospital with various activities, deficits and excesses are being partly set off, because the funds saved under certain clinical paths may be used for additional financing of other clinical paths;
- Clinical paths have got fixed prices and do not account expenses which can be incurred in the course of disease management and are not described in the clinical path;
- The impossibility to account expenses under two or more co-existing diseases or possible complications makes hospitals cover these expenses from their own budget."[4]

- The same analysis follows up several diseases out of which, in consideration of all assumptions and conditions regarding the causes and co-existing factors, the clinical path of "Ischemic brain attach without thrombolysis" could have been the closest applicant-consumer of proceeds from the tax:

- „The price paid by the NHIF under this clinical path in 2009 has been BGN693, which is by BGN63 more than the one paid in the previous year. The cost of the clinical path in this particular hospital has been BGN673.70, i.e. the clinical path is "profitable" for the hospital. The analysis of this clinical path has shown that for a three-year period only from a slight increase of the price of the clinical path in 2009 at the end of the year and slight reduction of the number of serviced patients (which in general varies within small limits from 995 in 2007 to 906 in 2009) the hospital has reported a profit of BGN17.513.

Graph 2: Dynamics of prices and cost of an example of a clinical path

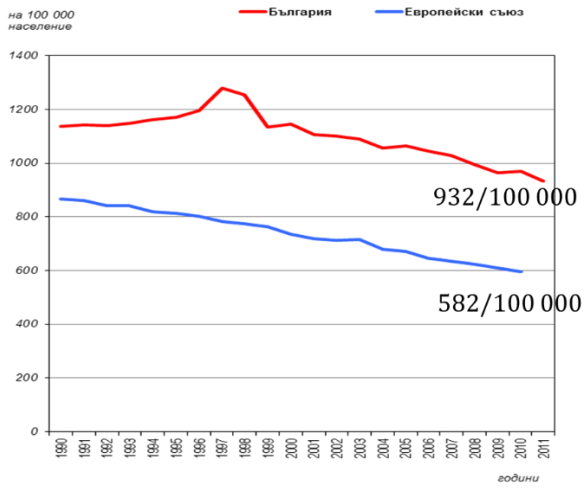


Source: Hr. Hristov and co-authors

- The above example shows also the following:

- The price of clinical path as per the NHIF exceeds the cost for the health care establishment which inevitably results in an increase of the cost until it "catches up" with the centrally determined price of the clinical path.
- Clinical paths as financing means and method are not sensitive to the number of patients, which makes hospital budgets balancing extremely volatile and exposed to all planning-related risks (small fluctuations result in large distortions) and such which could not be foreseen but affect greatly the number of patients suffering from this disease;
- Clinical paths as a financing means are extremely rigid also in terms of specifics and deviations of each individual case and patient, where its centralized unification/standardization does not help health care establishments analyze their (own) expenses and budgets forecasting.
    - In the health care reform concept "A reform through objectives" of Minister Moskov of December 2014[4] demographic data and kind of segmentation of mortality in Bulgaria in comparison to the EU are presented:
- On one of the Graphs Dr. Moskov is comparing the dynamics of mortality (standard mortality rates for all reasons) in the EU and in Bulgaria. The title indicates that mortality amongst Bulgarian citizens is higher (932 in Bulgaria against 582 per 100 thousand in the EU in 2011). It is seen from the same Graph that mortality peak of Bulgarian nationals is at the end of 1996 (around 1300 per 100.000, which is 1.3%), but thereafter there is a constant downtrend of general mortality, which is mostly expressed by the mid-1999 (a drop to a little more than 1100 per 100.000) and is stable with general improvement by the end of the period of 29%.

Graph 3: Standard mortality rates: Bulgaria and EU (1990-2011)



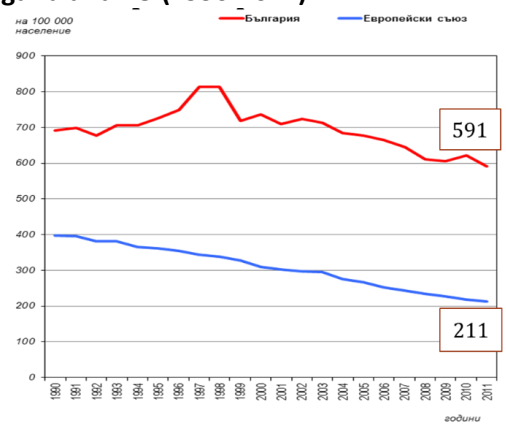
- The same applies also to individual diseases/causes, whereby their distribution is as follows:

Graph 4: Mortality factors

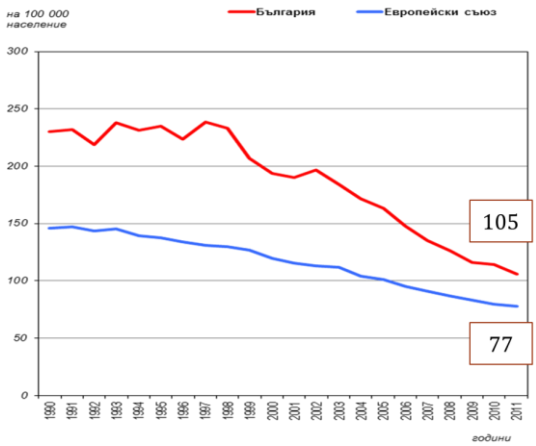
"

- As a general share, the largest share belongs to “Diseases of blood circulation organs” – 65.1%. For children’s mortality this share is 8.5%. No data about all age groups are presented and regardless the fact that the general tendency is higher than the one in the EU, it is constantly descending. The following data are presented for diseases belonging to this group/mortality causes.

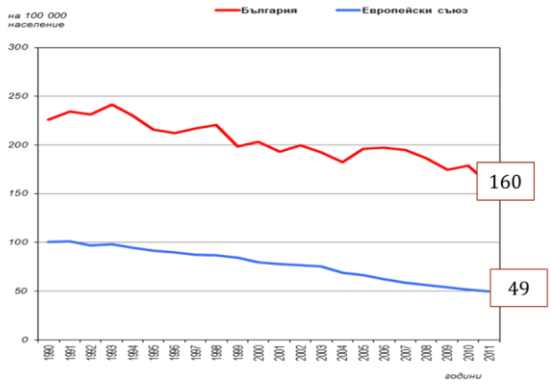
Graph 5: Comparative dynamics of mortality caused by diseases of blood circulation organs: Bulgaria and EU (1990-2011)



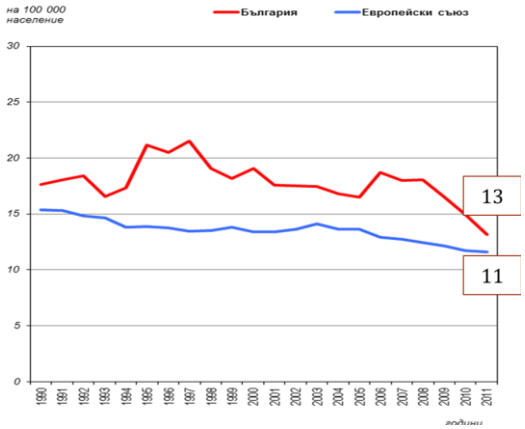
Graph 6: Comparative dynamics of mortality caused by ischemic heart disease: Bulgaria and EU (1990-2011)



Graph7: Comparative dynamics of mortality caused by cerebro- vascular disease: Bulgaria and EU (1990-2011)

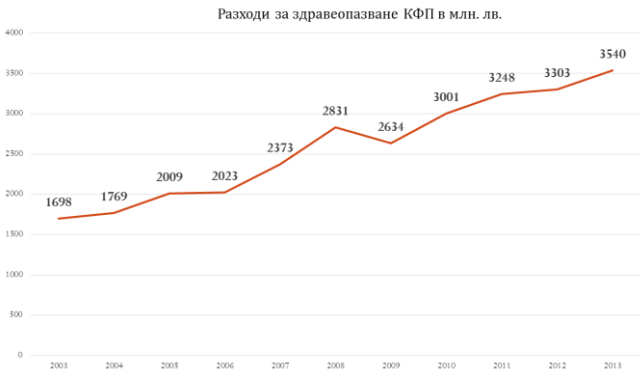


Graph8: Comparative dynamics of mortality caused by diabetes: Bulgaria and EU (1990-2011)



- Currently, the connection between diseases – clinical paths/items/deficits/NHIF budget/ health care establishments budget is not clear; … it is not clear how the reasons presented as justification ideas of the draft-tax "unhealthy foods" would support /"fund" fighting some (not certain, but just some) diseases, having got certain connection (medically speaking definitiveness and/or direct link of clinical picture for a certain disease is hardly identifiable and is rather not being studies but is treated as co-existing factors) and in other words how and what the unhealthy food tax would "feed" – how through clinical paths and if yes, which ones, these proceeds would be used and spent, if there is no mechanism of target re-distribution by geographic and/or demographic criteria or specialization of health care establishments for therapy through clinical paths, or probably it is a matter of another methodology, which is still unknown in practice of/and budgets of NHIF and hospitals it is yet not clear.
- The expenses of the NHIF do not represent all public expenses in the system at all. Public expenses include also deficits – both the one of the NHIF (2012 until now) and of the health care establishments which at the end of the day are being covered again by the tax payers, because they are covered by the national and/or local budgets and other items. In addition to public expenses for health care however every one of us pays additionally for medical services in one form or another. Assessments for the additional and/or private expenses vary depending on whether they cover only the regulated additional payments for health care services and products or they consider also other unofficial payments of a considerable amount. According to the information presented by Minister Moskov on 23 June 2015 [4] the private expenses for health care have increased from 26% in 1995 to 48.6% in 2012, which is nearly doubling the real (actually incurred) public expense, thus the general expenses amount to 6.3 billion BGNs. Provided that this rate does not increase additionally, in 2015 it can be expected that the total expenses will reach 8 billion BGN.

GraphGraph 9: Expenses for health care in mln. BGN 2003-2013



- Public expenses for health care in 10 years have increased significantly both as a share of the gross national product and as a total amount. As it is seen on the Graph below total public expenses for health care in 2012 are either exceeding 3.3 billion, which is equal to 4.2% of GNP, in 2013 – BGN3.5 billion, or 4.5% of GNP, and in 2014 they have reached BGN4 billion, which is 4.8% of GNP.[61]This means that during the last few years continuous linear increase of 0.3% a year has been registered in comparison with the previous year of the share of public expenses for health care in comparison with the GNP, the real rate of increase of which has decreased from 0.9% between 2013 and 2012 to 0.4% between 2014 and 2012[62].

- Notwithstanding the continuous increase of public expenses for health care, NHIF has been accounting deficits every year in this period (excesses 2007 – 2010, balanced thereafter, deficit – 2012 and after, in 2015- by the end of April [63]the estimated deficit is BGN200 mln. (after utilization of the reserve), and according to information from 28 July 2015 the estimated deficit in NHIF budget in this year will be BGN98[64]
- One of the reasons for accruing of deficits, if we follow just one budget item is hospital medical care, which has increased 4 times within 7 years, with total negative growth of the population of – 5,01%. This is illustrated in the following table. The share of this item – hospital care, is increasing continuously in the years so far, where in 2014 it reaches 55% of the total NHIF budget [65].

Table 2: Demographic profile of population and dynamics of hospitalized people.[66]

	2005	2012	Change
Population	**7 718 750**	**7 282 041**	**-5,66%**

[61]Kiril Ananiev (Deputy Minister of Finance and Chairman of the Supervisory Board of the National Health Insurance Fund (NHIF)
http://www.minfin.bg/bg/pubs/1/9009

[62]StanimirHasardzhiev (patients' representativeinSupervisoryBoardoftheNationalHealthInsuranceFund) – the estimated deficit in NHIF budget in this year is 98 mln. Health Care Mail, 28/07/2015), on:
(http://www.zdravnaposhta.net/post/index.php/novini/posledni-novini/11874-ochakva-se-defitzit-ot-98-mln-lv-v-byudzheta-na-nzok)

[63]Vladislav Goranov. The estimated deficit in the Fund budget by the end of the year is BGN200 mln. Инвестор.bg – at:
http://www.investor.bg/ikonomika-i-politika/332/a/moskov-mojem-da-vliiaem-administrativno-na-deficita-v-nzok-197234/; See also: Glinka Komitov (Manager of NHIF) - The deficit in the National Health Insurance Fund by the end of April is BGN200 mln.), at:
(ttp://econ.bg/%D0%9D%D0%BE%D0%B2%D0%B8%D0%BD%D0%B8/%D0%94%D0%B5%D1%84%D0%B8%D1%86%D0%B8%D1%82%D1%8A%D1%82-%D0%B2-%D0%9D%D0%97%D0%9E%D0%9A-%D0%B5-200-%D0%BC%D0%BB%D0%BD-%D0%BB%D0%B2-%D0%BA%D1%8A%D0%BC-%D0%BA%D1%80%D0%B0%D1%8F-%D0%BD%D0%B0-%D0%B0%D0%BF%D1%80%D0%B8%D0%BB_l.a_i.675539_at.1.html; http://www.mediapool.bg/ochertava-se-defitsit-ot-200-mln-leva-v-byudzheta-na-nzok-news234574.html .

[64]StanimirHasardzhiev, referred document. For us it is unexplainable where this amount comes from.

[65]Petar Moscov, referred document.

[66]The table is taken from the report of IPI Alternative Budget with low taxes – 2014.

0 – 14	**1 047 051**	**989 786**	**-5,47%**
15 – 64	**5 343 220**	**4 897 177**	**-8,35%**
65+	**1 328 479**	**1 395 078**	**5,01%**
Hospitalized			
Total	**1 614 313**	**1 961 177**	**21,49%**
0 – 17	**308 107**	**297 170**	**-3,55%**
18 – 64	**880 895**	**1 043 329**	**18,44%**
65+	**425 311**	**620 678**	**45,94%**
Hospital care	**295,1 mln.**	**1,19 mln.**	**4 times!**

Source NCPHA and NSII

- The following data and considerations are provided for the labor pool:

„In 2013 mortality cases of persons in active work age (20 – 65 year-old) of the 4 classes of diseases, the most often cause to death are 18 828, including:

- 9 952 from diseases of blood circulation organs;
- 6 482 from oncological diseases;
- 941 from respiratory system diseases;
- 1 453 diseasesofdigestivesystem.

In 2013, BGN5 199 are allocated to every working person from the current volume of GNP of the country.

Non-realized benefits for the GNP in 2013 because of the death of these persons can be calculated to be equal to BGN 97,886,772.“[67] This consideration of “cost” and “benefit” from GNP point of view would make certain sense (however, quite doubtful) if the death cases of people in work age are a consequence of an eventuality, and not a result of a diseases with a lethal outcome. In general, the process of suffering of a disease and therapy is also part of the NGP. We could add thereto that from fiscal point of view the shorter the period of the disease is (i.e. the sooner a person of a work age having paid social insurance contributions in the NHIF dies) the more at ease the fund budget would be.

- The five national health care objectives are, as follows:

„Integrated prevention, early diagnostic and effective therapy of diseases and injuries amongst:

1. Infants from 0 to 1 year of age in order to reduce the mortality rate by 20% within a 10-year period (up to 6.8 per 1000 life-birth infants in 2020);
2. Children from 1 to 9 in order to reduce the mortality rate by 20% within a 10-year period (up to 0.24 per 1000 in 2020);
3. Youngsters and teenagers from 10 to 19 in order to reduce the mortality rate by 20% within a 10-year period (up to 0.32 per 1000 in 2020);
4. Persons in economically active groups from 20 to 65 year of age in order to increase their ability to work and to reduce the mortality rate by 20% within a 10-year period (up to 4.19 per 1000 life-birth infants in 2020);
5. Elderly people above 65 in order to increase the average length of the forthcoming years of life of people after the age of 65 (up to 15.6 years in 2020).”

- The actual discussion taking place currently about the division of health paths into a major and additional package, considering socially-important diseases means available calculations and analysis to this respect by the MH. However, what is the criteria of social importance we could only guess – demographically or statistically – whether data about the dynamics and deficits by items/paths are being monitored at health insurance system level and it would provide synergy when re-allocating funds or demographic and social profiles of consumption of health care services have been taken into consideration/identified, which have nothing to

[67]The same document.

do with funding as a primary reason to the reform, this is of minor importance, because clinical paths are not sensitive thereto.

- In other words, neither adding of new taxes which we cannot manage for purposefulness or successfulness by the existing means, nor mechanical separation of these funds/paths are actually a reform in fact, because the problem is hidden exactly there – in the system mechanisms.

FISCAL AND SOCIAL EFFECTS

In this part of the analysis we are going to try to follow up fiscal and social effects of the alleged tax on "unhealthy foods".

We are ignoring the specific character of the tax as we have no information thereof. Several options are theoretically possible: a) excise tax; b) product fee for the subject foods; c) refunding of the turnover tax thereof and/or d) corporate income tax in a certain form. For these types of taxation, the administrative expenses (for their application) shall be different.

We assume that the tax will be within the scope indicated by the Minister – between 3 and 10 per cent is the closest to the excise taxation. Respectively, three scenarios have been elaborated, as described here below. In order to avoid unnecessary complication, we assume that the cost of application is the same regardless the type of the applicable tax.

Assumptions and basic considerations

Itisunavoidablethatunderthecircumstances of missing information about the type of tax and its rate, the calculations would be to some extend schematic. They are based on the following:

- Basic parameters and ratios (share of the gross added value and the profit in the turnover) are kept like these in 2014;
- The achiever income from excise tax (fees) is a sign of reduction of consumption by the respective value, where the total consumption is changed depending on the elasticity of demand in relation to the price and change of price of the taxed goods. As a result of the introduction of the new tax/fee, the turnover of the companies is getting lower, as well as the added value thereof, the gross profit and the cost of labor (salaries and wages fund), the number of employed persons and respectively employees consumption therein;
- Income from excise tax (fees) is used to cover budget deficits;
- Reduction of budget deficit means a lower additional government debt, which saves expenses for interest for the state budget;
- Theinterestrateonnewlyemittedgovernmentdebt (withamaturitytimeof 5 years) is 1% per year;
- Elasticityofdemandofsubjecttotaxgoodsinrelationtothepriceis -1 (i.e. for every 1% of increase of the price the demanded quantity is decreasing by 1%);
- With a tax rate of 3% it is assumed that collectability of income from taxes will be 100% (optimistic assumption). For higher tax rates (for example 9%) the incentives for avoiding of taxation lead to a decrease of collectability up to 90% [68]; this assumption does not include the loss of competitiveness, looking for replacements and replacing import – they are addressed separately;
- Tax rate under the proposed excise tax is between 3% and 10%. In the third considered scenario a 9% rate is applied, since it is sufficient to make a gross income of BGN150 mln. which is the amount discussed in the public environment by the supported of this idea;
- The entire tax/fee is undertaken by the consumers, i.e. the prices are being increased with the amount of the tax;
- The assessments are made on basic prices in 2015.

Scenarios of social and economic effect of the new tax: results

Scenario One (according to the justifications of the supporters of new excise duties)

- For the achievement of BGN150 mln. of income from excise tax (fees), a turnover of BGN5 billions of taxable goods is required; (this turnover is conditional: the actual turnover in 201 is about 2.5 times lower);
- The saved expenses for interest in case of reduced budget deficit are approximately BGN 1.3 mln.;

[68] In a publication of the European Commission of 2014it is mentioned that the share of the non-reported business in Bulgaria is 13.4%. For more information, please see European Commission, Tax Reforms in EU Member States: 2014 Report, European Commission Taxation Papers, Working Paper N. 48 – 2014.

- In this scenario, a loss of approximately 2,864 jobs is expected;
- With a tax of 3% the price increase in comparison with the basis scenario is also by 3%, which leads to consumption reduction by 3%;
- The reduced turnover by BGN 145.5 mln. in the economy results in a lower gross added value (BGN 58.9), lower profit, smaller total salaries and wages fund, lower income from social insurance contributions and tax on personal income and lower consumption, as a result of which expenses for the budget occur (non-collected income from the indicated taxes) of BGN 15 mln.;
- Expenses for the administration of the new tax/fee are estimated to be approximately BGN 1,5 mln.;
- The net benefit for the budget with this scenario is BGN130.3 mln.;
- The business expenses for consideration are estimated to be minimum BGN4.4 mln. – these are net expenses for consideration, i.e. these are money which would go for investments or any other production use.

Scenario Two (according to the actual data)

- Theturnoverofgoodstobesubjecttotaxationwiththenewexcisetaxes (accordingtodataprovidedbytheNSIabouttheconsumptionoffoodstuffsandbeverages) is approximately BGN 2 billion.
- With a tax rate of 3% and full collectability, the income from the new excise taxes will be BGN 58.2 mln.
- The saved expenses for interest with a reduced budget deficit is approximately BGN 0.5 mln.;
- With this scenario a loss of some 1,145 jobs is expected;
- The reduced turnover in the economy (of BGN 58.2 mln.) results in a lower gross added value (BGN23.6), lower profit, smaller total salaries and wages fund, lower income from social insurance contributions and tax on personal income and lower consumption, as a result of which expenses for the budget occur (non-collected income from the indicated taxes) of BGN6.01 mln.;
- Expenses for the administration of the new tax/fee are estimated to be approximately BGN0,6 mln.;
- The net benefit for the budget with this scenario is BGN52.12 mln.;
- The business expenses for consideration are estimated to be minimum BGN1.75 mln.

Scenario Three (tax rate of 9% for achieving the set fiscal objective for income of BGN150 mln.)

- The turnover of goods tobesubjecttotaxationwiththenewexcisetaxes(accordingtodataprovidedbytheNSIabouttheconsumptionoffoodstuffsandbeverages) is approximately BGN 2 billions;
- With a tax rate of 9% and collectability of 90%, the income from the new tax /fee will be BGN 156.3 mln.;
- The saved expenses for interest with a reduced budget deficit is approximately BGN 1.2 mln.;
- With this scenario a loss of some 3,076 jobs is expected;
- The reduced turnover in the economy (of BGN 156.3 mln.) and avoiding of taxation result in a lower gross added value (BGN 63.3), lower profit, smaller total salaries and wages fund, lower income from social insurance contributions and tax on personal income and lower consumption, as a result of which expenses for the budget occur (non-collected income from the indicated taxes) of mln. BGN;
- Expenses for the administration of the new tax/fee are estimated to be approximately BGN 1,6 mln.;
- The net benefit for the budget with this scenario is BGN 119.2 mln.;
- The business expenses for consideration are estimated to be minimum BGN 4.7 mln.

Competition, replacingimportand "canningeconomy" (supplementationtoscenarios)

In July 2014 the already reviewed special report assigned by the Enterprises and Industry GD has found out that the countries having applied such tax have reported loss of competitiveness, investments and jobs. This is best seen from the review of the failed attempts in Denmark, Hungary, Finland and France described in the first and second chapter of this report. [69]

International market conjecture and loss of VAT revenues

Bulgaria is in a more specific situation: Recently Romania (applicable since April this year) has reduced the taxation of foods up to 9% VAT. Bulgarian consumers have started buying things from there. The effect of this replacing import cannot be calculated exactly yet, because they are not reported in the statistics.

Depending on what the tax on the so called unhealthy foods would be in Bulgaria, the trans-border arbitration (price difference) would be between 18 and 25%. This is a sufficient incentive for a replacing import and individual purchasing from across the Danube. In other words, this measure would support the production and payment of taxes in Romania.

Assuming that the turnover of the foods supposedly subject to taxation in 2015 is maintained at the level of BGN2 billions and the substitution import would be 15%, we will get a total loss of turnover of BGN 300 mln. This means 60 mln. of loss of income from VAT.

Jar economy

Both in the referred study of ECORYS for the EC, and in the review of the experience of individual countries, one of explicitly mentioned effects is that relatively lower-income consumers emigrate to replacements of a lower quality.

With relatively low income and for lower-income households the new tax will promote also returning to the so called "canning economy" which is very typical for Bulgaria anyway. Canning of food for the winter – mainly pickled vegetables, fruit in sugar syrup and jams, means large use of sugar and salt, which cannot be affected by the "diet obligatory re-formulation" policies and taxation of the added sugar and salt.

Explanation of some concepts

The following are criteria of excise tax effective use:

- Low demand elasticity in relation to the price;
- Large production by a small number of companies;
- Missing non-taxable alternative products;
- Law administrative expenses and consideration expenses.[13]

The above criteria as a whole are not complied with in the made proposal for introduction of a new tax/fee.

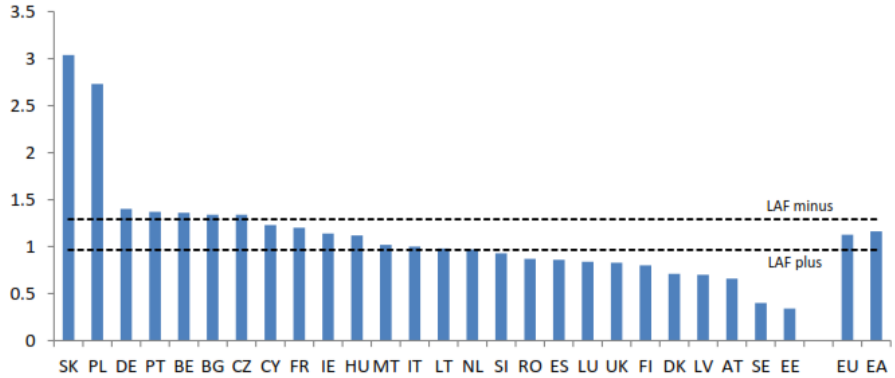
Taxes give rise to three types of expenses for the public:

- Decrease of efficiency – manufacturers and consumers adjust their behavior in order to reduce the amount of taxes payable thereby;
- Administrative expenses are covered by the state for the building, application, assessment, collection and auditing of taxes;
- The consideration expenses are covered by the tax payers when paying taxes – getting to know tax laws and regulations, filling in and filing of annual returns and tax declarations. Usually these expenses are allocated unequally to tax payers and represent a higher burden for small companies.

[69]See: Food taxes and their impact on competitiveness in the agri-food sector(EU Ref. Ares(2014)2365745 - 16/07/2014). ECORYS, Rotterdam, 2014, p. 24-34.

In Bulgaria in 2014, according to the data of the Ministry of Finance, administrative expenses amount to approximately 1% of the collected tax income. (Administrative expenses are BGN227 mln., whereas tax income is BGN23.028 mln.). Hence, in order to collect additionally some BGN150 mln., the administrative expenses would be about BGN1.5 mln., if we assume that the new tax is applicable with 100% reserved administration efficiency.

Graph 9: Expenses incurred for collection of taxes, 2011 (per 100 collected units of net income)



Source: European Commission, Tax Reforms in EU Member States: 2014 Report, European Commission Taxation Papers, Working Paper N. 48 – 2014

Consideration expenses are these, incurred by the tax payers or by third parties meeting the requirements for consideration with a certain tax system. They include the cost of book keeping, declaring, payment of taxes for their products, income and employees, together with the expenses for acquisition of knowledge about the legal obligations and punishments.

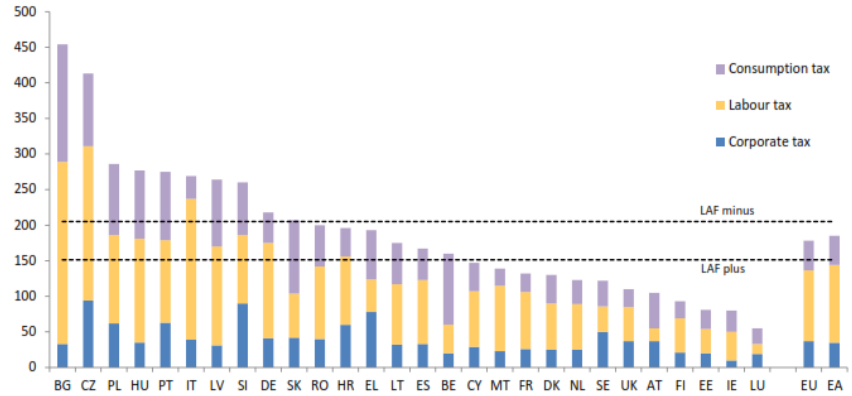
Here is a more detailed structure of the expenses for consideration, as follows:

- Cash expenses for personnel
  - ✓ Expenses for their own personnel at expert and managerial positions, involved in determination of tax liabilities, filing of tax declarations and annual returns and payments thereunder;
  - ✓ Exterior expenses – payment to outsourced accountants and tax advisors.
- Tome-related cash expenses – if it is necessary to pay a tax liability before getting a cash flow from sales, and also the expenses for insurance and safety of taxable goods;
- Time expense – this is the time expense spent for consideration of tax laws by a small business owner. It is also evaluated in money;
- Psychological expenses – these are the negative feelings caused by communication with tax officers. They are difficult to be measured in a cash form.

According to the indexPWC Paying Taxes 2015 the expenses for consideration of the laws on consumption taxes are 165 hours, while the average for the European Union and the European Economic Area these expenses are 55 hours. Hence, in Bulgaria the consideration time is average three times more than in the EU. The situation is similar regarding taxation in general – the consideration time in Bulgaria is 454 hours, while in the EU it is 176 hours[13]. All other conditions being equal, this would mean that the negative effects of the new taxes in terms of consideration expenses would be three times heavier than the average for the EU.

When calculating the ratio between the consideration expenses and the collected tax income, the result would be around 0.03. This assessment is based on already mentioned data, on information about the price of 1 hour of labor and the number of affected enterprises, as well as actual income from taxes on consumption in 2014. Thus, it appears that the consideration expenses would be approximately BGN4,8 mln.

Graph 10: Consideration expenses in hours for a medium enterprise as a result of different tax systems, 2012



Source: European Commission, Tax Reforms in EU Member States: 2014 Report, European Commission Taxation Papers, Working Paper N. 48 – 2014

These calculations are also unavoidably schematic. Where there is a draft act on taxation of unhealthy foods, it would be possible to assess what the actual consideration expenses would be. Because of the fact that we are addressing a new tax, the consideration expenses would have to include additional labeling expenses (recurring expenses), instruction manuals and training of tax and customs officers (non-recurring expenses), higher reporting and control expenses (recurring expenses), manufacturers' expenses for replacements and adjustment of technologies, as well as expenses for cooperation with the public administration.

Demandelasticityeffect

Elasticity of the demanded quantity in comparison to the price is not subject to taxation with the new tax foods and soft drinks is a necessary parameter for the determination of the deviations in the consumption as a result of the new tax, which on the other hand affect the potential direct income in the budget from taxes – excise tax, VAT, and indirectly through the chain of supplies and induced effects through the reduction of the number of employees and achieved turnovers. The long-term elasticity of demand of "unhealthy" goods is determined to the value of -1 (based on data in the period 2005 – 2014 provided by NSI), similar values have been obtained from a detailed calculation of the parameter in other EU economies. [13]

Determination of elasticity is based on the average weighed by the share in the total quantity prices of major types of products and the total consumption of goods subject to taxation with the proposed tax/fee as a percentage of the total consumption by years according to the statistics of NSI (47%). The estimated consumption of goods subject to taxation is based on the forecast of estimated proceeds to the national budget of BGN150 mln. Based on the change of the average weighed prices over subsequent years, the changes in the consumed quantities of foods and soft drinks are followed, which is a result of the ratio between the cash value of the consumption and the average price. In addition, because of the significant effect of the increased consumption as a result of the average growth of salaries and wages within the reference period of about 11% on a yearly basis, this effect is eliminated and the increased consumption as a physical amount is eliminated because the changes of the demanded quantities within two subsequent years. With the dynamics of the economic growth, the household income, consumption structure and the share of taxable goods, the average value of the long-term elasticity is approximately -1. It is expressed in reduced consumption

upon introduction of the tax and is comparable with the scenario with lower consumption of "unhealthy" goods.

FINDINGS AND CONCLUSIONS

International experience

The experience has shown that in all countries having introduced taxes on foods exceptions are made for certain groups of foods for the account of others, which as a final result does not change nutrition behavior of people and they accept such policy as one more focused on the fiscal issued than on their health. No positive fiscal effects have been observed, either.

In terms of business perspective, negative consequences concern: competitiveness, employment, equal market conditions, prohibited by EU laws state aid to some manufacturers for the account of others, which have been findings of an analysis, assigned by the EC in 2014. The EU countries, where such taxation is being applied, face some problems, forcing them either to give up, or to amend their laws. Their experience is a reason why other countries (Belgium, United Kingdom, Germany and Estonia) have given up such reforms.

Health care objectives – unattainable

AstoBulgariaitisclear that the stated health care objectives will not be attained.

For the salt-containing foods, approximately 1% of the consumption will be taxed, and the remaining 99% are taken with the bread, cheese, sausages, manufactured and home-made canned food, however they are not covered by the tax – for it is not politically suitable.

Consumption of energy drinks is contributing around 1% of the average caffeine intake. If there is any risk for human health, it is connected with their consumption in a combination with alcohol, which has already been taxed with a high excise tax. The new tax would maximum encourage consumption of replacing products of lower quality.

Is there is any effect at all on dietary behavior and consumption regarding sugar-containing foods (soft drinks, fruit in sugar syrup, ice-cream, etc.), the stimulated refraining would affect maximum 6% of the total calories intake.

If there was any health care problem at all, it would have rather been in the respective 99 and 94 percent of sugar and salt consumption, and not in the foods intended to be taxed. Highly possibly, such cause-and-effect relationship does not exist at all. According to data provided by NSI about consumption of food, the consumption peak of foods, allegedly regarded as unhealthy, is in the middle of 1980-ies. Since then it has been shrinking by 20 – 25% (depending on what foods are being considered).

Bulgaria is amongst the countries with the lowest average obesity level (11-12%) in the EU. A strong growth of age-related obesity is observed – the percentage of obesity amongst people of retirement age (55 – 75 year old) is more than twice as big as the average. This means that the structure of Bulgarian population is one of the reasons for the "visible growth" of obesity. There are data of registered growth of obesity in Bulgaria amongst people with the lowest income in cities and large towns, for whom until recently the major problem has been malnutrition and under-weight.

In Bulgaria, a combination is observed of relatively: a) low level of consumption of foods (measured in calories intake), b) low level of consumption of the targeted products, c) low level of physical activity, d) high level of sedentary life style and e) a large group of people with low income.

The main reasons for the obesity in Bulgaria are: a) lack of physical activity; b) the sedentary life style and c) lack of awareness and impossibility for people with low income to afford healthy food.

The targeted drinks probably have got a considerable contribution to the caffeine intake amongst young people (13 – 29 year old) however it is far from the unhealthy levels. We can talk about such levels only amongst a highly limited group of young people with high purchase power, where a tax of 3 – 10% would not affect the demand.

Consumption of foods with high trans-fats content is mostly popular amongst two main groups: a) consumers with the lowest income and the poorest health care culture and b) children

being the major consumers of the said products. For those with low income the tax would impair their household budgets for food and will make them look for replacements.

Hardlymanageablefiscalinefficiency

Regardless the stated conceptual justification and reasoning for the introduction of a new tax – supporting/"subsidizing" combating some diseases:

- The relation between the diseases, mentioned in the justification to the introduction of the tax, and the desired corrective effect of its introduction through reduction of consumption of the allegedly unhealthy foods/beverages and/or through subsidizing the "prevention, early diagnostics and effective therapy" is not clarified yet;
- With the existing system functioning and financing, the second part is practically not-feasible, since currently there is no mechanism through which the proceeds and the results can be purposefully absorbed and/or followed up with such a large variety of cases, as a general share;
- One of the reasons for accrual of deficits, if we follow just one of the items, is inpatient care, which has increased 4 times within 7 years, with a total negative growth of the population of -5,01%. This is illustrated in the table below. The share of this item – inpatient care – is constantly increasing over the years until present, where in 2014 it has reached 55% of the total NHIF budget. The new tax would not be able to solve these problems.

Scenarios of fiscal and social and economic effects of the new tax

Different options of the implementation of these effects can be illustrated with the following table:

Table 3: Fiscal and social and economic effects

Scenario / Parameter	**3%/BGN145.5 mln. of income**	**3%/BGN58.2 mln. of income**	**9%/BGN156.6 mln. of income**
Loss of jobs	2 864	1 145	3 076
Price increase	3%	3%	9-10%
Non-collected taxes	-15.0 mln.	-6.0 mln.	-36.7 mln.
Non-collected VAT	-3.2 mln.	-1.3 mln.	-24.0 mln..
Business expenses	4.4 mln.	1.7 mln.	4.7 mln..

Replacing import and canning economy

Because of the opportunities of an import and trans-border arbitration (difference in prices), the margin would be between 18 and 25% of the retail price. This is a sufficient incentive for a replacing import and individual procurement from across the Danube. In other words, the measure would support the production and payment of taxes in Romania. This would also mean 60 million of lost income from VAT in case of a replacing import of 15%.

In consideration of relatively low income and for more indigent households the new tax would encourage also going back to the so called "canning economy" which is traditionally typical in Bulgaria anyway. Canning of food for the winter – mainly pickled vegetables, fruit in sugar syrup and jams, means large use of sugar and salt, which cannot be affected by the "diet obligatory re-formulation" policies and taxation of the added sugar and salt.