

# The overlapping food and economic crises

Carmen Radu<sup>1</sup>, Liviu Radu<sup>2</sup>,

<sup>1</sup>University Lecturer, PhD - Nicolae Titulescu University, Bucharest, Romania

<sup>2</sup>University Lecturer, PhD - Nicolae Titulescu University, Bucharest, Romania

## Abstract

*In this paper we are looking at the cause-effect relationship between the economic, financial, demographic and food crises. Crises are interrelated and need to be viewed together, as the effects of one crisis are or may represent causes for another crisis. The current food crisis translates today in food price increases, in the level of health of the population that does not have enough resources for a balanced diet and in obesity problems of the young generation (Romania ranks third among European countries). All these issues with immediate and direct effects over the population in our country have generated our interest to conduct a rigorous and careful observation on the development of the phenomenon of food crisis.*

*Food crisis, its causes and consequences – aging population, the migration of the active population to other countries (especially from the rural areas) and the agglomeration of the disadvantaged population in certain geographical areas, can cause social and economic imbalances.*

**Keywords:** *food crisis, obesity, malnutrition, subnutrition, aging population, sustainable development, economic growth.*

## 1. Introduction

Crises are interconnected and should be analyzed jointly, as the effects of one crisis are or may be causes for other crises. This is the reason why Gilles Bonafi (2010), like other authors, believes that the issue of the crises should be analysed both globally and on different levels. Among these, the most important levels are the following:

- the financial or the monetary system, whose pillar is the dollar;
- the adaptation of the economical system to the new information technologies that determines the destroying of millions of places of work;
- the energy crisis; the danger that lurks democracies and freedom, because the real power is held by a handful of people through capital accumulation. (Momcilo Luburici, 2010).

In 2005, the famous economist John Kenneth Galbraith pointed out that all it takes is “a few strong and convincing enough sellers to determine what people buy, eat and drink”; the ecocide<sup>1</sup> determined by the current economic system. Reality shows that the risk lies in the disastrous effects caused by the food crisis degenerated from the economic crisis, the crisis itself actually being a greenhouse effect, meaning a disaster caused by disasters and, in its turn, a generator of other disasters. One of the reasons why the food crisis is not treated with the attention that it was once given, is that the notion of famine has been redefined. A couple of years ago, the famine was located strictly geographically<sup>2</sup>, while today it affects the whole planet. Lester Brown<sup>3</sup>, the American author who published a manifest-book translated into 35 languages “Full Planet, Empty Plates: The New Geopolitics of Food Scarcity” points out in the subtitle of his aforementioned book “The New Geopolitics of Food Scarcity” the acute problem of the least developed countries which are experiencing a sustained population growth and for which providing food becomes one of the most serious contemporary problem. Stating from the beginning of the book that “Food is the weak link in our modern civilization”, Lester Brown starts from the observation that over the last decade, world grain reserves have fallen by one third and the world food prices have more than doubled, triggering “a worldwide land rush and ushering in a new geopolitics of food.”

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<sup>1</sup> The ecocide represents the act of destruction of an ecosystem, especially through excessive exploitation.

<sup>2</sup> Blanchet, J., and Lefebvre, D. (1995). *PAC, GATT, OMC*. Le grand Chambardement, Paris, Edition France Agricole.

<sup>3</sup> Lester R. Brown is the president of Earth Policy Institute, a neoliberal environmental research institution based in Washington DC, and one of the best known researchers in the field of global environmental issues, sustainable development and environment protection (the work *Outgrowing the Earth: The Food Security Challenge in an Age of Falling Water Tables and Rising Temperatures*, Tehnica Publishing House, Bucharest, 2005).

Taking into consideration the globalization of the grain market and the ability to transport them, famine is less concentrated in certain geographic regions and more in low-income groups. At present, the food crisis translates in rising prices globally, growth that is affecting low-income populations, forcing many to end up even below the limit of subsistence. Thus, we start wondering today whether the current world economic crisis is either cause or effect of deepening the demographic, financial, food, energy resources and other crises.

Nowadays it is believed that the causes of the food crisis could be linked to:

1. Population growth<sup>4</sup>, population growth on Earth. If in 1950 there were about 2.6 billion people, in 1975 their number reached over 4 billion, while in October 2011 their number reached 7 billion. According to demographic forecasts for 2050, the Earth's population will exceed 9.3 billion people.

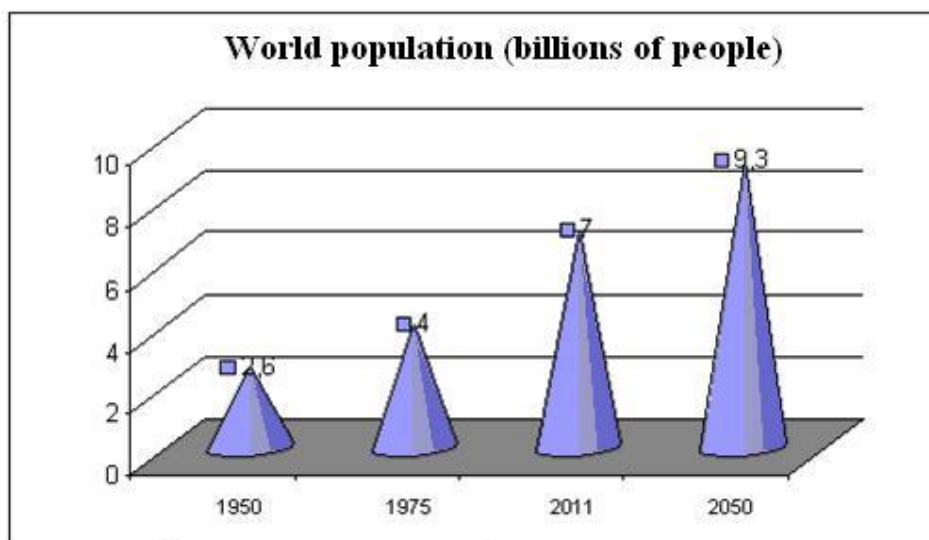


Fig.1. Population growth between 1950 and 2050

Source: Gabriela Molanescu – The Bucharest University of Economic Studies, Theoretical and Applied Economics, Volume XIX (2012), No. 4(569), page 57-69 Contributions to the Substantiation of the National, Original and Coherent Strategy of Interruption of the Involution of Romania's Agriculture

2. The insufficient production of agricultural goods worldwide. It is estimated that at present over 1.2 billion people are facing hunger. Therefore it will be necessary to obtain increases of agricultural food production to ensure and provide food for 2.3 billion people in addition to the current population.

3. Climate changes. Summers are becoming drier and winters frostier but without significant precipitation which will destroy crops.

4. Bio-fuels. It is impossible for the agriculture from the European Union to produce as much wheat so that to be used as bio-fuel without affecting the agricultural products market.

5. Speculators. The speculation on the financial market led to price increases that cannot be explained. Thus, the price of wheat and rice increased by 30% in one day, which inevitably caused the emergence of speculators.

6. Changing consumption habits. About 40 years ago meat was considered to be a luxury food, but nowadays people eat meat in large and exaggerated quantities.

## 2. Theoretical background

According to an international study conducted once in two years by World Wildlife Fund (WWF) the Zoological Society of London and the Global Footprint Network<sup>5</sup>, humans will need two Earths to support our lifestyles by 2030 because we are draining the world's resources so quickly and only another planet in addition

<sup>4</sup> Gabriela Molanescu – The Bucharest University of Economic Studies, Theoretical and Applied Economics, Volume XIX (2012), No. 4(569), page 57-69 Contributions to the Substantiation of the National, Original and Coherent Strategy of Interruption of the Involution of Romania's Agriculture.

<sup>5</sup> Produced by WWF in collaboration with Global Footprint Network and the Zoological Society of London, the report examines the state of our natural world, and our impacts upon it.

will be able to cover our demand for natural resources. According to the same study, if people continue with the same lifestyle, three planets will soon be needed just to cover the survival needs of the human civilization. Qatar, Kuwait, United Arab Emirates, Denmark, the United States of America and Belgium are countries considered to be currently large consumers of natural resources. In the first half of this classification, Italy and the Russian Federation are ranked as countries with a moderate consumption of natural resources. Romania is ranking 60 and the list of large consumers closes with the poorest countries of the world, such as Afghanistan, Congo, Burundi, Eritrea or Sudan which are countries that are still facing malnutrition and subnutrition. There are currently 850 million people malnourished in the world, of which 200 million are children.<sup>6</sup>

The study suggests that if the expected global population of 9.2 billion people in 2050 were to eat a typical Malaysian diet, we would need 1.3 planets to sustain us. The situation changes radically if everyone were to eat an Italian diet, humanity would need closer to two planets in order to survive.

David Nussbaum, one of the WWF specialists involved in the project noted that “the massive loss of biodiversity and habitats undermines the natural systems upon which we depend for the food we eat, the air we breathe and the stable climate we need. The depletion of natural resources caused by human consumption also poses risks to our economic security: for instance, scarcity of resources and degraded natural systems will increase the price of food, raw materials and other commodities”.

Also, the reports provided by the FAO (Food and Agriculture Organization of the United Nations) believe the currently a billion people worldwide suffer from hunger. The current food crisis that emerged in 2010 can rival that of 2007-2008.

These are observations that can only lead to the following questions: is there a connection between the great economic crisis of 1929-1933, also known as the Great Depression, and the current economic crisis or their causes are radically different? Is there a link between the commencement of the previous food crisis (2007-2008) and the commencement of the current economic world crisis? What do we know until now?

The Great Depression was caused by overproduction, took place between 1929-1933 and was characterized by a dramatic drop in global economic activity. The first signs of the crisis occurred in 1928. The commencement of the Great Depression in the United States is usually attributed to the sudden devastating collapse of US stock market prices on October 29, 1929. The Great Depression had devastating effects in both industrialized countries, as well as in less developed countries whose economies were depending mostly on exports of raw materials. The level of global trade decreased rapidly, as personal income, tax revenue, profits and prices dropped also. Cities all around the world were severely affected, especially those dependent on heavy industry. Mining and logging had perhaps the most dramatic decline as demand plummeted and re-employment alternatives for miners or forest workers in other sectors were the lowest. Construction activity was virtually halted in many countries. Farming and rural areas suffered as crop prices and agricultural commodities fell by approximately 40-60%.<sup>7</sup>

The Great Depression in different countries of the world ended at different times. In most countries recovery programs were designed and most of them have gone through various political transformations that have driven them towards left or right extremes. Societies based on liberal democracy were very weak because of the crisis and dictators, such as Adolf Hitler came to lead some of the most powerful states and prepared the political and military conditions to trigger the Second World War in 1939. He who learns from past mistakes can avoid repeating them in the future.

The experts of the International Monetary Fund (IMF) revised radically the economic growth forecasted for 2009 estimating that, globally, the advance shall not exceed 3%. Strongly affected by the financial crisis, the situation for industrialized countries is even worse: only a maximum of 0.5% growth. Reports from the Fund warned gradually on the delicate situation in which the world economy finds itself, perhaps the most serious in the last eight decades. The experts' thought are once again populated by the recession from the early '30s, given the fact that the events seem to unfold exactly the same: stocks fall, companies go bankrupt, and banks face liquidity shortages. Even the chief economist of the International Monetary Fund, Olivier Blanchard, has called

<sup>6</sup> According to the Food and Agriculture Organization of the United Nations.

<sup>7</sup> Willard W. Cochrane, *Farm Prices, Myth and Reality* (1958), page 15; World Economic Survey 1932-33, *League of Nations*, page 43.

for urgent fiscal interventions designed to rebalance the market, especially to avoid feelings of panic. In harsh times, the global economy needs consumer confidence.

In 1929, Wall Street had become for years the financial centre of the Western world, and it was considered that America already has a decade of prosperity. Only a few economists warned of imminent decline that was to come. The market simply could not sustain such rhythm. In the days before “Black Thursday”, as the day of October 24, 1929 remained and accepted in history as triggering moment for the Recession of the early '30s, the stock market was highly volatile. The investors' main worry was not the accelerated decline of the stock market indexes, but rather the large volume of shares traded, which was perceived as a sign of latent distrust. The stock market crash of 1929 was, in fact, more complex than it has been traditionally spread. Suddenly, the shares value began to decline, investors began to sell and panic took over the global finances. On October 24, 1929, nearly 13 million shares were traded. On October 28, the most important stock index lost 13% in one day. The next day, the threat becomes a reality: 16 million shares were traded, causing stock prices to decrease to minimum rates. Wall Street ceased to be an indestructible legend. The major American financial companies have tried to remedy the situation by buying large quantities of shares as a sign of confidence that they still have and invest in the “market reason”.

On February 1, 2007 a law to increase the minimum wage was enacted (Fair Minimum Wage Act of 2007), law which has blocked investments and, implicitly, the crediting process. It has also reduced drastically the efficiency of U.S. companies that were competing with emerging economies, especially China. On February 17, 2007 the British bank Northern Rock was nationalized by the British Government. After one month, JPMorgan Chase & Co Bank bought the investment bank Bear Stearns at a very low price, with the help of the U.S. central bank (Federal Reserve) and on September 7, 2008 the largest mortgage banks in the United States (Freddie Mac and Fannie Mae) were placed under federal supervision. After a week, the company Merrill Lynch (the third largest investment bank in the world) is taken over by Bank of America and Lehman Brothers (the fourth largest investment bank in the world) declared bankruptcy. On September 16, 2008, the United States Federal Reserve Bank and the U.S. government nationalized the largest insurance group in the world, American International Group (AIG) which was threatened by bankruptcy, and led to a rescue agreement with the Federal Reserve Bank for a US\$85 billion dollar secured loan facility.

The United States of America announces the recession, and from that moment chaos begins. But a close analysis of economic history shows us that periods of economic depression have usually followed a pattern that was not so little predictable. Almost without exception, major economic crises in history, had similar developments<sup>8</sup>. Of course, each crisis has its own specificity, but there are some key similarities in the sequence of stages that all these crises have gone through.

The first common feature we observe when we analyze the way most economic crises unfold relates to the periods that precede such crises. Thus economic crises are usually preceded by a period of sustained economic growth. But if this economic growth is initially a healthy one, as the population's optimism in general and entrepreneurs' in particular increase, an “overheating of the economy” takes place. That economic growth which was initially healthy is becoming more and more one built more on speculative grounds, and one can easily observe an increasingly pronounced distance of the economic growth from the real economic basic rules.

The thinking trends of Keynesian inspiration, as well as the institutionalist ones, consider that there has been a overproduction phenomenon combined with a lack of aggregate demand in the period before the crisis, while monetarists believe that a determining cause of the Great Depression was the application of bad monetary policy by the U.S. authorities, which led to an unfortunate restriction of the money supply in circulation, that turned an ordinary recession into the worst and bleakest economic depression the world economy would face. The severe drought period in the Mississippi River basin in 1930, caused great difficulties to the U.S. farmers. Many of them were forced to sell their properties just to be able to pay their taxes or debts accumulated. Such circumstances led to the significant decrease in aggregate demand for all social categories. It also determined the decrease in the production of goods, and also, people's income. They were about to face bigger and bigger difficulties in paying their rates on already purchased goods. Are we somehow in a similar stage of unprecedented development of the consumption?

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<sup>8</sup> Alexandru Asavoaei “The economic crisis - a predictable phenomenon”, the Faculty of Economics and Business Administration, July 18, 2012

China is more and more taking into account the process of controlling the commodity prices so that to decrease inflation. The Russian Federation has suspended external deliveries of wheat because of the danger of insufficient supplies of wheat to meet the domestic demand of the country. The United Nations Organization warns of the situation in North Korea, a country that is headed towards a new stage of “chronic” food crisis. As we already showed at the beginning of this paper, a classification of the high risk countries ranks among the first 5 positions countries such as Afghanistan, Congo, Burundi, Eritrea and Sudan. At the opposite end are countries such as Qatar, Kuwait, United Arab Emirates, Denmark, the United States of America and Belgium. A global food crisis is imminent! This warning which is released periodically by competent experts and specialized institutions, should normally compel countries to a more rational attitude and behaviour to food consumption. Especially since, according to experts of the United Nations (UN), one billion people worldwide suffer from hunger and food prices will remain high on a medium term. Nevertheless, according to a study conducted by the Swedish Institute for Food and Biotechnology, an estimated one-third of food produced for human consumption is lost or wasted globally, amounting to 1.3 billion tonnes per year, namely 33% of everything that it is produced worldwide. Such reality represents a paradox, given that nearly one billion people worldwide suffer from hunger. In the same vein, the experts of the Food and Agriculture Organization of the United Nations warn that we are approaching a crisis of food prices. It seems that there is food, but many countries (especially those who were “richer” after the economic crisis - an example could be the BRIC group - Brazil, Russia, India and China) have decided to make supplies of domestic production but at the same time, they are buying goods in large quantities from anyone selling.

The UN Food and Agriculture Organization (FAO) foresees that the grain offer of the Asia-Pacific region will decrease considerably in 2050, so it will not be able to meet the growing demand. Consequently, investments in agriculture aimed at expanding productivity represent a priority for all countries. The agriculture, a sector highly dependent on climatic conditions and human factors, is conducted under the global impact of climate change. According to some market reports, if the current global warming continues, the productivity of major crop yields in tropical countries could decrease by 20 to 30%. On the other hand, the process of supplementing new farmlands was minimal and was done by tropical deforestation which, in turn, involves substantial environmental costs. In many countries, primary agricultural lands are restricted in favour of industrial and residential constructions. Moreover, the insufficient water resources and the underdeveloped irrigation systems affect the development of agriculture. Most food markets face major challenges arising from the growing demand, the changes in climate, the increase of production costs and commodity prices and poor crops, based on the diminishing of food reserves and agricultural areas. As we already mentioned, the main causes are the decrease of grain reserves because of unprecedented weather and hydrological conditions, the restriction on exports and a low dollar that has favoured the inflation. In 2011, the price of butter has reached the highest price in history; the price of sugar is hit a record of the last 30 years, while the price of wheat and corn increased by 40%.

The price of wheat increased by 91% since the beginning of 2010 until the end of 2011, and the causes for such price increase are, among others, the extreme weather events in 2010: the Russian heat wave, fires in Israel, flooding in Pakistan and Australia, landslides in China, snowfall in the U.S. and the 12 hurricanes in the Atlantic Ocean<sup>9</sup>. To all these causes we can add up the protectionist measures of countries such as the Russian Federation and Ukraine, measures that, in the fall of 2010, limited grain exports because of low production and fears that they will not meet internal needs.

The quotations for corn increased by 57% over the same period, because crops were fewer, but surprisingly, the demand continued to go up, especially in China. In fact, grain consumption increased most in East Asia, the region becoming at present the largest consumer of grain. Oilseed consumption recorded an increase of over 1000% in East, South, and Southeast Asia. Sugar consumption has gone up exceptionally in South Asia since 1960 with a compounded annual growth rate of over 12%, more than four times the global growth rate. Livestock, the most expensive of the analyzed food commodities, saw demand move up without precedent over the past five decades in East Asia, with China accounting for almost 90% of the consumption. Note that sugar reached the maximum peak of the last 30 years. The general food price index for December 2010 was one percent higher than in June 2008, but cereal prices were still 13% below the level reached in 2008.

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<sup>9</sup> University Professor, PhD Marian Ianculescu – The global warming and the food crisis – challenges that can be reduced by foresters.



**Fig. 2.** The evolution of the FAO Food Price Index

Source: <http://www.fao.org/worldfoodsituation/wfs-home/foodpricesindex/en/>

Man “consumes” on average 4.1 liters of diesel oil, 29 kilograms of soil and 2.2 tonnes of fresh water per day. “These are the resources consumed to feed one person. Multiply this number by 7 billion people and you will realize that all this huge amount of resources consumed is almost impossible to replace“, said researcher Julian Cribb<sup>10</sup> at a conference of the Academy of Science in Canberra. In his paper entitled “The coming famine. The global food crisis and what we can do to avoid it” Julian Cribb says that the biggest personal impact of humans on the planet is how they consume food. He argues that most people do not realize what impact has such consumption for the planet. The researcher warns that in less than half a century the global food system will reach “points of no-return” unless there is radical change to farming systems, cities and the world diet.

“Take soil for instance. According to the Food and Agriculture Organization of the United Nations, the planet is deteriorating at a rapid pace, and we’re losing up to 100 billion tonnes of topsoil a year, mostly into the oceans. Soil takes thousands of years to form, so it is not going to be replaced any time soon. Despite progress in countries like Australia, soil degradation is getting worse, not better. Some scientists say we will face a shortage of good farming soils within 70 years” argues the same Julian Cribb.

The situation is similar in the case of water. Over 4,000 cubic kilometers of water are extracted from the soil each year, the extraction being mostly unsustainable. Regions of the planet such as China or the Middle East will face a severe water crisis by 2030. However, the researcher says, what most governments and authorities on food security have failed to admit publicly is the scarcities of resources such as water and arable lands.

The researcher warns that “There is still time to act – but the action must be fast and it must be universal. Julian Cribb also says there are opportunities for major new developments in food production. “There are also 25,000 edible plants on Earth, 99% of them unfamiliar to most people. So we have not yet begun to explore the culinary potential of our home planet. For example, Australia alone has 6,100 edible plants of which we currently eat just five or six!” explains the researcher.

Professor Alyson Warhurst, chief executive of Maplecroft, points out the importance of food: “Food security is a critical geopolitical issue and an important factor for investors concerned with sovereign risk, food and agricultural business with respect to supply chain integrity and foreign direct investments.” Lester Brown also, in the aforementioned paper “Full Planet, Empty Plates: The New Geopolitics of Food Scarcity” starts from the observation that over the last decade, world grain reserves have fallen by one third, and the world food prices have more than doubled, triggering “a worldwide land rush and ushering in a new geopolitics of food.”

<sup>10</sup> Julian Cribb is a science communicator and author of *The Coming Famine: the global food crisis and what we can do to avoid it*. He is a member of *On Line Opinion's* Editorial Advisory Board. Source Article from <http://www.jurnal.md/ro/news/criza-alimentara-mondiala-ameninta-omenirea-707756/>

### 3. Conclusions

In line with the increase in household income levels, food expenditure patterns have also undergone changes<sup>11</sup>. Generally, in countries with lower income, food takes a much bigger share in the total household expenditures than in the higher income countries. Thus statistics show that a level of a Gross Domestic Product (GDP) per capita of less than USD 5,000 usually implied at least 30% of consumer expenses went toward food. This percent can reach even 50% for a number of countries with the lowest GDP per capita levels. Thus, the share of food in total expenditures tends to decline as a country's per capita income moves up. In high-income countries the share of food in total expenditures had an average share of 10.9%. Similarly, the composition of the food basket has also changed in tandem with the income increase. A larger share of food expenditure is allocated to higher value products such as meat or sugar and confectionery, leaving a lesser percent for basic commodities like bread and rice. However, the analysis of expenditure may not always be accurate. For instance, the breads and cereals category has a similar contribution to the total of food budgets.

However, the number of calories deriving from this category account for 57% of total calories consumed in low-income countries and only 36% in high-income countries. This indicates that low-income countries consume larger amounts of simple breads and cereals (corn, rice) compared to other food categories. On the other hand, higher-income countries buy smaller amounts of more expensive products (packaged and processed cereals like breakfast cereals), which explains their relatively high share in total food expenditure. Therefore, in order to get a reasonably clear picture of the basket's composition, the analysis needs to cross-reference and collate data related to the share of individual food groups and the calories/nutritional value derived from them. Furthermore, product prices need to be considered too, since some more expensive products in lower-income countries can have a similar contribution to household expenditures despite much lower consumption volume.

Low-income countries will experience most severely the food crisis because in such countries population growth is sustained. One can consider that, at the same time with the unfolding of the financial crisis, we are also in a powerful food crisis and Romania is seen among the vulnerable countries being ranked 12<sup>th</sup> in the world within a classification of vulnerability to food price increases. Our country imports too much food not to be affected by what happens on the international market. Moreover, in the last couple of years, Romania has faced dry and very warm summers. According to the National Institute of Statistics, in 2010, Romania had the highest inflation in the last five years. Among the products whose prices went up the most we mention vegetables, cigarettes, canned food, as well as some service or administered prices.

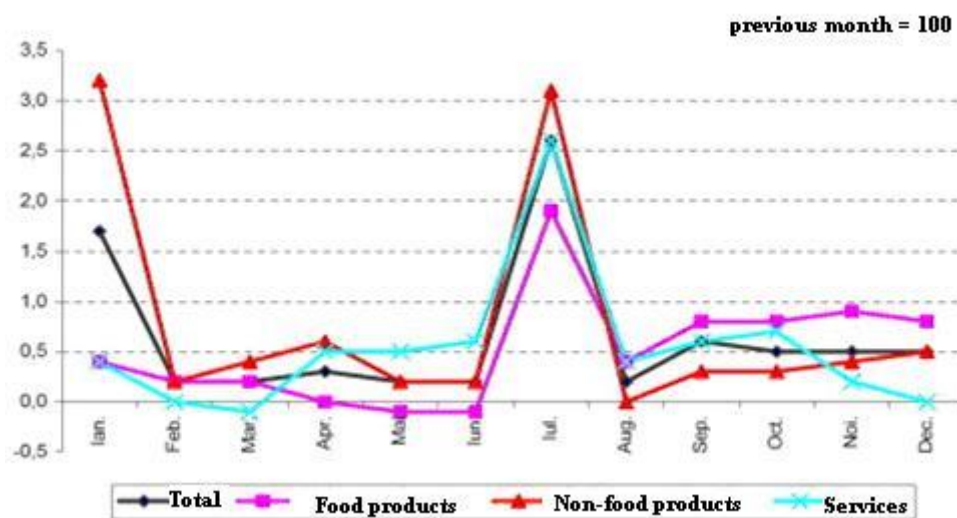


Fig. 3. Monthly increase in prices for 2010 (overall and by categories of goods and services)

Source: The National Institute of Statistics

Following the analysis made by experts according to some generally accepted criteria, it was concluded that Romania meets all the requirements to qualify among the countries with poor food security. This result is supported by the following aspects: low agricultural production, vast areas of uncultivated land or lands worked

<sup>11</sup> Blominvest Bank – F&B in the MENA Region Marie Dumitrescu, Romanian Center for Trade and Investment (CRPCIS)

rudimentary, food price explosion superimposed over a continuously lower purchasing power because of the economic crisis. This situation determines large segments of the population to no longer afford to provide their food needs from their monthly income. The seriousness of the situation also lies in the fact that a food crisis may become a succession of crises at any time should the market imbalances persist, and the competition for energy sources will continue to affect the production and the commodity market. The causes of the food crisis in Romania may be grouped as follows<sup>12</sup>:

1. About half the food products consumed in our country is imported, which means that any price increase on the international market will affect immediately our domestic market.

2. A large part of the domestic food production is exported, which means that we cannot trust the assumption that the domestic production will save us from the food crisis. Should the prices rise all over the world, then all the Romanian wheat will be exported as before to Europe.

3. Romania's population spends more than 50% of their income for purchasing food products, which means that the limit of endurance has either already been reached or exceeded. The consumer cannot afford and support new price increases because he simply does not have the money needed to purchase expensive product.

4. The speculative factor on the food supply chain is very long, with an endless string of intermediaries who will take advantage of the occasion to obtain greater profit on the consumers' expense.

Price increases affect mostly people with medium and below-medium income who limit their consumption in return as a reaction to the price increase. Another direct effect is the deterioration of the quality of life due to the fact that people cease to invest anymore in their own comfort and wellbeing.

From the data and observations presented within this paper, it is evident that a food crisis overlapping the global economic crisis will seriously affect household budgets and, implicitly, the food consumption. As a solution we can argue that: the lack of food products on the market could be resolved by motivating the domestic producers and by targeting the domestic market. Also, another controversial solution would be a larger production of genetically modified foods that have adverse effects on human health, but that might solve the problem of food scarcity. Therefore, public policies ought to consider encouraging the domestic production, the increase of foreign investment in agriculture, the increase of the levels of leasing and alienation of land, the increase of technology and invariably the reduction of prices.

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<sup>12</sup> "The food crisis and the possible repercussions on Romania" - Assoc. Professor PhD, Rabontu Cecilia Irina, Professor PhD, Niculescu George, Constantin Brâncuși University of Tg-Jiu