

**Czech University of Life Sciences Prague**

**Faculty of Economics and Management**

**Department of Humanities**



## **Bachelor Thesis**

**Social and Economics factors influencing food eating  
(comparative study of Czechia and Kyrgyzstan)**

**Thesis Author: Aiza Myrzabekova**

**Thesis Supervisor: doc. PhDr. Michal Lošťák Ph.D.**

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# CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE

Faculty of Economics and Management

## BACHELOR THESIS ASSIGNMENT

Aiza Myrzabekova

Business Administration

Thesis title

**Social factors influencing food eating (comparative study of Czechia and Kyrgyzstan)**

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### **Objectives of thesis**

The goal of the work is to find out how society and culture influence food habits. It will be demonstrated through the comparison of Czech and Kyrgyz cuisine to answer research question: what are the social factors influencing consumers to eat certain types of foods?

### **Methodology**

The thesis starts with literature review. It will highlight how various social influences concerning food are conceptualized in the literature (for instance, in consumers studies). This part will therefore demonstrate how academic literature conceptualises social factors in eating food (preferably in combination with economic factors). The research section of the thesis will be constructed to underpin the findings from literature review. It will investigate (using short survey) how the respondents reflect social and economic factors when eating the food. The data from the survey will help to search for the differences (reflecting various societies in Czechia and Kyrgyzstan) in terms of eating food.

**The proposed extent of the thesis**

40-50 pages

**Keywords**

Food eating, social factors, Kyrgyzstan, Czechia

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**Recommended information sources**

Borubayev T. (1982). Kyrgyz cuisine. Frunze: Kyrgyzstan

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Prague on 04. 03. 2023

## **Declaration**

I declare that I have worked on my bachelor thesis titled "Social factors influencing food eating (comparative study of Czechia and Kyrgyzstan)" by myself and I have used only the sources mentioned at the end of the thesis. As the author of the bachelor thesis, I declare that the thesis does not break any copyrights.

In Prague on 30<sup>th</sup> of November 2023

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I would like to thank my supervisor doc. PhDr. Michal Lošťák Ph.D for his instructions, valuable advice, as well as professional guidance in the process of writing a dissertation

## **Social and Economics factors influencing food eating (comparative study of Czechia and Kyrgyzstan)**

### **Abstract**

The Czech Republic is able to produce a predominant share of food for the consumption of the Czech population, but this has not kept it safe from such rapid price increases. The reason for this was not only an increase in energy costs, but also a significant export of food products made in the Czech Republic abroad, as well as an independent price increase by Czech vendors, while similar food products in neighboring Germany were increasing in price. In October 2022 the cost of food in the Czech Republic has increased by more than 25%. This is quite a serious level of food devaluation. The biggest increase is observed in such products as bread, milk, oil, sunflower oil and sugar. In Kyrgyzstan, insufficient food security and inadequate (unhealthy) nutrition cause enormous damage to the state economy and negatively affect the profits of the population and the financial capacity of sensitive categories of the population. Food insecurity, unreliable eating habits, inadequate health care and unhealthy home environments are considered the top three contributors to malnutrition. The proportion of expenditure spent on food serves as an indicator of food security. Food quality and safety is a very hot topic nowadays, especially in an ever-evolving global economy. Possible malfunctions can lead to fatal consequences not only for the trade or production organization (financial, moral), but also for many residents. For food products, risk (safety) reflects the potential impact on the health of consumers. The scope and structure of the thesis: the work consists of an introduction, three chapters, conclusion, list of references and appendices.

**Keywords:** Food eating, social factors, Kyrgyzstan, Czechia

# **Sociální a ekonomické faktory ovlivňující stravování (srovnávací studie Česka a Kyrgyzstánu)**

## **Abstrakt**

Česká republika je schopna produkovat převážnou část potravin pro spotřebu českého obyvatelstva, ale to ji neochránilo před tak rychlým růstem cen. Důvodem bylo nejen zvýšení nákladů na energie, ale i výrazný vývoz potravinářských výrobků vyrobených v ČR do zahraničí a také samostatné zdražování českých prodejců, zatímco obdobné potraviny v sousedním Německu zdražovaly. V říjnu 2022 se ceny potravin v ČR zvýšily o více než 25 %. To je poměrně závažná míra znehodnocení potravin. Největší nárůst je zaznamenán u takových výrobků, jako je chléb, mléko, olej, slunečnicový olej a cukr. V Kyrgyzstánu způsobuje nedostatečné potravinové zabezpečení a nedostatečná (nezdravá) výživa obrovské škody státní ekonomice a negativně ovlivňuje zisky obyvatelstva a finanční možnosti citlivých kategorií obyvatelstva. Za tři hlavní faktory, které přispívají k podvýživě, jsou považovány nedostatečná potravinová bezpečnost, nespolehlivé stravovací návyky, nedostatečná zdravotní péče a nezdravé domácí prostředí. Podíl výdajů na potraviny slouží jako ukazatel potravinové bezpečnosti. Kvalita a bezpečnost potravin je v současné době velmi aktuálním tématem, zejména ve stále se vyvíjející globální ekonomice. Případné závady mohou mít fatální důsledky nejen pro obchodní či výrobní organizaci (finanční, morální), ale také pro mnoho obyvatel. U potravinářských výrobků odráží riziko (bezpečnost) možný dopad na zdraví spotřebitelů. Rozsah a struktura práce: Práce se skládá z úvodu, tří kapitol, závěru, seznamu literatury a příloh.

**Klíčová slova:** Stravování, sociální faktory, Kyrgyzstán, Česko

<b>1 Introduction.....</b>	<b>10</b>
<b>2 Objectives and Methodology.....</b>	<b>11</b>
2.1. Objectives.....	11
2.2 Methodology.....	11
<b>3 Literature Review.....</b>	<b>12</b>
3.1. Theoretical and Methodological Foundations for the Sociological Study of Nutrition .....	12
3.2.1 Czech Food Safety Policy.....	14
3.2.2 Food Safety System in the Republic.....	16
3.2.3. Rapid Alert System for Food and Feed.....	18
3.2.4. Food Sovereignty as a way to Food Security: The Czech Republic....	20
3.2.5 Food Sovereignty and the Czech Republic.....	21
3.3. Food Security and Nutrition in the Kyrgyz Republic.....	23
3.3.1. Impact of Social Factors on Nutrition and Health in Kyrgyzstan.....	26
<b>4 CONSUMER NUTRITION PRACTICES OF THE RESIDENTS OF THE CZECH REPUBLIC AND THE KYRGYZ REPUBLIC.....</b>	<b>27</b>
4.1 Social Factors of Nutrition in the Kyrgyz Republic.....	27
4.2 The Czech Republic's Social Factors of Nutrition.....	30
4.2.1 Factors Underlying the Food Behaviour of the Czech Population.....	32
4.3 Conceptual Framework.....	35
4.4 The role of social protection in reducing poverty and the risks of malnutrition.....	35
<b>5. Survey.....</b>	<b>36</b>
<b>6 Conclusion.....</b>	<b>42</b>
<b>7 Reference.....</b>	<b>46</b>

# 1 Introduction

The greatest scope of food safety activities in the Czech Republic is provided by organizations of the Ministry of Agriculture and the Ministry of Health. Other important partners, besides governmental institutions, are representatives of supervisory organizations, scientific committees and groups, and consumer organizations, which means members of the interdepartmental food safety coordination unit, which was established in 2002 in accordance with the Strategy for Food Safety in the Czech Republic.

The impact of food consumption strategies on nutrition (food quality and variety). The total number of individuals unable to purchase healthy food may increase due to the higher cost of food and the loss of profits that occurred because of the economic impact of the pandemic. The results of the WFP study in 2020 and 2021 show a disconnect in nutritional patterns compared to before the pandemic, which proves the global results that the decrease in profits has contributed to a change in nutritional patterns towards a decrease in food consumption quality. In fact, based on Figure 9, the inclusion of fruits and vegetables in the diet decreased, while the inclusion of foods such as butter, sugar, and bread, on the contrary, increased.

Obesity is a serious problem today. Since 1980, the worldwide prevalence of overweight and obesity has doubled. Nearly one-third of the world's population is now classified as overweight or obese. Worldwide, the number of overweight and obese people is increasing dramatically. Current estimates suggest that up to 2.7 billion adults will be overweight or obese in 2025. Meanwhile, it already costs trillions of dollars to treat obese people. The International Diabetes Federation (IDF) says the number of diabetes patients in Europe will increase by about 1 million new patients a year over the next 25 years. The Czech Ministry of Health reports that the direct cost of treating obese patients now accounts for about 10% of total health care expenditures and thus amounts to about tens of billions of crowns per year. A 2013 Stenmark survey shows that 34% of adults are overweight and 21% of the population is obese. This is consistent with our results from tested respondents. For one in ten poor Czech citizens, social welfare programs provide good nutrition. The Czech Republic is able to produce most of the food for the Czech population, but this has not kept it safe from such a steep rise in prices. The reason for this was not only an increase in the costs of energy carriers, but also the significant export of Czech food products abroad and an increase in prices by Czech retailers, while similar products in neighbouring Germany were increasing in price. In October 2022 the cost of food in the Czech

Republic has increased by more than 25%. This is quite a serious level of food devaluation. The biggest increase is observed in such products as bread, milk, oil, sunflower oil and sugar.

## **2 Objectives and Methodology**

### **2.1 Objectives**

The goal of the work is to find out how society and culture influence food habits. It will be demonstrated through the comparison of Czech and Kyrgyz cuisine to answer research question: what are the social factors influencing consumers to eat certain types of foods?

### **2.2 Methodology**

The thesis starts with literature review. It will highlight how various social influences concerning food are conceptualized in the literature (for instance, in consumers studies). This part will therefore demonstrate how academic literature conceptualises social factors in eating food (preferably in combination with economic factors). The research section of the thesis will be constructed to underpin the findings from literature review. It will investigate (using short survey) how the respondents reflect social and economic factors when eating the food. The data from the survey will help to search for the differences (reflecting various societies in Czechia and Kyrgyzstan) in terms of eating food.

## **3 Literature Review**

### **3.1 Theoretical and Methodological Foundations for the Sociological Study of Nutrition**

Global food security is now becoming a regulated process through international political and economic cooperation, as reflected in the approaches to achieving the food security goals outlined in the 2030 Sustainable Development Goals (SDGs). At the same time, regional regulatory measures are becoming increasingly important because they take into account the real problems

of food supply in a certain geographical area in conditions of similarity of production and consumption of food.

As the most valuable economic, human and political problem, the provision of global food security at the present stage becomes a controlled process in the context of international political and economic interaction, which is reflected in the ways of implementing the main indicators of food security outlined in the Sustainable Development Goals (SDGs) until 2030. At the same time, regional monitoring and surveillance measures are becoming increasingly important because they take into account food and nutrition issues in general in a particular geographic region in circumstances of similar criteria for food production and consumption.

Issues of food security and the eradication of hunger and social inequality are fundamental issues of national, regional, and global policy. The basic terms on which the concept of "food security" is based were formulated as early as the 1940s after World War II, but food supply indicators, terms and categories often undergo changes. The meaning and use of the term "food security" has gradually changed in response to the challenges faced by countries and the world at large. In the documents of international organizations, whose activities are aimed at solving the problem of ending hunger in the world and providing the population of countries with quality and safe food, it is increasingly noted that the term "food security" is inextricably linked to the concept of "food security food" and factors influencing changes in the food system. It should be emphasized, however, that examination of these factors has not led to a purification of the often-competing interpretations of "food security". According to the World Committee on Food Safety (CSA), "food safety and food security exist when all people have physical, social, and economic access to enough safe and quality food to meet their nutritional needs and dietary preferences, sanitary and hygienic conditions suitable for healthy and active lifestyles".

In food security issues in the last ten years special attention is paid to the study of the direct impact of such factors as urbanization, climate change, the growth of profits of Czech residents, changes in global food patterns, the speed of globalization and the increase in the sales of food products. At the same time, according to experts of the Food and Agriculture Organization of the United Nations, the mere adequate availability of food at the national and global level does not ensure food protection and nutrition of communities or households. Lack of food availability can

increase the risk of not consuming enough food, as well as obesity and food-borne infectious diseases, as appropriate.

Food quality and safety play an increasingly important role in ensuring adequate nutrition for a healthy and active life. Consequently, increasing the consumption of nutritious foods without addressing safety issues leads to a deterioration in public health [FAO, 2018b: 57]. According to the World Health Organization, about 600 million people worldwide became ill in 2010 by eating food contaminated with bacteria, viruses, parasites, toxins, or chemicals.

However, political, and economic developments in the international community have a major impact on food safety issues. Although these problems have been addressed internationally, regional efforts should be considered more important in the practical provision of food to the world's population, given the geographic proximity of the states of the region, the similarity of natural and climatic conditions, production base, culture, and consumption habits. The new quality of the influence of regional processes on international relations implies that "the global agenda is reorganized and updated differently in different regional subsystems". At the regional level, the practical benefits of addressing food security issues include cooperative cross-border resource management, combating cross-border pest infiltration, creating stable regional markets, optimizing risk management, strengthening regional value chains, removing barriers across regions, coordinating information gathering and communication systems, and coordinating emergency food aid activities.

### **3.2.1 Czech Food Safety Policy**

Food safety can be understood from many points of view: from the obligation of the state to create a legal environment for the production, import and testing of safe food to the content of certain, even above the legal limits, or added substances. in food. While the first aspect is set by law and therefore easy to control, the second is more subjective, poorly verifiable and part of an ongoing debate, both professional and non-professional. under the law, food on the market can be considered as health and safety products.

Since May 1, 2004, the Czech Republic became a full member of the European Union, which led to the adoption of all rules of this Community. One of the main obligations enshrined in the



Treaty establishing the European Community is to ensure a high level of health protection and strengthen consumer protection.

Food safety policy works on the principle of risk analysis, which includes three interrelated components: risk assessment, risk management and risk communication. Risk assessment is based on data collected through regular long-term monitoring, even though routine control activities along the food chain from primary production to final consumption. Food safety monitoring includes monitoring and evaluating the natural occurrence of undesirable or harmful substances and microorganisms, contamination of food, feed, and raw materials for their production and, finally, monitoring the environmental components that can contaminate food and feed (soil, air and water) and their entry into the food chain.

Professional institutes throughout the Czech Republic, as well as national supervisory bodies and universities, are involved in the creation of primary data and subsequent risk assessments. The European Food Safety Authority (EFSA) was established in January 2002 after a series of food crises in the late 1990s as an independent source of scientific advice and information on food chain risks. EFSA was created as part of a comprehensive program to improve food safety in the EU, ensure a high level of consumer protection, and restore and maintain confidence in the EU food supply.

Once established, EFSA's initial priority was to build the necessary scientific infrastructure to enable it to provide scientific opinions and advice in response to requests received. To ensure the high quality of its work, EFSA has developed guidelines for risk assessment methodologies and the risk monitoring they carry out. As stated in the Founding Regulations, EFSA can initiate its own work (autonomous mandate). EFSA's strategic relationship with national food safety organizations is explicitly recognized in its Founding Regulations. Through the Consultative Forum, EFSA has laid the foundation for its cooperation activities with national food safety risk assessment and research organizations throughout Europe.

Other objectives of EFSA are to provide independent scientific advice and to clearly communicate existing and emerging risks in EU food and feed safety legislation, to ensure public access to objective information and, among other things, to establish a European network of scientific institutions.

## 3.2.2 Food Safety System in the Czech Republic

The aim is primarily to coordinate the activities of individual ministries and to set priorities, to ensure cooperation between the relevant competent authorities exercising official control, scientific committees, consumers and public administration, and to establish cooperation with national food safety authorities. institutions in EU member states and with EFSA.

The Czech scientific committees perform the function of scientific advisory committees in relation to the public authorities and ensure consistency of risk assessment with communication, providing verified and understandable information to the professional and consumer public. Scientific committees are composed of groups of experts with the following framework tasks in the field of food safety: Preparation and publication of independent analyses and opinions, proposals for food safety measures along the entire production chain and evaluation of research and development guidelines in the subject area.

The Ministry of Health has the following scientific committee: the Scientific Committee on Food. The Ministry of Agriculture has the following four scientific committees: the Scientific Veterinary Committee, the Scientific Committee on Animal Nutrition, the Scientific Committee on Phytosanitary and the Environment, and the Scientific Committee on Genetically Modified Foods and Feeds. Each resort performs its tasks within its purview, and the individual agencies work together to ensure food safety. Activities are ensured by the respective agencies.

The next step is risk management, which is essentially the creation and implementation of appropriate legislation and state supervision (official control). Official control over the entire food and feed chain from primary production to sale to the consumer is carried out by the competent authorities. The supervisory bodies, within the scope of their competence, also supervise the compliance with the obligations of the subjects of the food industry, which are stipulated in the direct applicable legislation of the European Commission (EC). The basic legislation in the field of official controls in the Czech Republic is Regulation (EC) No. 882/2004 of the European Parliament and of the Council of 29 April 2004 on official controls to ensure compliance with feed and food legislation. , animal health and welfare regulations, which, among other things, imposes an obligation on the member states to create appropriate conditions to ensure official controls, develop national food and feed control plans, develop contingency plans, specify the

content of employee training and education, conduct internal inspections and a number of other responsibilities.

The legislative framework of the Czech Republic is based on (*Act No. 110/1997 Coll. on Foodstuffs and Tobacco Products*), as amended. The state veterinary administration of the Czech Republic (veterinary administration authorities) supervise the production, storage, transport, import and export of raw materials and food products of animal origin, when raw materials and food products of animal origin are offered for sale in market halls and markets, when products of animal origin are offered for sale in stores and counters, where meat and milk are processed, The next institution providing state supervision is the Central Institute for Supervision and Testing in Agriculture, which supervises the classification of carcasses, while the Czech Agricultural and Food Inspectorate supervises the production of foodstuffs and their placement on the market, where this is not the case. Last institutions Regional public health authorities perform state supervision of catering services and to detect causes of damage or health risks and to prevent food-borne illnesses and other food-borne accidents. They are also responsible for the control of materials and articles intended to encounter food.

Risk communication is the last step in the risk assessment. This idea is related to the mutual exchange of information (including risk assessment results and the basis for risk management decisions) between risk assessors, risk managers, consumers, feed and food companies, academia, and other stakeholders.

Thus, the Strategy for Food Safety in the Czech Republic defines the following key requirements: full harmonization with EU legislation, ensuring coordination between the central state authorities and the competent authorities performing official control, optimization of the laboratory network. The key requirements are full harmonization with the EU legislation, development of the RASFF system and co-operation and co-ordination with EFSA.

### **3.2.3 Rapid Alert System for Food and Feed**

The Rapid Alert System for Food and Feed (RASFF) was established in 1978 to provide information on unsafe food and feed in Western Europe. RASFF is now an interconnected network that connects members of the European Union (EU) with the European Commission (EC), EFSA and the European Free Trade Association (EFTA). The main objective of this system is to prevent harmful health hazards to consumers from food and indirectly feed. RASFF is used

for two-way communication between network members. RASFF is not available for communication with consumers. It is the duty of each member of the system to notify the other members immediately in case of substandard food, feed, or common items in contact with food.

The Czech Republic became a member of RASFF automatically after joining the European Union in 2004, and a national contact point was established at the State Agricultural and Food Inspection Office in Brno to transfer information between members of the national system. RASFF has been active since March 1, 2005. Members of the network include supervisory authorities and other agencies involved in food safety. In the Czech Republic, ordinary consumers can obtain information on the RASFF system on the website of the Ministry of Health or on specialized websites. One of them is the Food Safety Information Centre of the Ministry of Agriculture, designed primarily as a public relations centre. Its purpose is to make the public aware of food safety issues in the form of current news, risk warnings, information on research results in the field of food, nutrition, food technology, hygiene, etc.

ISO 22000. All types of food chain organizations that would like to eliminate possible maximum error are defined by the international standard ISO 22000. The food safety management system is designed for all links in the food chain, from producers and producers of feed and food products to food processing companies, distributors, and catering services. The system is also intended for all organizations indirectly involved in the food chain and may affect the quality and safety of food products, as well as producers of machinery and equipment for the food industry, food packaging, various accessories for food products, transporters, warehouse operators, etc.

The standard ISO 22000:2005 (ISO 22000:2006), based on the international standards ISO 9001, defines the requirements for implementation of food safety management system. The food safety management system defines the requirements for compliance with food and feed safety. In a systems approach, beyond ISO 22000 is the food industry critical points system (HACCP).

Proper application of the HACCP system can go a long way toward eliminating the maximum number of improper practices in the food chain. The requirements for a food safety management system can be divided into three main parts: good manufacturing practice requirements and necessary baseline requirements, HACCP principles established by Codex Alimentarius, and management system requirements.

Good hygienic practice means the correct observance of all stipulated sanitary requirements, compliance with the rules and obligations of hygiene in the process of food production and

marketing. The Ministry of Agriculture publishes good hygienic rules for individual products in the Bulletin of the Ministry of Agriculture of the Czech Republic and the Czech Technical Standard. In this section you can find a list of valid guidelines for good manufacturing and hygienic practices and, if they are not prepared according to Czech national standards, you can also find their text. The use of these guides for food industry operators is voluntary.

### **3.2.4 Food Sovereignty as a Way to Food Security: The Czech Republic**

The concept of food sovereignty is rooted in the refusal of farmers, peasants and other food producers and social organizations to see their domestic food markets as subject to the vagaries of international market forces. This concept is now increasingly used in the development debate to increase control over food production, trade, and consumption. There is a difference between food security and food sovereignty: the former sets a goal, and the latter determines how it is realized. Food security means that all people always have physical and economic access to basic food, as defined by the United Nations. The main determinant of food insecurity is people's vulnerability, which in turn is caused by poverty. Poverty makes people unable to feed themselves, that is, to produce enough food or to earn enough income to buy food. Thus, eradicating poverty is key to achieving household food security. For this to happen, it is necessary to recognize the specificity of small-scale agriculture as the main source of income and livelihood for the poor in several developing countries, especially in Africa (approximately 80% of Africa's poor live in rural areas). It is here that food sovereignty, a concept born of civil mobilization, comes to the fore, since it is a political framework emphasizing the right of nations and their peoples to determine their own food production systems (production, distribution, and consumption) without depending on the fluctuations of international markets. Thus, it is not possible to fully realize food sovereignty without control over the main determinants of agricultural policy today, i.e., the rules concerning tariffs and domestic support, which are determined by trade policy.

### **3.2.5 Food Sovereignty and the Czech Republic**

By asserting the view that the free market is the main tool to solve the global economic crisis and eradicate poverty, the Czech Republic echoes an often-criticized view of dominant economic

thinking that has already proven detrimental to food security in many developing countries. The Czech Republic overlooks the need to recognize the diversity of agricultural systems and to balance the market power of giant agricultural corporations over small farmers, both in developing countries and in Europe. Not only is the Czech Republic lagging in actively participating in the international debate on food security, but it also faces challenges in ensuring that the market brings fair returns to Czech farmers, who are increasingly dependent on subsidies. The area of farmland in the Czech Republic is shrinking dramatically - since 1995, fifteen thousand hectares of farmland have disappeared, and with it many people working in the sector. The former Czechoslovakia used to belong to the most advanced states in Europe when it came to food production. That is no longer the case. The change came after 1989, when the former Czechoslovakia turned to neoliberal market practices that did not support national food sovereignty. Many policies hindered agricultural business (some protective laws no longer applied, bank loans were difficult to obtain, etc.), and additional problems arose after EU accession because budgetary support for "new" EU members was much lower than for "old" EU members.

Although the food sovereignty movement does not have deep roots in the Czech Republic, there are several local movements that are beginning to support other ways of producing and consuming food, although without any explicit advocacy campaign. For example, a new type of marketing emerged in 2009 that promotes locally produced organic agricultural products sold directly to consumers by farmers or cooperatives. As an example, we could mention the so-called "poorinka" (basket) system, which works to regularly deliver to consumers a certain number of vegetables and fruits, dairy products, herbs, bread, or meat produced by local farmers. This system is considered important not only because it offers people access to fresh, locally produced food, but also because it brings farmers a fair income and helps restore the lost personal relationship between consumers and food suppliers. Vegetable markets are also on the rise, especially in the capital, Prague. Milk vending machines have become increasingly popular in the past year because they sell fresh milk directly from farmers. This system especially helps small farmers by greatly increasing the price they receive per litre of milk (often double or more). These direct marketing concepts took inspiration from the Community Supported Agriculture (CSA) model, which has been operating in Japan, Western Europe, and the United States since the 1970s. CSA

basically assumes that consumers support the farm, with the result that both producers and consumers share the risks and benefits of food production.

To change the status quo of virtually zero participation by Czech citizens in the debate on food security and food sovereignty, the Prague-based Global Policy Institute-Glopolis has initiated political and public debates with non-governmental organizations, farmers and decision-makers in the Czech Republic and Europe, raising awareness of the growing food insecurity and poverty faced by the poor in developing countries, caused by the dominant business approach. Food insecurity and inadequate (unhealthy) nutrition cause enormous harm to the public economy and negatively affect the income and financial capacity of sensitive populations.

### **3.3 Food Security and Nutrition in the Kyrgyz Republic**

Food insecurity and inadequate (unhealthy) nutrition cause enormous harm to the public economy and negatively affect the income and financial capacity of sensitive populations. Food insecurity, unreliable eating habits, inadequate health care, and unhealthy home environments are considered the top three contributors to malnutrition. The proportion of expenditure spent on food serves as an indicator of food insecurity. The more sensitive and poorer the household, the higher the share of expenditure on food consumption. A larger share of expenditures spent on food consumption makes households sensitive to price changes, which accordingly affects the quantity and level of food quality in the household. Between 2016 and 2019, insolvent households spent approximately 61% of their own money on food consumption (food purchases). The high share of expenditures on food consumption reduces a household's ability to spend money on other services, such as health care or educational services, and creates a barrier to the desire to exit poverty.

In 2019, it was found that 46% of the Kyrgyz population ate below 2,100 kilocalories per day (the suggested lowest calorie diet). However, addressing the issue of supplying a basic daily caloric intake is considered only the first stage in the systemic aspect of ensuring a healthy, nutritious diet. There is also great concern about the implementation of a nutritious and healthy diet.

In 2019, for example, up to 48% of the population was not able to provide a healthy diet, which was due in some part to the high cost of a healthy diet, which costs \$5.2313 per day. The addition

of fruit and protein to the diet is quite far from the mandatory daily dose, predominantly in the poorest regions of Kyrgyzstan.

Malnutrition in all its forms and non-communicable diseases related to nutrition are still the main factors contributing to increased pressure on the medical system in Kyrgyzstan, and entail increased social and economic costs for communities, households, and Kyrgyzstan as a whole. Despite significant investment in recent years, the expansion of chronic hunger and malnutrition (stunting) among preschool children accounts for about 12% and about 17% of preschool deaths are related to underweight and stunting at birth. The discrepancy in the growth retardation rate is confirmed by the social and geographical division of the Kyrgyz population. However, growth retardation is highest among children living in rural areas (13.1% of children in rural areas versus 8.8% in urban areas) and among children living in families with low material wealth (14% versus 9.2% in the richest households).

Micronutrient deficiencies continue to be an intractable issue. There is an increased rate of anaemia (42.6% in preschool children and 39.8% in pregnant women). Vitamin A deficiency in the adult population of the country is high at almost 33%. In addition, undernutrition among adolescents (especially girls) is not considered, even though this period is perceived as a chance to prepare them for reproductive, healthy life activities and for the prevention of diet-related chronic diseases during adulthood. Childhood and adolescence are considered a critical period in which eating behaviour is established for the long term, with a direct impact on future financial well-being and opportunities.

Kyrgyzstan faces the triple pressure of nutritional deficiencies (malnutrition), with obesity and overweight common among adults as well as adolescents and children. Nearly 7% of preschoolers and 49% of women are overweight. An increasing propensity for obesity and overweight is also common among adolescents and children ages 5-19, with 16% of children of both sexes being prone to being overweight in 2016. This poses a variety of dangers to the reproductive and material well-being of the nation, predominantly for young children and reproductive age.

Despite of the fact that significant results have been achieved in the reduction of premature mortality from non-communicable diseases, the primary pressure on the medical system continues to be on non-communicable diseases (NCDs), which account for about 80% of mortality and



morbidity in Kyrgyzstan. More than half of them (51.6%) are associated with cardiovascular diseases.

Obesity and overweight are risk factors underlying many noncommunicable diseases. Poor nutrition is considered a major decisive factor for both unhealthy eating and overweight. The diet in Kyrgyzstan is characterized by the inclusion of starchy foods in the diet and an insufficient intake of fruits, vegetables, and healthy fats. Although the presence of fruits and vegetables has improved slightly over the past 20 years, the availability of non-essential foods is still inadequate in comparison with WHO dietary recommendations. At the same time, there has been an increase in the availability and intake of foods high in saturated fats, sugar, and salt. A nutritious diet that promotes acceptable food intake indicators is very much in demand for unified body development and growth, which contributes to improving living standards and overcoming the threshold of poverty. In addition to the above-mentioned factors affecting food insecurity and malnutrition (hunger), the impact of natural disasters and climate change should be considered. In fact, Kyrgyzstan ranks third on the list of Central Asian and Eastern European countries most sensitive to severe weather conditions, climate change, heavy snow falls, causing floods, avalanches, and other natural disasters.

In addition to the above factors affecting food insecurity and malnutrition (hunger), the impact of climate change and natural disasters should be considered. Natural disasters and climate change threaten the profits of the most sensitive and impoverished categories of the population living in rural areas (their profits depend on agricultural activities), causing damage to infrastructure and production facilities, interrupting systems that provide permission to food, water, and health services. The frequency and magnitude of natural disasters associated with climate change has increased by half over the past 10 years<sup>28</sup>. The total number of climatic disasters, including avalanches (8% of all disasters), and mudflows and floods (39% of all disasters), has increased markedly, contributing to serious disasters, causing the loss of human

life, and eliminating their means of survival (the amount of material damage caused each year forms 0.1% of GDP).

### **3.3.1 Impact of Social Factors on Nutrition and Health in Kyrgyzstan**

Sociology has always had two directions in the acquisition and accumulation of knowledge. One of them, from the very beginning, was focused on control methods (tracking) and experimental experiments, and finally took root in the 20s of the 20th centuries; its supporters created ways of collecting and processing practical information, used in current research. The other current is theoretical, aimed at conceptualizing the reality of social life. The correctness of sociological knowledge is established only in the process of interaction of experimental (practical) and theoretical competences.

Most sociological theories were aimed at studying global problems of society, so macrosociology was formed. Practically at the same time another direction, which studies social phenomena, cooperation of small groups, which belongs to microsociology, was born. The third direction is medium-level concepts, they are indispensable for sociological evaluation of a certain class of facts in isolated spheres of knowledge.

However, between sociological theories of different levels are conditional and represent the part and the whole in the life of society. From E. Wallerstein's point of view during the first half of the XX century the entire chapters devoted to the science of social science were isolated into separate scientific subjects accepted by the scientific community. Each of them was defined by opposing close scientific subjects.

As a living being a human being requires adequate nutrition, as a social being he is obliged to receive wages to supply his own livelihood, and this requires specific physical aspirations, which accordingly depends on the factors of food consumption. It must be assumed that human nutrition is a consequence of most interrelated factors: it is the availability of material opportunities to purchase food of high quality, the sufficiency of the income received by the population, a certain

competence in healthy nutrition, the presence of useful food of high quality in the food market and the need for acceptable conditions for the consumption of food.

In everyday life, the nature of food consumption is also influenced by a random factor, since the weekly menu is not always drawn up, or this menu is not maintained according to various arguments. In today's time-consuming and busy environment, the demands of dietetics are not always respected by the population.

The problems of nutrition have hardly been investigated in depth in theoretical sociology; the problem has been addressed in independent studies by sociologists.

Ranzenhofer emphasized conflicts among social processes and viewed interest as a basic sociological term that includes the physiological process associated directly with food consumption.

In our view, malnutrition and hunger have always provoked social conflicts and have often been the main cause of uprisings and coups in most countries. The science of sociology, as studied by L. Genesee, emphasizes two components - genesis and teleosis. Nevertheless, love and hunger are considered the most sought-after human forces. They turn into social forces due to human interaction and cooperation. G.Simmel believes that the social whole requires a certain amount of food consumption (nutrition) to remain as such; this need is considered ideal, since in a detached organism this need increases in accordance with its values.

In our opinion, the special science "Sociology of Nutrition" should be devoted to the study of social issues of the population directly affecting nutrition. We came to a similar conclusion in 2004. Later the Russian professor Veselov Yu. V. published some research on this discipline.

We believe that the improvement of food intake (diet) is a prerequisite for maintaining health, but at the same time it is impossible to evade the familiar aspects of the national cuisine, which have developed genetically over several centuries, and considered the adaptation of man to the environment, to the presence of specific food resources in the habitat. In organizing the food consumption process of a population, only a similar approach contributes to maintaining and improving the performance, health, and longevity of the population.

It must be assumed that the effective resolution of issues of hunger and malnutrition, of poverty and destitution, contributes to the optimization of social relations throughout the world. The problem of providing the population with food considered sufficient and capable of satisfying hunger is considered the foundation of the existence of the population, of the nation, of

maintaining the sustainability and prosperity of both the individual state and the entire world community.

At research of problems connected with nutrition of the population, it is concluded that the concept at research of problems of nutrition of the population is necessary to consider as interpreting meta paradigm, in a context of unconventional methodology, asserting numerous potentials of development and individually constructed worlds, that says that the general and multilateral substantiation of social reality does not exist.

The state of health and the nature of food consumption by the population of post-Soviet countries has been greatly influenced by the changes that have taken place over the past few years. The economic and social crisis in Kyrgyzstan and other CIS countries developed in a similar way because all states were on a common economic platform and owned a common form of economy, which were destroyed in an instant.

In the early stages of Kyrgyzstan's democratization and sovereignty, the tactics of rapid capitalization of the state through privatization and DE monopolization of social holdings were approved in advance. The lack of an effective development strategy and the failure to replicate the diverse development patterns of Eastern and European countries caused a serious socio-economic crisis that left a negative impact on the nutrition and health of the population. During the period of sovereignty, Kyrgyzstan has undergone many changes in all aspects of society, characterized by the material division of society and the lack of equality in society. According to statistical data, the life expectancy of the country's population, especially workers and employed men, has noticeably decreased. There has been an increase in the number of infectious and non-infectious diseases, 26% of children in Kyrgyzstan, whose age is less than 2 years, suffer from anaemia, which leads to inhibition of their physical and mental development and low profits in adulthood. In addition, 42% of women in the country are deficient in folic acid. Iron deficiency anaemia affects 35% of women of childbearing age. Iodine deficiency has increased in recent years, predominantly in children and adolescents; the incidence of endemic goitre in different regions ranges from 30% to 80%, depending on gender and age.

During the transition period, the conditions and quality of life of people in Kyrgyzstan worsened, as it was associated with such social phenomena as lack of work, poverty, and intensified migration processes supporters of most social groups found themselves in poverty, which caused the deterioration of the Kyrgyz population's nutrition. Even though, according to statistical information, poverty decreases every year, but our research data show that the level of

poverty in the country is still very high, about 70 percent of the population belongs to this category. We rely on information describing real nutrition, which is one of the main indicators designed to identify the level of poverty. People who are poorly nourished form a "risk group" because they are more likely to have health problems, they may behave in an unconventional way, they must commit crimes to ensure their physical survival (satisfying hunger, providing food). Transition is accompanied by crises in the economy, which affect the actual nutrition of the population. The most acute crisis situations can be traced in 1992-1994, then in the period of 1995-1997 there was a period of stability, which was destroyed by the economic crisis in Russia in 1998. The economy of the states continues to be in a difficult situation, attempts to revive it do not bring results. Inequality and disproportion in the economic development of the regions remains in the present period. One of the most dangerous causes of the current crisis economic situation in the economy is the shadow economy. It should be emphasized that public health is important for the development of the economy, only people with good health can improve the economic power of the state.

To maintain health, a person's assessment of his or her own health and his or her attitude toward it are of great importance. Thus, according to studies conducted in the context of international projects (2000-2013), many respondents rated their own health as "satisfactory," and only about 17% gave a rating of "poor," which suggests that people do not fully evaluate the criteria for assessing their own health in a certain way. When processing the materials we received, we noticed that even those respondents who have chronic diseases give a good assessment of their health. According to 96.6% of the respondents, the main condition for good health is good nutrition. From the point of view of 86.9% of the respondents, the changes that have occurred in recent years in the state have had a negative impact on human health. 96.6% of the respondents believe that proper nutrition is considered the key to good health.

Nutrition factors improve the ability of the human body to adapt to the surrounding physical and social world and contribute to maintaining health. Only a healthy person could correctly perceive the changes taking place in the life of society. Nutrition of the population is considered the most significant social problem and serves as the most important platform for the formation of physical and spiritual health of the individual person, the entire nation and, from our point of view, contributes to the wellbeing of society and the state. In the history of human development there are many examples when malnutrition of most of the population became the driving force

of revolutionary uprisings in many countries, the beginning of the collapse of a particular form of government.

Therefore, the nutrition of the population should be considered as a social process and the subject of the study of the new section "sociology of nutrition".

## **4 CONSUMER NUTRITION PRACTICES OF THE RESIDENTS OF THE CZECH REPUBLIC AND THE KYRGYZ REPUBLIC**

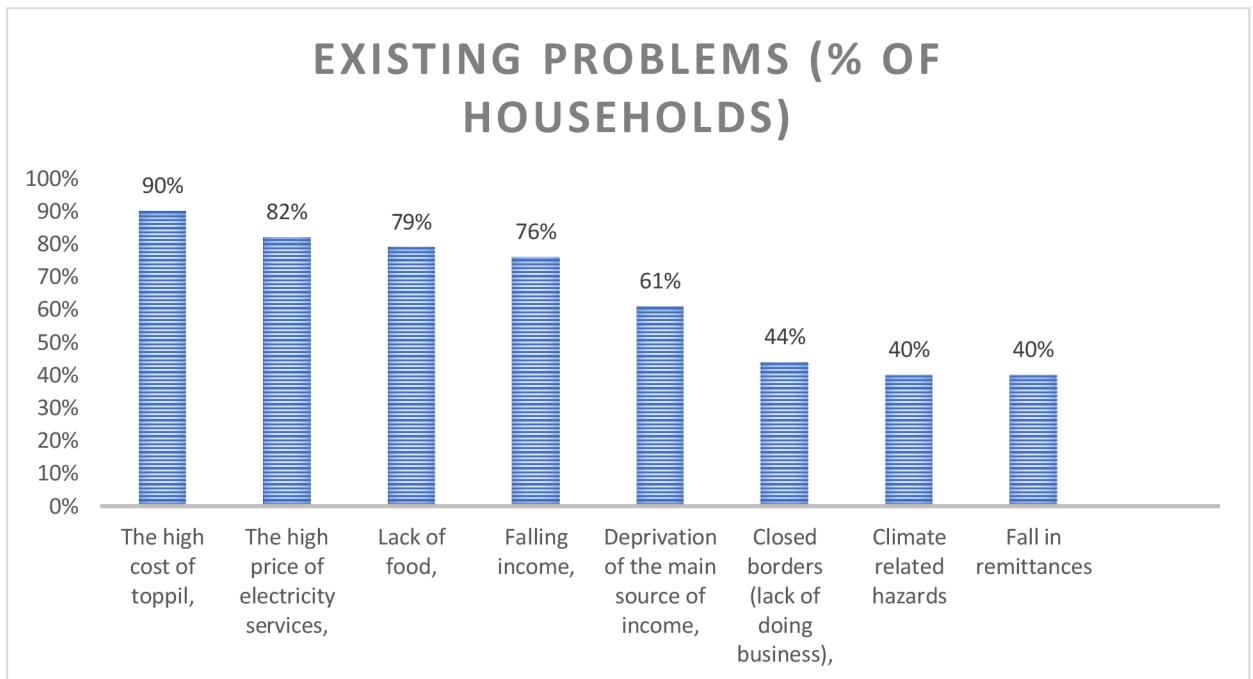
### **4.1 Social Factors of Nutrition in the Kyrgyz Republic**

The economic crisis resulting from the pandemic has had a direct impact on the income of sensitive categories of the population and on the cost of food. Dependence on changes in prices on the market is a threat to food security, reflected not only in a decrease in nutrition, but also in a decrease in the quality and variety (ability to balance) of food. To compensate for the decrease in purchasing power, households have used all kinds of negative strategies that have a negative impact on health, food consumption and work capacity. This impact causes irreversible consequences in the short term and causes chronic sensitivity and poverty.

Consistent control of the causes of supply and demand became valuable during the height of the pandemic, when restrictions imposed in Kyrgyzstan had a direct impact on food production, supply, and affordability. To compensate for the need for online food safety information, the Kyrgyz government has embarked on the creation of an online platform designed to monitor socially valuable food and its cost,<sup>49</sup> the development of which requires significant technical assistance.

The impact of economic unrest resulting from the pandemic on the affordability of food. The rise in food costs since the pandemic began has limited access to essential food - the food inflation rate for essential foods formed almost 19% (January-August 2021 in contrast to the same period last year), the rise in grain costs was almost 70%, sugar rose 58%, flour 18%, and sunflower oil 82%. One of the main factors influencing the increase in the cost of food is the devaluation of the Kyrgyz currency - by 8% compared to May 2020 and by 21% compared to the information before the pandemic coronavirus. Both situations under consideration have an impact on the purchasing power and accessibility to purchase and consume food among susceptible households.

**Table of Existing problems (% of households)**



In 2020, the three common problems in the past 12 months in urban and rural areas were: declining population profits, high food costs, and lack of food supplies 51. Compared to a similar estimate in similar target localities before the onset of the coronavirus pandemic (in 2018), declining personal profits and high food costs were considered a major problem for 57% and 52% of the single-home-operated housing group, respectively. Whereas a predominant number of households have reported these problems in the current period. In 2021, due to high inflation, 97 percent of households in urban and rural areas notified the problem of increased food costs. Other frequently reported problems included falling personal profits, shortages of food supplies, high electricity prices, and high gasoline costs

Many households think there is enough food stock in the market. This proves the world's conclusions that the predominant impact of the coronavirus pandemic on poverty (malnutrition, hunger) and food stocks is directly related to falling household profits and thus reduced access to food than to dependence on food transportation.

To address economic problems, 44 percent of households reduced food expenditures.<sup>53</sup> In 2020, 45.3 percent of the Kyrgyz population was found to eat below 2,100 kilocalories per day, down 1 percent from the previous period. According to the NSC, in 2020, the first quintile spent almost 65% of their own expenditures on food. This population was forced to deny full meals at

times and was intentional about using negative strategies. The specific share of food expenditures increased by 1.2% from 2019, due to declining personal profits and food inflation.

Of the five strategies concerning changes in food consumption practices used during the week preceding the survey date, the most common were: eating lower-priced and less desirable foods (approximately 34%), obtaining food in debt or relying on outside help (approximately 40%), and reducing the number of meals per day (approximately 23%). By reducing food intake people try to overcome food and financial shortages (Table 3). If, according to the sample, approximately 18 percent of households limited their food intake, then the share of similar households in the poorest quintile was 29 percent. Similarly, up to 13 percent of households reported that adults reduced their daily food intake to benefit children who require a full meal, while the share among households with more than seven family members was 21 percent.

### **The five strategies table concerning changes in food consumption practices:**

<b>Food Strategies %</b>	<b>All</b>	<b>1st quintile</b>	<b>5th quintile</b>
<b>Adults educed food intake to the benefit of children.</b>	<b>13</b>	<b>21</b>	<b>8</b>
<b>Limited thep ortion size of meals eaten.</b>	<b>18</b>	<b>29</b>	<b>12</b>
<b>Reduced the number of meals consumed per day.</b>	<b>23</b>	<b>34</b>	<b>17</b>
<b>They buy food in debt, depend on outside support</b>	<b>40</b>	<b>49</b>	<b>30</b>
<b>Use food that are not really desirable / not high in cost.</b>	<b>34</b>	<b>45</b>	<b>24</b>

## **4.2 The Czech Republic's Social Factors of Nutrition**

The Czech Republic performs well on several well-being dimensions compared to other countries in the Better Living Index. The Czech Republic outperforms the average in jobs, education, social connections, security, and life satisfaction. It is behind the average in income and civic engagement. These estimates are based on available sample data. Money, while it cannot buy happiness, is an important means of achieving a higher standard of living. In the Czech Republic, the average adjusted net family income after taxes per capita is \$26,664 per year, less than the OECD average (\$30,490 per year). In terms of employment, about 74% of people aged 15 to 64 in the Czech Republic have a paid job, higher than the OECD average (66%). About 81%



of men have gainful employment, compared to 67% of women. In the Czech Republic, 5% of workers work overtime in paid work, below the OECD average (10%), with 7% of men working overtime in paid work compared to 2% of women.

Good education and skills are important prerequisites for finding a job. In the Czech Republic, 94% of adults aged 25 to 64 have completed secondary education, higher than the OECD average (79%). However, completion of secondary school differs between males and females, with 95% of males successfully completing high school compared to 93% of females. Regarding the quality of the education system, the OECD Program for International Student Assessment (PISA) has an average student score of 495 in reading, math, and science literacy. This score is higher than the OECD average (488). On average, girls outscore boys in the Czech Republic by 10 points, which is higher than the OECD average gap of 5 points. In terms of health, life expectancy at birth in the Czech Republic is about 79 years, which is two years less than the OECD average (81 years). Life expectancy for women is 82 years and for men 76 years. The level of atmospheric PM2.5 - tiny air pollutant particles small enough to penetrate and cause lung damage - is 17 micrograms per cubic meter, higher than the OECD average (14 micrograms per cubic meter). In the Czech Republic, 89% of people say they are satisfied with the quality of their water, which is higher than the OECD average (84%).

In the public sphere, there is a strong sense of community and a moderate level of civic participation in the Czech Republic, where 96% of people believe they know someone they can rely on in times of need, which is higher than the OECD average (91%). voter turnout, a measure of citizen participation in the political process, was 62% during the recent elections, lower than the OECD average (69%). Social and economic status can affect the number of votes; voter turnout for the top 20% of the population is 76% and for the bottom 20% it is 55%. When asked to rate their overall satisfaction with life on a scale of 0 to 10, Czechs gave it an average score of 6.9, slightly higher than the OECD average (6.7). In most cases, people in the Czech Republic buy food mostly in supermarkets. They buy fruit and vegetables at the market, and they buy bread and pastries at special stores with their own bakeries.

The obesity is a serious problem today. The prevalence of overweight and obesity worldwide has doubled since 1980. Nearly one third of the world's population is now overweight or obese [1]. Globally, the number of overweight and obese people is increasing dramatically. Current estimates are that up to 2.7 billion adults will be overweight or obese in 2025. Meanwhile, treating obesity already costs trillions of dollars. The International Diabetes Federation (IDF) says that

over the next 25 years, the number of diabetes patients in Europe will increase by about 1 million new patients a year. The Czech Ministry of Health reports that the direct cost of treating obese patients now accounts for about 10% of total health care expenditures, and thus amounts to about tens of billions of crowns per year. A 2013 Stenmark survey shows that 34% of adults are overweight and 21% of the population is obese. This is consistent with our results from the respondents tested. The evolution of obesity costs in the Czech Republic is steadily increasing at an average annual rate of 8.95%. Obviously, if the trend in the number of obese people does not change, this could become a real economic problem in the future, as the costs of obesity treatment are increasingly increasing the overall costs of the health care system. The annual cost of treating a severely obese patient is more than CZK 100,000, and there are more than 200,000 such patients in the Czech Republic. Studies have also shown that overweight people rarely take the time to analyse their diet and the nutritional value of their food. Changing their approach to eating could be a key reference point for them in the fight against obesity. In recent years, the growing obesity of mankind and its associated health complications, as well as rising health care costs, have been frequently discussed. The subject of this article is to assess the current state of health and its sustainability in the Czech Republic by analysing the dynamics of the number of obese people and the health care costs for the obese population. The problem of obesity is also closely related to the quality of food intake and the control of the nutritional value of foods in the diet. Food quality and the impact of unhealthy and unhealthy foods on people's health, sugar intake, increasing obesity and the associated increased health care costs associated with treating obesity and related conditions (such as diabetes, heart attack, etc.) have, of course, also noted the economic sustainability of this trend. Individual demand depends on several factors, particularly his or her preferences. In recent years, these preferences have shifted strongly in favour of quality food, as a growing interest in healthy living in the face of increasing civilization diseases, stress and excessive carbohydrate consumption are now playing an important role in people's thinking. Sugar is a commodity that is one of the key ingredients in our diet and cannot be eliminated from the menu. This is evidenced by the below 30 kg per person per year (beet sugar and cane sugar). White beet sugar is currently the most used sweetener, although many consider it harmful to health. Points to the impact of its consumption on the rise in obesity and depression.

As a result, there is a growing demand for healthy, organic foods and foods with lower sugar content, although less sugar does not necessarily mean fewer calories. As Magkos points out, consumers are dissatisfied with the quality of classic traditional foods and therefore pay more attention to the analysis of the effects of traditional foods on our health. Most often this is due to

the need to protect their health and the health of their family. Thanks to all these arguments, the number of organic farmers.

## **4.2.1 Factors Underlying the Food Behaviour of the Czech Population**

The growing urbanization of society is provoking changes in lifestyle, consumption, and diet among consumers, exacerbating the severity of obesity and other nutrition-related health problems (World Health Organization, 2020). The World Health Organization continues to emphasize the urgency of addressing "globality" as it escalates worldwide. WHO has developed a global strategic framework that promotes collaborative responses from civil society and stakeholders in the public and private sectors. This mainly includes support for healthy diet and physical activity for disease prevention and overall health promotion, resulting in reduced health care costs and economic incentives. The Czech Republic is one of the European countries with high rates of obesity. Obesity rates reached 20% of the population in 2017, exceeding the EU average of 15%. Growing unemployment, poor sleep patterns in some populations, low physical activity, high tobacco/cigarette, and alcohol consumption all contributed to the prevalence of obesity in the country. Overweight and obesity appear to be most prevalent among men, people over 64 years of age, residents of rural areas, and members of a lower socioeconomic class. Prevalence of adult overweight and obesity in 20 European countries. National policies and programs to combat nutrition-related health problems are still underdeveloped in the Czech Republic (*Voráčová et al., 2015*).

Some efforts have been made to improve nutrition literacy, and more and more Czech consumers are reported to be interested in information about calories, carbohydrates, and sugar in foods. However, the prevalence of overweight and obesity is still a problem for the country. The trend extends even to children. Family affluence appears to be a contributing factor, where overweight problems among adolescents and school children have been found in families with lower levels of affluence. In addition, Czech children and adolescents consume fewer fruits and vegetables per day compared to other European countries (*Voracova et al., 2015*).

Obesity and nutrition are important economic debates. The costs associated with these issues are likely to increase substantially in the future, especially if they are ignored. Meanwhile, health care in the Czech Republic may become unsustainable as obesity among adults and children increases. Only a few studies have focused on eating habits in the Czech Republic to promote

healthy eating and, therefore, to alleviate obesity and diet-related problems. Little is known about the motivations of Czech consumers and other factors influencing their food choices. Obtaining information on such issues is crucial because the effectiveness of the proposed resolution requires a comprehensive understanding of the population's food consumption behaviour. Consumers' call for healthy eating requires an understanding of the motivations behind their food choices. Researchers argue that health considerations determine more than just healthy food choices or dietary habits. People are guided by different motives (e.g., health, mood, convenience, sensory appeal, natural composition, price, weight control, familiarity, and ethical concern) in their food choices. The level at which these motives influence their food consumption varies across socioeconomic and cultural settings. Regarding the existing literature, information on motives and biases for healthy food consumption among Czech consumers remains limited. It is critical to obtain information on such issues to develop countermeasures that will reduce obesity and other nutrition-related problems prevalent in the country.

Meanwhile, personality traits may also influence the choice of which foods to eat. Previous studies have used the five-factor personality theory (i.e., openness, extraversion, conscientiousness, benevolence, and neuroticism) to predict general health-related behaviours, food habit, adoption of controversial food technologies, and in other contexts. Nystrand reveals the importance of personality traits in functional food consumption with the dominant influence of conscientiousness, malleability, and neuroticism. However, the authors suggested the inclusion of moderator-mediator interaction effects in health habits, food values, or attitudes toward food.

Notably, recent studies have shown that the ongoing pandemic has led to changes in consumer behaviour in general. It is argued that given the economic and social consequences of the pandemic, overall consumer habits and food choices may have changed. In addition, Snuggs & McGregor's (2021) initial observation shows that consumers changed priorities and needs following the introduction of pandemic-related measures. The authors note that the pandemic caused anxiety and loneliness in consumers, which changed their buying habits and even led to weight gain. Glabska et al. (2020) argue the role of pandemic stressors in changing the dynamics of motivations and healthy food choices. emphasize improved eating during the pandemic for Brazilians who have enough time to cook, have a positive attitude, and do not overdo it. Also reported that eating habits remain largely unchanged during a pandemic, but lifestyle changes and anxiety levels spread. The authors claim that people with high anxiety levels and who were positively diagnosed with COVID-19 changed their diets in favour of healthier alternatives. As

such the data on changes in consumer consumption habits still varies from country to country. More research is needed to comprehensively understand the eating patterns of people affected by the onset of the pandemic. They are important for the design and implementation of individual policies and inventions that promote health in a post-pandemic world.

Motivations for food choice. Previous studies have examined consumers' primary motivations for food choice. Researchers have commonly used the Food Choice Questionnaire to measure and determine which motives influence consumers' food choices. The FCQ emphasizes nine motives for food choice: health, mood, convenience, sensory appeal, natural content, price, weight control, familiarity, and ethical considerations. However, the authors emphasize differences in the relevance of each motif based on gender, age, and income. For example, people from a lower socioeconomic class tend to choose food for price and social reasons. Young people's awareness of the health and nutrition aspects of food remains low. For parents choosing foods for their children, motivations for weight control, price, and mood were low. Moreover, evidence from recent studies also suggests varying degrees of influence of motivations on food choices. For example, consumers driven by convenience motives are more likely to consume fast food, convenience foods, and less healthy foods. In cultures that emphasize body image, food choices are influenced by nutrient content and weight control motivations. In the case of the COVID-19 pandemic, recent results have shown the relevance of health motives in consumers' eating patterns. Many more replications of FCQ studies have been conducted; however, because context and regional differences.

### **4.3 Conceptual Framework.**

Given the arguments presented above, this paper postulates a potential association of food choice motifs in the attitude-intent nexus within TPB. Several attempts have been made to explore and validate such a concept. For example, Kim & Jeon linked motives (e.g., health, sensory response, mood, and weight control) to consumers' cognitive assessment (attitude) and chocolate choices, similarly investigated the relationship between food choice motivations (e.g., health, mood, familiarity, sensory appeal, natural composition, and price) with attitudes and ethnic food consumption in Pakistan. Organic food choice studies also postulate a link between motives and food choice constructs in the TPB model. These studies show that the presence of certain food choice motifs influences the formation of attitudes toward a food product and its subsequent consumption. However, food choice motives and the extent to which they influence attitudes vary

from country to country. Pearcey & Zhan argue that food culture, social and economic situations, and other contextual factors influence differences in evaluations of food choice motivations across countries. In addition, this work emphasizes that personality traits can strengthen or weaken the relationship between food choice motivations and consumers' attitudes toward healthy food.

Empirical evidence supporting the concept of the study may help to develop individualized strategies and interventions to address obesity and other nutrition-related health problems in less-studied territories, such as the Czech Republic. (Kim, S.H. & Jeon, H.M. 2020).

## **4.4 The role of social protection in reducing poverty and the risks of malnutrition**

The national system of social protection plays a pivotal role in optimizing the material capabilities and well-being of the most tangible categories of the population to meet their own preferential needs, including healthy and nutritious food (access to food), and ensures the stability of such families in a crisis. Social protection in Kyrgyzstan aims to reduce the risks arising at different stages of the life cycle and plays a determining role in overcoming the threshold of poverty, while contributing to food protection and optimization of the quality of nutrition. Social protection programs include social services and existing employment support measures. The multifaceted mechanism of pension provision is one of the main ones in reducing the sensitivity of families. The total cost of providing pensions amounts to 9.8% of the value of GDP<sup>58</sup> with consumption-oriented pension payments keeping one fifth of the Kyrgyz population out of poverty each year (in other words, pension payments reduce poverty by about 20%). The average value of pension payments is 124 percent of the subsistence level, which makes it possible to cover basic food consumption needs. But despite the remarkable progress that has been made in increasing the average value of pension payments, 36% of pensioners continue to be paid less than the subsistence minimum 60.

After a difficult initial stage of the country's sovereignty and transition, Kyrgyzstan has achieved a notable result in economic and social development. The state economy is recovering from recent shocks, including the financial crises of 2008 and 2014, political unrest, and the

effects of natural disasters, but food insecurity and poverty still affect a large portion of Kyrgyzstan's population. Limited access to food (especially economic access) is a serious threat to household food security. According to the National Statistics Committee, low-income households spend on average 69% of their monthly income on food. Micronutrient deficiencies resulting from inadequate food quality and variety are observed in many children in the country. In 2011, more than a third of children under the age of five were anaemic, and in 2014, more than a tenth of children had stunting due to chronic malnutrition. Instability hurts household food security in rural areas and in areas affected by natural disasters and political unrest. Poverty and food insecurity are linked, as a lack of purchasing power prevents households from consuming enough nutritious food. Social security is relatively comprehensive in Kyrgyzstan, but social assistance and active employment programs are quite small in scale. Remittances received from migrant workers constitute a significant share of household income, playing the role of informal social protection mechanisms. The social insurance system established in the country includes pensions for vulnerable groups, as well as maternity, unemployment, and funeral benefits. These benefits play an important role in the national social security scheme; a significant reduction in poverty (over 56 %) is attributable to pensions.

Kyrgyzstan was one of the first CIS countries to reform its social assistance system, which consists of monthly allowances for vulnerable groups, cash compensation, and energy subsidies and compensation. International partners, and in particular the World Food Program, have actively promoted incentive-based social security, which is being mainstreamed into the national social security agenda. Increasing coverage of incentive-based social protection systems has the potential to break the cycle of poverty and food insecurity. The Kyrgyz government provides meals to schoolchildren through an active school feeding program, which greatly enhances food security for children. The programme has achieved significant coverage and expenditure financial commitments; however, the nutritional value of the food provided needs to be improved.

Since 2010, the Government, together with its partners, had demonstrated a commitment to improving the well-being of the population and had made considerable progress on social policies. Several reforms have been implemented over the previous two decades, and there are ongoing efforts to expand and consolidate the social security system. Nevertheless, there remain several

gaps and challenges that need to be addressed through comprehensive reforms to improve food security and nutrition.

Analysis of social security programs shows that they have different impacts on poverty depending on the coverage and proportionality of benefits. In general, the focus in addressing these gaps and challenges should be on social protection incentives and measures that change gender relations, as well as systems for responding to shocks and nutritional targets. Recent research has shown that gaps also include comprehensive social service delivery systems. Now, the only stimulus programs that have been implemented nationally are proactive employment interventions such as public works programs. To break the cycle of poverty and food insecurity, incentive-based social protection, and gender-transformative social protection programs, informed by public consultation, are needed. Along with this, even underdeveloped incentives can increase the resilience of the Kyrgyz population in the face of shocks. Except for the school feeding program, national social welfare programs do not include nutrition-oriented or nutrition-related targets that are recognized as important for addressing food security concerns by both the national government and international partners. Critical reforms to develop effective social welfare systems include promoting policy dialogue, improving social welfare program design, streamlining standards, increasing targeting and implementation efficiency, ensuring sound budgeting, and engaging international development partners to support government efforts (*WFP and Maastricht University, 2018c*).

## **5. Survey**

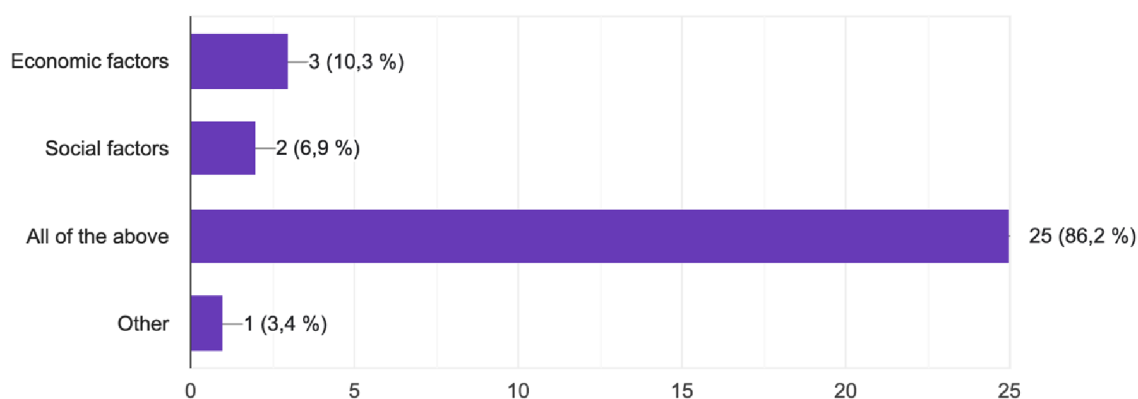
In the survey, I addressed all the questions regarding understanding the factors influencing food consumption. Conclusions of survey were drawn based on the largest percentage of participant's answers. I realized which socio-economic factors, depends on the opinions of the participants, influenced the most in a particular country. As participants, I chose people who have been living in two countries. I thought that this would be the best indicator in comparing the two countries.

**Statistic graph 1.**



### What do you think influences human food consumption?

29 ответов

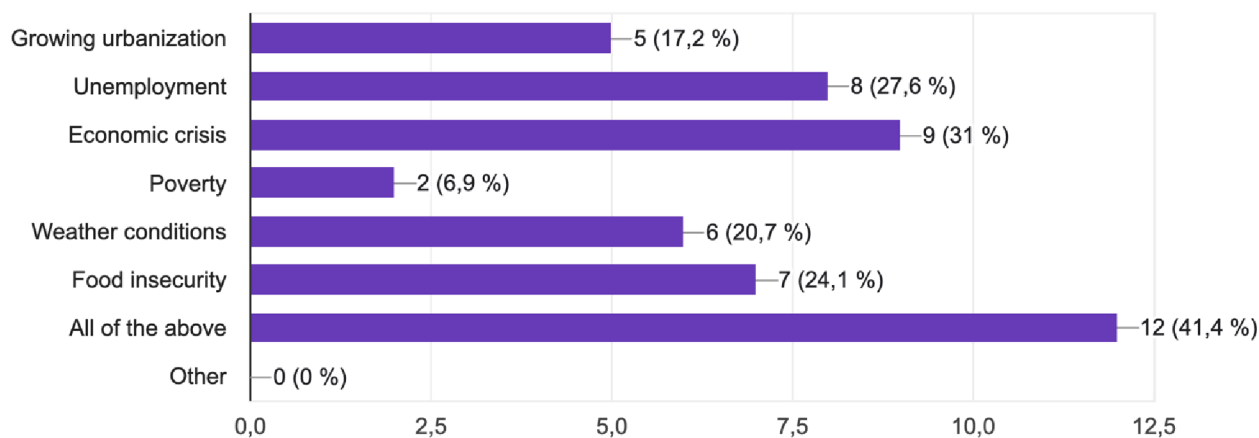


From the first statistical graph, we can determine that the majority, namely 86.2% of survey participants, agree that two categories such as social and economic factors influence food consumption.

### Statistic graph 2.

#### In your opinion, what economic factors can influence human food consumption?

29 ответов

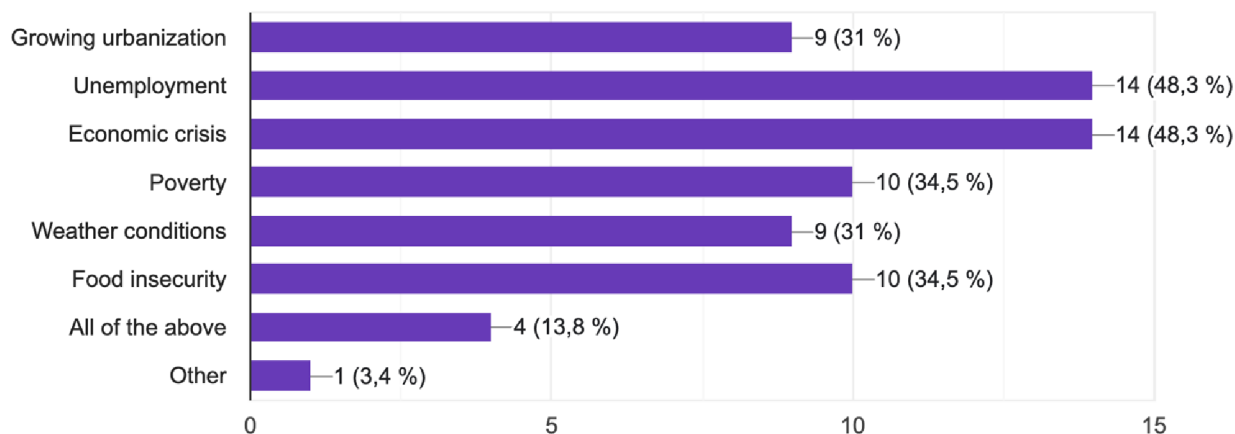


According to the participant's results one the second graph, the main influencing economic factors is the section with all the listed factors.

### Statistic graph 3.

In your opinion, what economic factors can influence human food consumption in Kyrgyzstan?

29 ответов

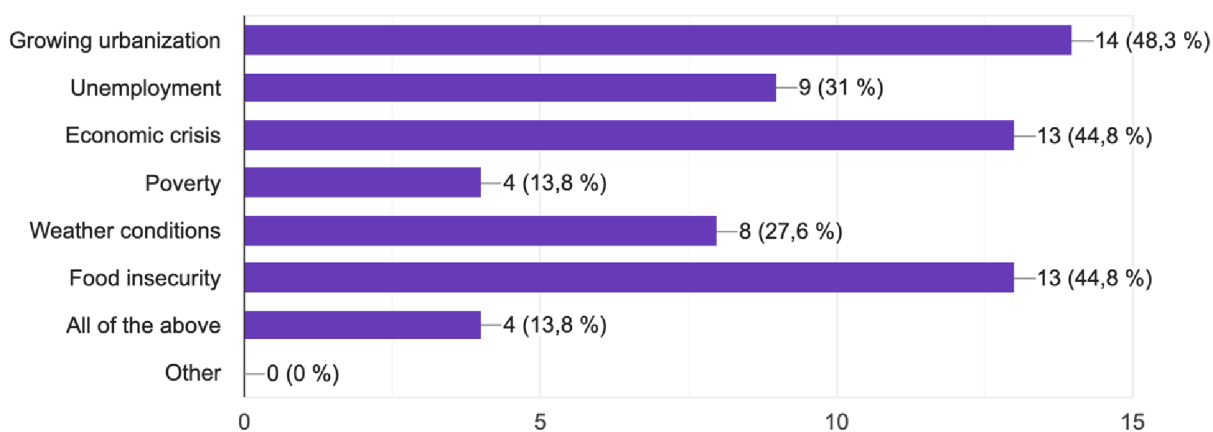


Unemployment and economic crisis in Kyrgyzstan taking the most common answers from participants. (Graph 3 and Graph 4) Since in Czech Republic are growing urbanization, economic crisis, and food insecurity.

**Statistic graph 4.**

In your opinion, what economic factors can influence human food consumption in Czech Republic?

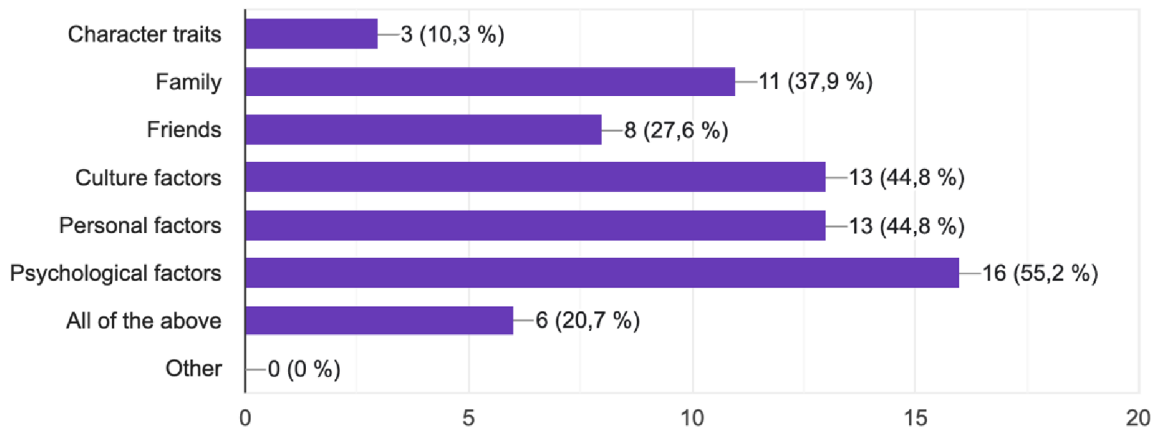
29 ответов



### Statistic graph 5.

In your opinion, what social factors can influence human food consumption?

29 ответов



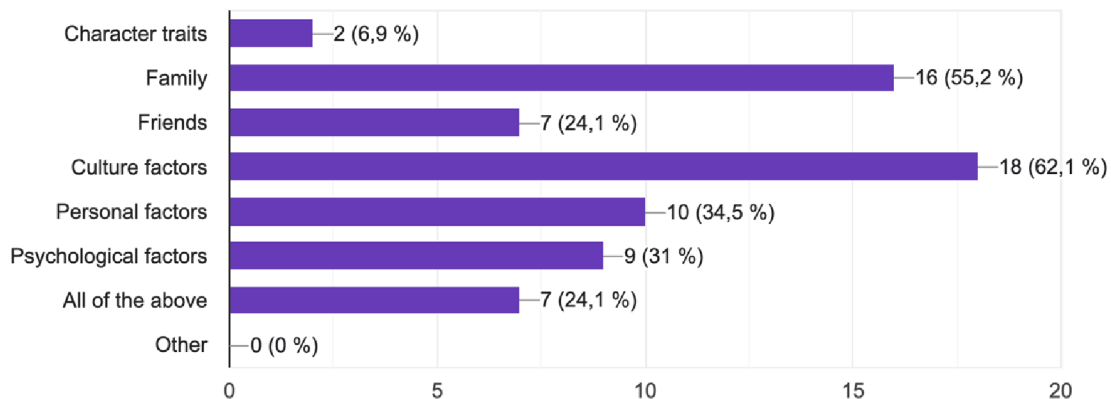
In the fifth graph the largest percentage (55,2%) of what factor can influence human food consumption is psychological factors then culture (44,8%) and personal factors (44,8%)

### Statistic graph 6.

Culture factors and family are most influencing factors of human food consumption in Kyrgyzstan, while in the Czech Republic it is personal and cultural factors.

In your opinion, what social factors can influence human food consumption in Kyrgyzstan?

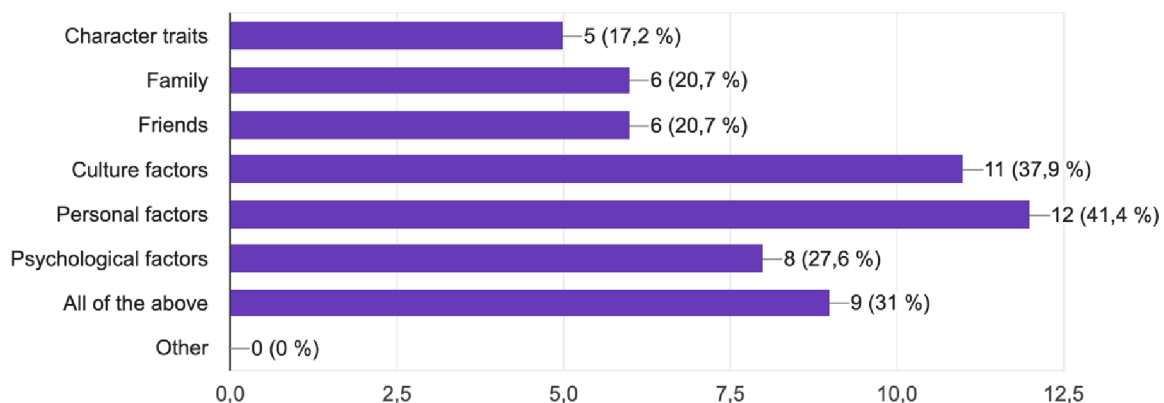
29 ответов



### Statistic graph 7.

**In your opinion, what social factors can influence human food consumption in Czech Republic?**

29 ответов

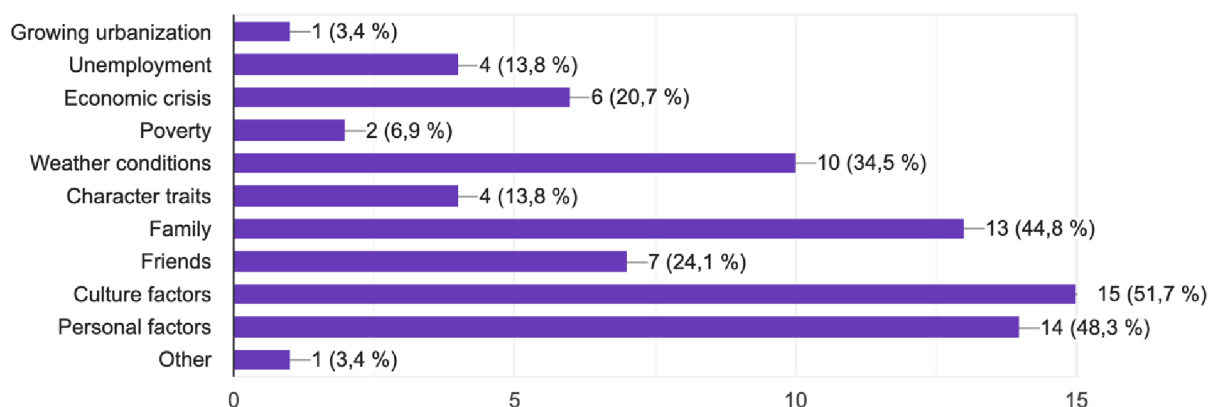


**Statistic graph 8.**

In the last two graphs the personal factors took pretty high level and were the same percentage from both of the countries (48,3%) . However , in Kyrgyzstan people tend to be influenced mostly by cultural factors. Where in Czech Republic also taking the place for ,character traits.

**What factors influence you personally when choosing food consumption in Kyrgyzstan?**

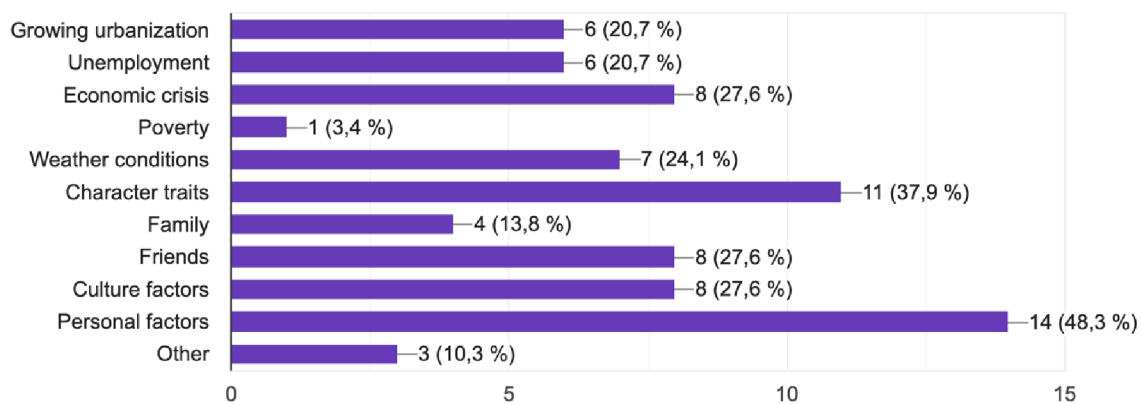
29 ответов



**Statistic graph 9.**

## What factors influence you personally when choosing food consumption in the Czech Republic?

29 ответов



## Conclusion

Food quality and safety are a very hot topic nowadays, especially in an ever-evolving global economy. Possible malfunctions can lead to fatal consequences not only for the trade or production organization (financial, moral), but also for many residents. For food products, risk (safety) reflects the potential impact on the health of consumers. Pathogenic microorganisms, chemical contaminants (e.g. during cleaning of production equipment) or solid objects (e.g. shards of glass) pose a potential hazard in food. Despite all the measures taken to minimize this hazard, food safety is not absolute and harmless, and failure can occur. Risk identification is a structured approach to identifying possible risks and evaluating the factors that can affect these risks in a positive or negative way. In the long-term perspective of the Food and Nutrition Safety Strategy the Czech authorities (including the EU) strive to strengthen the protection and promotion of health as well as the legitimate interests of consumers. The Strategy recognizes as the most important areas of interest the further strengthening of cooperation with the European Food Safety Agency, communication, and training of consumers as well as public administration staff.

## Appendix

Changes in meat consumption in the Czech Republic. What are the main reasons for changes in meat consumption in the Czech Republic? According to information from retail chains, the Czech consumer likes to buy at a promotional price. Up to half of the entire range offered by retail chains is sold at a discount. Studies by the Ministry of Agriculture of the Czech Republic have also identified price orientation as a major trend in meat consumption. However, the origin of meat also played a role. Consumers looked for information on what breeding the meat came from and under what conditions the animal lived. However, Kamenik also points out that the Czech consumer is guided not only by price, but also by other aspects, mainly the health effects of this type of meat. Therefore, according to the authors of the article, white meat (poultry) is more popular than red meat (pork and beef). According to experts, white meat is much healthier because it contains less fat, and the human body is better able to absorb the proteins contained in this type of meat. However, the author does not deny that a great advantage of poultry meat, especially chicken meat, is its low price, which is due to the cost of primary production.

Price tends to be an important decision-making factor for most consumers. It is in the case of beef that, because of interest in other meats and the restriction of beef consumption, its price is increasing. There is no surprise in this. Raising cattle tends to be a relatively expensive endeavour. If a farmer wants to be profitable, he/she must respond in some way to changes in demand. This may involve trying to sell more meat or make it more expensive. The Czech Association of Meat Processors gives the following reasons for the decreasing interest in beef: a) The impact of BSE (Bovine Spongiform Encephalopathy) disease on cattle is overrated; b) the quality of beef offered is relatively low, but above all unreliable, substandard. In this sense, beef loses out in competition with pork and poultry; c) consumer perception of the price-quality ratio for beef is worse than for the other two main types of meat. Chicken meat is the best of this comparison; d) Beef from older cuts is traded for younger meat in the marketplace. This experience will discourage consumers from buying beef next time; e) economic reasons (inadequate refrigeration capacity, weight loss in cold storage of meat) lead to premature

shipment of meat and therefore insufficient maturation and failure to achieve the expected culinary and sensory qualities. From the above, the main reason why consumers do not buy beef is mainly its poor quality, which does not match the price. At least that is what the Czech Association of Meat Processors claims. It is possible, for example, that the decline in beef's popularity is not only due to fear of BSE, but also to relatively demanding cooking, since most consumers were probably served beef on a plate that was too tough to slice. In addition, there is still increasing pressure on the quality and provenance of meat in the Czech Republic. This increases the amount of meat that is sold directly from the producer.

Consumers also have more confidence in the various quality labels and regional product labels. Thus, the aspect of where the meat comes from is becoming increasingly important. We can also assume that as society becomes richer and the economic situation and standard of living continue to improve, there will be an increasing emphasis on quality and assurance of origin. Breeders and producers who do not adapt to this trend will undoubtedly face some difficulties. In addition, the Ministry of Agriculture plans to make it easier for consumers in this regard. Thus, it will increasingly focus its attention.

**Healthy and Sound Nutrition** According to Panek, healthy living trends are becoming increasingly popular nowadays and there can be no doubt that good nutrition is part of a healthy lifestyle. By healthy eating, we mean a supply of food of sufficient quality, without chemicals, with sufficient nutritional value to ensure healthy growth and sufficient energy for all activities. However, there should not be an excess of this energy in the body. Humans get their energy from food, namely from its three components: proteins, fats, and sugars. These individual food components should be in a certain combination and in a certain amount, with the following ratio recommended: 15% proteins, 30% fats and 55% sugars. According to current scientific data, this ratio of individual components will ensure proper and healthy functioning of the body. Vitamins and minerals are other important food components in terms of a healthy diet. A balanced supply of individual vitamins and minerals is important in a healthy diet. It follows from the above that meat also has its indispensable place in the human diet; it is only a question of quantity as well as form. For example, sausages are not part of a healthy diet. However, chicken, rabbit, but limited amounts of pork and beef are the basis of a varied diet. Today, more and more people are paying attention to the principles of a healthy



lifestyle. These include a rational diet. Diet and its composition significantly affect the health of each person. The diet should be balanced and should not be depleted of important components or, on the contrary, there should not be an excess of these components. According to the human body needs 45 nutrients for normal functioning, and each of these nutrients has its own indispensable place in the human diet. Shtikova note that meat consumption can be classified as a risky behavior that subsequently leads to obesity. Excessive meat consumption leads to a few diseases, such as heart disease, low blood pressure, diabetes, liver, and spleen diseases, and especially cancer. More and more people are trying to eat rationally, but there are also many people who do not know the rational way of eating. Because of the increasing wealth of the population, these people are buying more and more foods, including meat. Vegetarianism and veganism. Other ways of eating that significantly affect meat consumption and thus the sustainability of meat production are vegetarianism and veganism. Vegetarianism is a way of eating that eliminates meat from the diet. Veganism is a diet that eliminates all animal products.

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