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Economic transformation, altered nutritional habits and health implications in Russia

The obesity crisis proclaimed by the World Health Organization, along with all its health consequences, started in the Russian Federation at the beginning of the millennium. This fact is gaining increasing significance against the background of the "tax on unhealthy foods" that is currently being discussed in Russia and is the result of changing lifestyle and nutritional habits. Rising economic growth and private incomes in Russia have brought about an increase in the consumption of high-fat animal products, and the health of many citizens is jeopardized by an increased risk of adiposity and diet-related chronic diseases. At the same time, health-related diets have improved in terms of vitamin and mineral intake. These two opposing developments are typically also found in other industrial and emerging economies, though in a more distinctive form in the Russian Federation. The underlying reasons appear to be traditionally rather high preferences for high-fat animal products in Russian society, but also, similar to many other countries, inadequate nutrition information. Hence, better-targeted information campaigns and clear product labelling could pave the way to healthier eating.

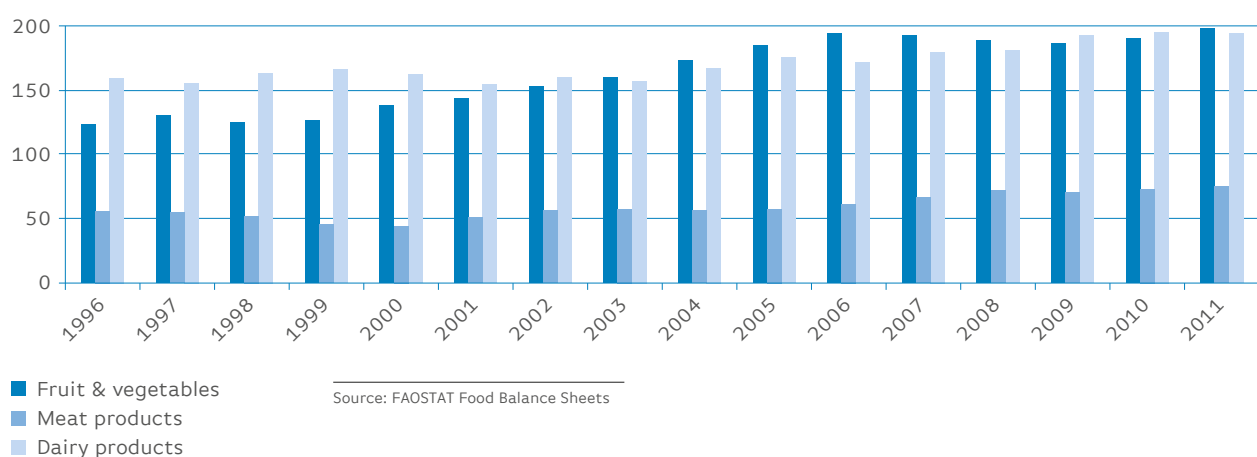
The alarming increase of chronic diseases on a global scale and the associated impacts on individual quality of life and life expectancy also entails enormous costs for private households, employers, as well as health and social-security systems. At the same time, chronic diseases impair the productive efficiency of economies and thus indirectly the welfare of their citizens. Preventing chronic diseases is thus one of the key societal challenges in the 21st century – and not only in Germany and other western industrialized nations. The prevalence of chronic diseases also increasingly constitutes a central problem in emerging or transition economies such as the Russian Federation, with considerable consequences for their public health systems (WHO 2016).

Health-related nutrition is deemed to have a significant influence on the emergence or conversely the prevention of chronic diseases. A healthy diet provides a balanced supply of important macro- and micronutrients in order to prevent deficiency diseases and simultaneously reduce the risk of diet-

related chronic diseases due to the oversupply of certain food ingredients. Excessive consumption of fats, notably saturated fatty acids, salt and refined carbohydrates increases the long-term risk of obesity and diet-related chronic diseases such as cardiovascular diseases, diabetes mellitus type 2, and certain tumor diseases (DGE 2016).

Almost 60 per cent of the adult population in the Russian Federation suffers from obesity and adiposity despite a generally high interest in healthy menus. Thus, the prevalence of obesity and adiposity in Russia is higher than in Germany, where some 55 per cent of adults are affected by obesity and adiposity (The World Bank 2016). Similar to Western industrialized countries, Russia shows typical patterns of a so-called "nutrition transition" in the course of, albeit not always stable, economic growth in Russia. This development may once more have prompted the Russian Parliament (Duma) to contemplate levying a "tax on unhealthy foods" from mid-2016.

Figure 1: Quantities per food group available per person in kg/year



This Policy Brief describes the development of Russian dietary patterns during the post-Socialist transition of the country, searches for reasons why different segments of the population choose a health-oriented diet, and provides various recommendations for measures to improve the quality of nutrition. This Policy Brief is based on a comprehensive empirical analysis, which used the dataset of the Russia Longitudinal Monitoring Survey (RLMS-HSE) of approximately 5,000 Russian households for the period from 1995 to 2008.

Transition of dietary patterns

Traditionally, the supply of fruits and vegetables in Russia was rather scarce due to its command economy. At the same time, the consumption of meat and dairy products was massively encouraged. Government institutions recommended and subsidized a diet containing a high share of animal proteins. Since its transition to a more market-oriented economy in the early 1990s, average Russian household incomes have risen and both the diversity and quality of food supplies have improved. This development was linked to a long-term change of dietary patterns (Burggraf et al. 2015a). For example, a slowly increasing level of fruit and vegetable consumption was accompanied by improved vitamin and mineral intake. For instance, the Russian population's previously inadequate supply of vitamins A and C, vitamin B complex and calcium improved during transition. At the same time, the health risks of diet-related chronic diseases increased due to the stepped-up consumption of animal fats in the form of meat and dairy products (Figure 1).

Since 2001/2 the average intake of fats and saturated fatty acids has been above their respective maximum Russian reference values for a nutritionally desirable intake. In addition, the consumption of high-fiber foods such as whole-grain products, which can reduce the risk of diabetes mellitus type 2, high blood pressure, and coronary artery diseases, declined. Long-term effects of those al-

tered dietary patterns are also an increase in average energy intake per day and thus, at a positive energy balance, the rising prevalence of obesity and adiposity (Burggraf et al. 2015b). Thus, the Russian Federation is facing the same obesity crisis as western industrialized nations, albeit in a more distinctive form.

Who is investing into a balanced diet?

The decisive factor will be if and to what extent the Russian population is willing and capable of making its own contribution to healthcare through balanced nutrition. In order to pursue this issue, model approaches were drawn up and empirical estimates made based on the above-mentioned data. The model approaches take account of individual consumer's cost-benefit considerations regarding healthy nutrition, such as the consideration between "today's taste" and "tomorrow's health", i.e. the trade-off between individual predilections for sweet, fatty, and salty dishes and the associated diet-related health risks (Burggraf et al. 2015b).

The analytical findings for Russia suggest that better-off citizens with higher educational qualifications tend to consume more healthy foods that are rich in vitamins and minerals, and are thus actively investing into their health. The results, however, also show that especially those strata of the population are inclined to consume too many (unsaturated) fats and thus counter their efforts towards a healthier diet. Poorer population strata, especially those far away from the metropolitan centers Moscow and St. Petersburg, are still struggling against considerable vitamin and mineral deficiencies. A positive effect in this regard is made by home-growing fruits and vegetables. This kind of fruit and vegetable cultivation is not only used by rural populations but is also relatively popular among city dwellers. In addition, findings suggest that increasing prices for higher-fat foods reduce the consumption of these products and at the same time benefit the consumption of foods rather rich

in vitamins and minerals though substitution effects. It goes without saying that this price effect plays a rather limited role among population strata with higher incomes because their food budget shares are generally lower.

Finally, the influence of a higher educational level or nutritional knowledge is of great interest. Specific findings suggest that, except for the consumption of high-fiber products, the health benefits of adequately consuming foods rich in vitamins and minerals are generally known. In this respect higher educational qualifications, similar to Germany, correlate with a more adequate intake of vitamins and minerals. The research findings for nutritional quality demand in Russia, however, also imply that a higher educational level does not necessarily lead to the lower consumption of rather unhealthy foods rich in fats and calories. This outcome differs from the usually verified positive interrelation between a higher educational level and the cultivation of healthier diets in western industrialized countries, and may be the result of the rather insufficient provision of information regarding the health risks of excessive fat, sugar and salt intakes.

Recommendations for action

Cultivating a healthy diet requires prevention, on the one hand, of the under-supply of essential vitamins and minerals and, on the other hand, the over-supply of fats, notably saturated fats, sugar and salt. Two trends can be diagnosed for the Russian Federation in this respect: poorer population strata, especially those located far away from metropolises, are still suffering from inadequate vitamin and mineral intake, while the well-off and educated classes in Russian metropolitan centers are well supplied with vitamins and minerals. The better-off population strata, however, often tends to consume products rich in fats and sugar in excessive quantities: obesity and even adiposity are potential consequences.

Consequently, effective measures to promote healthier diets are necessary. First, poorer population strata, whose sufficient vitamin and mineral intake is often hampered by lacking purchasing power and less available (or utilized) nutritional information, should be supported for a more varied vitamin and mineral intake. Other potential options besides increased fruit and vegetable consumption include nutrition programs, for example improving communal-feeding menu offers (e.g. high-quality school meals) and the targeted dissemination of sufficient nutritional knowledge.

Second, such information campaigns should also promote the more moderate consumption of fats, sugar and salt. Potential addressees of public recommendations and medial arrangements should be particularly the better-off and often higher-educated strata in urban centers in the Russian Federation, which are more frequently characterized by the excessive consumption of fats. Past nutrition information campaigns, however, focused

mainly on the positive health effects of increasing the intake of vitamins and minerals, while only little attention was devoted to the potentially negative health effects of excessive fat consumption.

Third, suitable product labelling could provide comprehensive information about the nutritional value of a given food, for example, in terms of its fat content. Germany is currently discussing a so-called "traffic-light food labelling" system inspired by the voluntary traffic-light food labelling system conceptualized by the UK Department of Health (Department of Health 2013). This easily understandable traffic-light labelling shows the contents of fat, saturated fatty acids, sugar and salt in a given food with a green, yellow or red color. For example, the red color signals a high nutrient content per portion and thus moderate consumption of the respective food is recommended. Yet the current arrangement of traffic-light labelling is predominantly geared towards the aspect of reducing the intake food ingredients assessed as being risky, while the aspect of an adequate intake of vitamins, minerals and dietary fibers in order to avoid malnutrition has been completely neglected to date. This is why the current design of traffic-light labelling would not necessarily lead to a healthier and more balanced level of nutrition. Hence, several modifications to the traffic light system are required, which could be easily implemented. Please see IAMO Policy Brief 28 for more details regarding modified traffic-light labelling.

Fourth, the "tax on unhealthy foods" as recently contemplated by the Duma is likely to bring about, at best, a conditional solution of the problem. Segments of the population with higher incomes, which are currently affected by excessive fat consumption, will probably respond with rather limited consumption reticence to taxation-conditioned price increases. Lower-income groups, on the other hand, would "unnecessarily" suffer from such supplementary tax contributions. This should be particularly seen against the background that – inter alia due to the devaluation of the rouble – prices for staple foods in Russia have markedly risen. Not least also for those reasons, taxes on foods with relatively high fat and sugar contents have been relatively rare in international comparisons and their success is very difficult to forecast. Denmark, for instance, abolished its taxation on saturated fats in 2012 after only one year.

Finally, the overall efficiency of measures to promote healthy diets and the associated anticipated healthcare benefits also depends on the macroeconomic and agrarian development of the country and its integration into international agricultural trade.

Further Information

Literature

Burggraf, Christine; Kuhn, Lena; Zhao, Qiran; Teuber, Ramona; Glauben, Thomas (2015a): Economic growth and nutrition transition: An empirical analysis comparing demand elasticities for foods in China and Russia. *Journal of Integrative Agriculture* 14 (6): 1008–1022.

Burggraf, Christine; Teuber, Ramona; Brosig, Stephan; Glauben, Thomas (2015b) Economic growth and the demand for dietary quality: Evidence from Russia during transition. *Economics and Human Biology* 19 (4): 184–203.

Food and Agriculture Organization of the United Nations Statistics Division (FAOSTAT, 2016): http://faostat3.fao.org/download/FB/*E

Department of Health (2013): <https://www.gov.uk/government/publications/front-of-pack-nutrition-labelling-guidance>

Deutsche Gesellschaft für Ernährung e. V. (DGE, 2016): <https://www.dge.de/wissenschaft/leitlinien/> <https://www.dge.de/wissenschaft/weitere-publikationen/>

Russia Longitudinal Monitoring Survey-Higher School of Economics (RLMS-HSE, 2016): <http://www.cpc.unc.edu/projects/rlms-hse>

The World Bank (2016): Data from database: Health Nutrition and Population Statistics: <http://databank.worldbank.org/data/databases.aspx>

World Health Organization [Weltgesundheitsorganisation] (2016): <http://www.who.int/topics/obesity/en/>

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