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## Socio-psychological consequences of food price volatility: a synthesis of international practice

**Ol'ga O. Smirnova**

PhD in Economic Professor,  
Slavic Greek Latin Academy,  
105000, 20, Radio str., Moscow, Russian Federation;  
e-mail: oos39@mail.ru

**Anna S. Elagina**

PhD in Economics, Associate Professor,  
Department of Economics,  
Jewish University,  
127273, 6, Otradnaya st., Moscow, Russian Federation;  
e-mail: yelagina.anna@gmail.com

### Abstract

The purpose of work is to review current approaches to assess the impact of food price volatility on the psychology and social situation of the population by the example of developed, developing and least developed countries. The reasons for the sharp increase in food prices include a significant number of factors, among which are biofuels market development, deterioration of the quality of soil and crop failures, the devaluation of the US dollar, increased energy prices, as well as restrictions on exports and imports in some countries. Therefore, the projection results show that the trend of food price volatility will only increase. The definance and the factor of speculation on the food market, which are considered the cause of rising food prices in 2007-2008, when according to some researchers there were no significant changes in supply and demand, but food prices went through a noticeable shift. Thus, the economic behavior of the biggest players in the food market has led to an abrupt increase in hungry people in 33 countries around the world, "food riots" were the reason for the change of the political system in a number of less developed countries. Volatility in food prices as the 2008 and 2010 showed that a one-time sharp increase in prices of basic food is the cause of political instability in countries with a different type of federal system. At the same time a key factor in maintaining the existing governance regime was the presence of food independence of the state, a developed agricultural sector even in low economic growth. Thus, history has shown that the maintenance of price stability in the internal market for energy and food is a key target for the state.

### For citation

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**Keywords**

Food crisis, world economy, food price, social structure, social instability, developing countries, psychology.

**Introduction**

Over the past 10 years, there have been two food crises, the impact of which has been widely covered in scientific research. The first crisis occurred in 2008, when from January 2007 to March 2008, food prices increased by 51% (the overall growth for the year was only 3%). The second food crisis led to a 40% increase in food prices from January 2010 to February 2011, while prices fell only after 2.5–2 years [Bellemare, 2015]. This price increase has led to social upheaval in several countries in Africa, Asia, the European Union and Latin America [Berazneva, Lee, 2013].

Changes in food prices have a significant impact on the social situation of the population in less developed and developing countries, since a significant part of the cash income is spent on food, while in almost all countries there is an opinion that national governments can regulate food prices. Therefore, several sources show a positive correlation between social tension and the food price index [Clapp, 2009]. The opposite is also true, the preservation of food prices determines political stability in the country, which is typical, for example, for Russia and India, where during this period there was no abrupt change in prices.

In these circumstances the generalization of current research in the area of influence of the social structure of food price volatility is a scientific interest in the part of the more comprehensive assessment of social impact in the regulation of food prices [De Schutter, 2010].

In this paper, it is proposed to systematize modern studies in the field of assessing the impact of food price volatility (not of their high or low levels, but their sharp increase in a short time) on the behavior of social groups of citizens.

**Main part**

In general, in this subject area, we can distinguish works directly related to sociology that study various aspects of the behavior of social groups in different conditions of food availability [Reardon, 2003; Sneyd, Legwegoh, Fraser, 2013; Von Braun, Tadesse, 2012]. The topics and work devoted to the economic mechanism of the functioning of the food market and the assessment of food supply and demand factors are no less significant for research [Wright, 2011].

Modern sources for analyzing the impact of changes in food prices on social shocks in different countries can be roughly divided into two types:

- devoted to generalization of the experience of the first food crisis of 2008, to a greater extent in developing and least developed countries of Asia, Africa, Europe and Latin America, as well as to the preservation of political regimes in countries with food security [Wodon, Zaman, 2010];
- dedicated to summarizing the experience of the second food crisis of 2010 [Tadesse, 2016].

A number of studies examine the correlation between increases in food prices and social tension in general; the assessment of the social status of households in the face of rising food prices is being specified; The impact of public administration methods on food availability for the population is considered.

In this paper, generalization methods based on studies of the food crisis of 2008 and 2010 in Africa, Southeast Asia, Eastern Europe and Latin America are used. The paper also defines the institutional model of food price dependence, evaluates the effectiveness of state policy in the field of food price regulation and evaluates the effectiveness of this regulation by the population.

The materials of the work are studies in the field of assessing the interdependence of increasing food prices for riots and unrest in developing and less developed countries.

The volatility of world food prices has now increased significantly: for example, until 2008, the previous food crisis was in 1972. Never before in the conditions of organized exchange trading on international trading floors has there been a virtually simultaneous increase in food prices by such a significant amount: the increase in prices for some products for three to five months exceeded 100%.

In world practice, to determine the general level of changes in food prices, it is customary to calculate a price index that includes several types of products (cereals, meat, oil, aquatic biological resources, vegetables and fruits). However, the use of such an index in econometric models for assessing the dependence of food price increases on the occurrence of “food riots” is irrelevant, since not all prices included in the “basket” of the index increased during this period. It is also not taken into account that when compiling this indicator, the heterogeneous structure of consumption of these products in countries with different levels of development and traditions of consumption of certain types of food is not taken into account. So, in 2008 and 2010, prices for all cereal crops increased significantly, with the most significant growth observed for wheat and rice – the most popular crops consumed in the least developed and developing countries. It is with the increase in prices for these crops that food crises are associated.

A significant number of negative factors, including the development of the biofuel market [Gardebreek, Hernandez, 2013], deterioration in the quality of soils and crop failures, devaluation of the US dollar, increase in energy prices, as well as restrictions on export and import in several countries, lead to forecasts that food price volatility trends will only intensify. There are also significant issues of speculative operations in the food market, which are considered to be the reason for the increase in food prices on the year 2008, when, according to a number of researchers, there was no significant change in supply and demand, but a change in food prices occurred. Also, a significant number of studies have shown that there will no longer be low prices for food products on the world market: from 2000 to 2008, prices for wheat, butter, milk increased 3 times, rice, corn and chicken meat - 2 times, significantly increased prices for cassava and palm oil. By 2050, it is planned to double prices for the main types of food products.

All this leads to the need to develop instruments of state regulation to protect the domestic market from such shocks, as well as assessing the social consequences of food price volatility.

### **Social consequences of the global food crisis in developing and less developed countries**

According to the Malthus hypothesis, social collapses are inevitable when there is not enough food available to meet the needs of the population. Practice confirms that this hypothesis, formulated in 1782, is reflected in the public administration of the socio-economic structure of society [Arezki, Bruckner, 2011].

Higher commodity prices are more likely to affect low-income consumers, as they spend most of

their income on food [Bellemare, 2015]. In addition, commodity prices such as wheat, rice, corn, and soybeans have a greater impact on low-income consumers. Also, low-income consumers are more dependent on food market regulation and in countries where food shortages are covered by foreign suppliers, since the tools used to support food prices are often not enough, especially if they are implemented through direct subsidies to their state budget [Fafchamps, 1992].

World history knows many examples of “food riots” when an increase in the price of food led to social and then political upheaval and mass protests [Reardon, 2013]. According to some researchers, such collective social movements are the oldest way to express dissatisfaction with public administration in the history of mankind. Often, these protests led to the transformation of the political regime. Thus, the sources mention cases of active expression of discontent in Europe in 1848, which subsequently led to the development of the revolutionary movement. Currently, many countries depend on the global food market and, as a result, their political regimes remain unstable [Roache, 2010]. It should be noted that the situation is fundamentally different in countries with even a low level of development, but with a developed agricultural sector, and countries that do not have food independence.

According to some researchers, the food crisis of 2008, caused by speculation, led to an abrupt increase in the number of hungry people in 33 countries, a significant increase in mortality from hunger and malnutrition. Moreover, the reason for this situation was the behavior of a number of major players in the food market and the existing trading system on the international exchange, which makes it possible to unreasonably increase food prices for both wholesale deliveries and futures contracts [Sneyd, Legwegoh, Fraser, 2013].

In 2011, protests due to rising food prices arose in northern Africa and the Middle East in countries such as Guinea, Cameroon, Ethiopia, Burkina Faso, Philippines, Bangladesh, Yemen, Haiti, Mozambique, Egypt [Bellemare, 2015]. In the former USSR, such unrest arose in Uzbekistan, but not in Tajikistan, where the active development of dekhans led to a significant increase in the food independence of the state [Barfiyev, 2013]. According to a number of researchers, these social phenomena arose as a result of the removal of the population from the political process under dictatorship regimes, however, studies have shown that their true cause was a significant increase in food prices.

## Conclusion

The volatility of food prices in both 2008 and 2010 showed that a simultaneous sharp increase in prices for basic products is the cause of political instability in countries with different types of federal structure. At the same time, the key factor in preserving the existing state government was the food independence of the state, in the presence of a developed agricultural sector of the economy, even in conditions of insufficient development of the economy. Thus, history shows that maintaining stable prices on the domestic market for energy and food resources is a key task of the state.

## References

1. Clapp J. (2009) Food Price Volatility and Vulnerability in the Global South: considering the global economic context. *Third World Quarterly*, 30 (6), pp. 1183-1196.
2. De Schutter O. (2010) Food Commodities Speculation and Food Price Crises: Regulation to reduce the risks of price

- volatility. *United Nations Special Rapporteur on the Right to Food Briefing Note*, 2, pp. 1-14.
3. Elagina A.S., Smirnova O.O. (2017) Razvitiye institutov psikhologicheskoy podderzhki v sel'skoy mestnosti: vozmozhnosti i ogranicheniya [Development of institutions of psychological support in rural areas: opportunities and restrictions]. *Psikhologiya. Istoriko-kriticheskie obzory i sovremennyye issledovaniya* [Psychology. Historical-critical Reviews and Current Researches], 6 (4B), pp. 257-265.
  4. Fafchamps M. (1992) Cash crop production, food price volatility, and rural market integration in the third world. *American Journal of Agricultural Economics*, 74 (1), pp. 90-99.
  5. Gardebroek C., Hernandez M.A. (2013) Do energy prices stimulate food price volatility? Examining volatility transmission between US oil, ethanol and corn markets. *Energy economics*, 40, pp. 119-129.
  6. Gilbert C.L. (2010) Has food price volatility risen. In: *Technological Studies Workshop on Methods to Analyse Price Volatility*. Seville, pp. 28-29.
  7. Holt-Giménez E. (2009) From food crisis to food sovereignty: the challenge of social movements. *Monthly Review*, 61 (3), pp. 142.
  8. Reardon T. (2003) The rise of supermarkets in Africa, Asia, and Latin America. *American journal of agricultural economics*, 85 (5), pp. 1140-1146.
  9. Roache S.K. (2010) What explains the rise in food price volatility? *IMF Working Papers*, pp. 1-29.
  10. Sneyd L.Q., Legwegoh A., Fraser E.D.G. (2013) Food riots: Media perspectives on the causes of food protest in Africa. *Food security*, 5 (4), pp. 485-497.
  11. Tadasse G. (2016) Drivers and triggers of international food price spikes and volatility. In: *Food Price Volatility and Its Implications for Food Security and Policy*. Springer International Publishing, pp. 59-82.
  12. Von Braun J., Tadesse G. (2012) Food security, commodity price volatility, and the poor. In: *Institutions and Comparative Economic Development*. Palgrave Macmillan UK, pp. 298-312.
  13. Von Braun J., Tadesse G. (2012) *Global food price volatility and spikes: an overview of costs, causes, and solutions*. ZEF-Discussion Papers on Development Policy, 161. Bonn.
  14. Wodon Q., Zaman H. (2010) Higher food prices in Sub-Saharan Africa: Poverty impact and policy responses. *The World Bank Research Observer*, 25 (1), pp. 157-176.
  15. Wright B.D. (2011) The economics of grain price volatility. *Applied Economic Perspectives and Policy*, 33 (1), pp. 32-58.

## **Социально-психологические последствия волатильности цен на продовольствие: обобщение международной практики**

**Смирнова Ольга Олеговна**

Кандидат экономических наук,  
профессор,

Славяно-Греко-Латинская Академия,

105005, Российская Федерация, Москва, ул. Радио, 20;

e-mail: oos39@mail.ru

**Елагина Анна Сергеевна**

Кандидат экономических наук, доцент,  
кафедра экономических дисциплин,

Еврейский университет,

127273, Российская Федерация, Москва, ул. Отрадная, 6;

e-mail: yelagina.anna@gmail.com

### **Аннотация**

Цель. Целью работы является рассмотрение современных подходов к оценке влияния волатильности цен на продовольствие на психологически-социальное состояния населения на примере развитых, развивающихся и наименее развитых стран. Методология. Методология работы включает в себя применение методов научного познания, таких как анализ причин и последствий продовольственных кризисов в мировой экономике, обобщение результатов научных исследований на примере стран с различным уровнем развития и сопоставление влияния в различных институциональных условиях. Результаты. К причинам резкого увеличения цен на продовольствие относится значительное количество факторов, к которым относится в том числе и развитие рынка биотоплива, ухудшение качества почв и неурожай, девальвации доллара США, повышение цен на энергоресурсы, а также ограничения на экспорт и импорт в ряде стран. Поэтому результаты прогнозов показывают, что тенденции волатильности цен на продовольствие будут только усиливаться. Значимы и фактор спекулятивных операций на рынке продовольствия, которые считаются причиной повышения цен на продовольствие 2007-2008 года, когда по мнению ряда исследователей не было значительных изменения спроса и предложения, однако изменение цен на продовольствие произошло. Таким образом, экономическое поведение крупнейших игроков рынка продовольствия стало причиной скачкообразного увеличения голодающих в 33 странах мира, «продовольственных бунтов» и стало причиной смены политического строя в ряде менее развитых стран. Заключение. Волатильность цен на продовольствие как 2008 года, так и 2010 года показала, что одномоментное резкое увеличение цен на основные продовольствия является причиной возникновения политической нестабильности в странах с различным типом федерального устройства. При этом ключевым фактором сохранения существующего режима управления государством являлось наличие продовольственной независимости государства, наличие развитого аграрного сектора экономики даже в условиях недостаточного развития экономики. Таким образом, история показывает, что поддержание стабильных цен на внутреннем рынке на энергетические и продовольственные является ключевой задачей государства.

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### **Ключевые слова**

Продовольственный кризис, мировая экономика, цена продовольствия, социальная структура общества, социальная нестабильность, развивающиеся страны, развитые страны, менее развитые страны.

### **Библиография**

1. Clapp J. Food Price Volatility and Vulnerability in the Global South: considering the global economic context // Third World Quarterly. 2009. Vol. 30 (6). P. 1183-1196.
2. De Schutter O. Food Commodities Speculation and Food Price Crises: Regulation to reduce the risks of price volatility // United Nations Special Rapporteur on the Right to Food Briefing Note. 2010. Vol. 2. P. 1-14.

3. Fafchamps M. Cash crop production, food price volatility, and rural market integration in the third world // *American Journal of Agricultural Economics*. 1992. Vol. 74 (1). P. 90-99.
4. Gardebroek C., Hernandez M. A. Do energy prices stimulate food price volatility? Examining volatility transmission between US oil, ethanol and corn markets // *Energy economics*. 2013. Vol. 40. P. 119-129.
5. Gilbert C.L. Has food price volatility risen // *Technological Studies Workshop on Methods to Analyse Price Volatility*. Seville. 2010. P. 28-29.
6. Holt-Giménez E. From food crisis to food sovereignty: the challenge of social movements // *Monthly Review*. 2009. Vol. 61 (3). P. 142.
7. Reardon T. The rise of supermarkets in Africa, Asia, and Latin America // *American journal of agricultural economics*. 2003. Vol. 85 (5). P. 1140-1146.
8. Roache S.K. What explains the rise in food price volatility? // *IMF Working Papers*. 2010.
9. Sneyd L.Q., Legwegoh A., Fraser E.D.G. Food riots: Media perspectives on the causes of food protest in Africa // *Food security*. 2013. Vol. 5 (4). P. 485-497.
10. Tadasse G. Drivers and triggers of international food price spikes and volatility // *Food Price Volatility and Its Implications for Food Security and Policy*. Springer International Publishing, 2016. P. 59-82.
11. Von Braun J., Tadesse G. Food security, commodity price volatility, and the poor // *Institutions and Comparative Economic Development*. Palgrave Macmillan UK, 2012. P. 298-312.
12. Von Braun J., Tadesse G. Global food price volatility and spikes: an overview of costs, causes, and solutions. ZEF-Discussion Papers on Development Policy. 2012. № 161. 50 p.
13. Wodon Q., Zaman H. Higher food prices in Sub-Saharan Africa: Poverty impact and policy responses // *The World Bank Research Observer*. 2010. Vol. 25 (1). P. 157-176.
14. Wright B.D. The economics of grain price volatility // *Applied Economic Perspectives and Policy*. 2011. Vol. 33 (1). P. 32-58.
15. Елагина А.С., Смирнова О.О. Развитие институтов психологической поддержки в сельской местности: возможности и ограничения // *Психология. Историко-критические обзоры и современные исследования*. 2017. Т. 6. № 4В. С. 257-265.