

## DEVELOPMENT OF THE FOOD SECTOR IN THE REPUBLIC OF MOLDOVA

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**Abstract:** *The food sector of the Republic of Moldova has undergone significant changes in the past decades. Food processing companies and large scale collective and state farms have been privatized, markets were liberalized, and economies have been integrated into the global food systems. As a result of liberalization and privatization processes, the state-controlled vertical integration in the agri-food industry had collapse.*

*Latter on, private vertical coordination systems have emerged and started to grow rapidly as a response to consumer demand for food quality and safety on the one hand and the farms' production constraints caused by factor market imperfection on the other. The main drivers of the integration processes are private business operators and traders. However, the efficiency of the newly emerged food value chains is still low. This investigation was based on analysis of the official statistical data, qualitative and quantitative studies and other relevant publications. A significant part of analysis was done in the framework of the FP7 project "AGRICISTRADO". In this paper the importance and the most recent changes of the food industry in the Republic of Moldova were demonstrated, the main impediments were analyzed and proposals to foster the food sector development were provided.*

**Keywords:** *food sector, agriculture, food consumption, agri food trade.*

### 1. Introduction

Global transformation and modernization of the food sector in the Republic of Moldova has faced several challenges over the past decades when the country started a complex processes of transformation of political and economic systems, such as liberalization of exchange rates, prices, and privatization of enterprises and agricultural holdings, which caused a collapse of the system of vertical coordination and significant disruptions in the agri-food chain.

Disruptions in relationships between farmers, input suppliers and food businesses also resulted in serious constraints faced by many farms and processors in accessing basic inputs. At the same time the food export is represented mainly by primary agricultural commodities or semi-processed food products.

The purpose of this article is to assess the impact of recent changes and identify possible solutions for strengthening the resilience of the food sector against external trade shocks.

### 2. Material and methods

Given the challenges of the recent development in food sector the following

research methods were used: analysis of the food sector structure and development tendencies, analysis of the legal framework regulation the food safety system in the Republic of Moldova, analysis of the food distribution system and country's food security, analysis of the export development trends for main groups of agri-food products, analysis of the impact of external shocks over the export development and country's economic stability and food security.

The main sources of primary information for this study were data from the publications of the National Bureau of Statistics of the Republic of Moldova and the data bases of the National Bureau of Statistics of the Republic of Moldova. As a secondary source of information a range of articles and studies elaborated by local and foreign experts were used.

### 3. Results and discussion

The prospects for continued growth in demand for value-added food and agricultural products constitute an incentive for increased attention to agro industries development within the context of economic growth, food security and poverty-fighting strategies (da Silva, 2009).

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Despite the de-industrialization process that lasted almost two decades in Moldova, the industry has maintained its position as an important sector of the national economy and as a foundation for the continuous development of the country. The leading positions in the structure of industrial production belong to the branches specialized in the processing of local raw material, mainly of agricultural origin. The food processing sector involves about 1,260 companies. The share of food industry accounted for about 43% of the total industrial production in the Republic of Moldova in 2013, although this share was 52% in 2004 (National Bureau of Statistics, 2014).

In the same time the large scale food industry is characterized by underutilization of its capacities and insufficient investments. High levels of moral and physical depreciation of the industrial capacities and infrastructure is typical for local food processing companies. A large part of processing equipment and technologies is not energy efficient and do not meet modern standards. Many enterprises lack modern

management practices and necessary investment capital. The lack of financial resources leads to inadequate compensation and to the exodus of the skilled labour force. Lack of horizontal and vertical coordination of supply chains is another important reason underlying the low competitiveness of the agri-food sector.

The reasons causing low prices of agricultural products include poor development of wholesale markets, low bargaining power, changing product quality, lack of distribution channels, poor infrastructure and limited access to foreign markets. Value chain deficiencies lead to large discrepancies between the farm gate price and the consumer price, resulting in low-income, low investment and persistently low quality at the farm level.

Despite favourable circumstances in international markets the development of food sector of the Republic of Moldova had an unstable character. Production volume of food and beverage industry in 2013 amounted to only about 87% of production in 2005 (see Table 1).

**Table 1.** *Indices of industrial production, by most important types of activities, 2006-2013 (2005 = 100%)( Source: BNS, 2014)*

	2006	2007	2008	2009	2010	2011	2012	2013
<b>Industry – total, of which:</b>	<b>95,2</b>	<b>94,0</b>	<b>95,4</b>	<b>75,2</b>	<b>82,2</b>	<b>90,1</b>	<b>88,3</b>	<b>94,3</b>
<b>Processing industry, of which</b>	<b>93,5</b>	<b>91,8</b>	<b>92,8</b>	<b>71,7</b>	<b>79,5</b>	<b>88,8</b>	<b>87,4</b>	<b>94,3</b>
Manufacture of food products and beverages	81,6	75,2	82,0	67,6	75,7	80,9	82,0	87,2
Production, processing and preserving of meat and meat products	109,8	142,8	147,1	121,8	132,5	150,7	174,2	179,4
Processing and preserving of fruits and vegetables	106,5	115,6	109,2	84,1	90,4	118,0	98,0	111,4
Manufacture of dairy products	98,2	101,7	108,3	98,2	107,1	109,3	117,3	127,7
Manufacture of products of flour-milling industry, of starches and starch products	106,5	95,1	105,0	88,7	81,6	80,3	70,5	85,9
Manufacture of bred and pastry products	106,4	118,0	129,1	121,2	127,6	137,3	136,5	143,2
Manufacture of wine	50,9	36,3	45,2	35,7	40,3	41,2	41,9	38,8

However this decrease was mostly due to the reduction of wine production after the restrictions imposed by Russian Federation for Moldovan wine exports in 2006.

The most important products of the food processing sector include wine, meat, fruit and

vegetable products, dairy products and bakery products.

**Wine and brandy production.** Wine and distilled spirits represent the largest portion of Moldova's food processing and a significant part of all industrial output. Moldova had 98 enterprises dealing with wine production and

bottling in 2013. In addition, there were 18 factories producing, maturing and bottling distillates. Grapes are grown by about 70,000 individuals, mostly smallholder farmers.

**Mills and bakeries.** There were 241 mills and 278 bakeries operating in the country in 2013. A concentration of producers grouping around the large bread-baking plants that have a market share of about 65% can be observed in the sector; the group of small and medium scale bakeries has a market share of circa 35%. As main leaders in this sector can be mentioned “Franzeluta” SA located in the capital city, the bread baking factory from Balti in the North region and the bread baking factory “Cahul Pan” SA in the South.

**Fruit and vegetable processing.** Fruit and vegetable processors can be divided into two main groups: the first comprises a small number of large firms, focused on export markets and producing about 80% of the total output of the sector; and about 80 small and medium canneries mainly serving the domestic market. Together these firms process from 150,000 to 200,000 tons of raw material, mainly apples, plums and vegetables. The main products are concentrated apple juice, fruit and tomato paste, canned fruits and vegetables. However, the potential of the fruit and vegetable processing industry is utilized at only one third of its capacity.

**Meat processing.** Moldova’s meat-processing industry is highly consolidated, while official statistical data indicate there were 159 meat processing enterprises and production units in 2013. “Carmez” in Chisinau and “Basarabia Nord” in Balti dominate the domestic market,

together controlling about 2/3 of the local market. Along with “Carmez International” (Belgian joint venture now separated from “Carmez”), these companies dominate the export market and have strong brands. All these three companies import about 85-95% of their meat and offal raw material and nearly all of their ingredients used for manufacture of sausages and ham. A handful of other manufacturers supply sausages and smoked meats to the supermarket and small shop outlets in cities and towns.

Meat companies operate their abattoirs on an intermittent basis, because domestic stock is more expensive than imported frozen meat. The production of the processing industry is exported mainly to the CIS states. Moldova has not qualified for the status needed to export meat products to the EU.

**Dairy production.** The dairy industry is based primarily on the supply of raw milk from small producers, company-owned collection centres and dairy cooperatives with collection centres financed by the dairy companies or through donor programs. While overall milk supply is adequate and animal productivity has been increasing slowly, dairy processors have seen only marginal improvements in the quality of milk. A number of 32 dairy companies operated in the Republic of Moldova in 2013.

Prices and production costs for the most important processed food products are not presented by the official statistics of the Republic of Moldova. The available aggregated data from the national accounts confirm that agri-food sector produces mostly raw materials and semi-processed products.

**Table 2.** Value added in agriculture and selected food industries, 2007-2013, millions MDL

		2007	2008	2009	2010	2011	2012	2013
A,B	Agriculture, hunting, forestry and pisciculture	5333,9	5544,0	5134,5	8657,4	10095,2	9896,2	12383,1
D15	Manufacture of food products and beverages	2381,5	2768,8	2516,0	3086,0	3682,9	3974,3	4315,3
D15.1	Production, processing and preserving of meat and meat products	24,0	293,2	273,8	300,5	393,1	472,0	50,5
D15.3	Processing and preserving of fruits and vegetables	259,5	226,4	201,9	245,1	427,4	370,3	420,2
D15.5	Manufacture of dairy products	227,5	269,0	30,3	344,4	380,9	429,9	481,8

The ratio between the value added in agriculture and agri-food industry shows that during the recent years the value added in

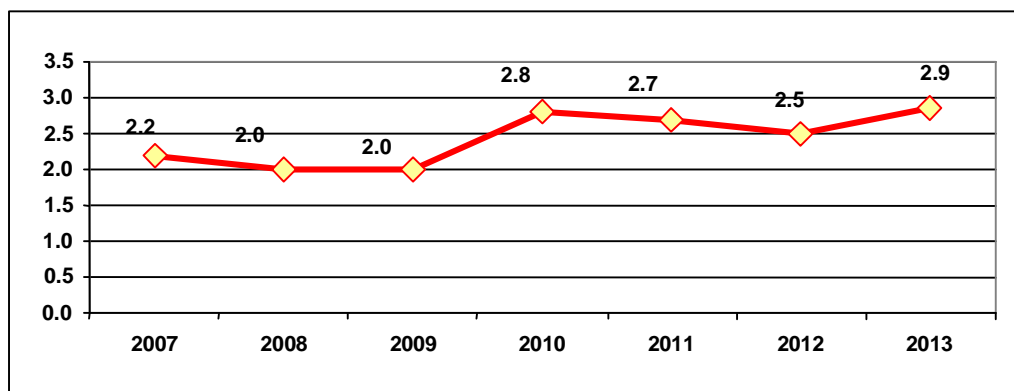
agriculture is higher than value added created in the food processing industry - more than 2.4 times on average for the period of 2007-2013

(see Figure 1). At the same time, food processing industry has higher productivity as compared with the agricultural production.

#### Legal framework

The food safety system in the Republic of Moldova is currently being revised to comply with the EU regulations on food safety.

The Food Law was adopted in 2004 and reflects most of the provisions of Regulation (EC) No. 178/2002. This law creates the legal framework for the implementation of the EU legislation on foodstuffs.



**Fig. 1.** The ratio between value added in agriculture and agri-food industry, 2007-2013

Sources: elaborated by authors based on data from National Accounts of the National Bureau of Statistics, 2014

The scope of the food law is to protect human health and consumers' rights and facilitate trade. The law establishes general requirements for the safe production, distribution, import and export of foodstuffs, for traceability of foods, for risk assessment and for establishing a rapid alert system. It also defines the responsibilities of food business operators to produce and distribute food in good hygienic conditions, to introduce the HACCP control system, to label foodstuffs and to provide sufficient information to consumers.

Food safety is also the subject of the Law on Sanitary-Epidemiological Assurance of the Population (1993, rev. 2003), which includes mandatory hygiene training for food handlers, sanitary authorization for food establishments and sanitary certification of food.

The Law on Sanitary Veterinary Activity (2007) establishes requirements for animal health, prevention of diseases, sanitary/veterinary control and inspections in the area of food of animal origin, monitoring of veterinary residues and organization of activities in the field of veterinary medicine.

The Law on Identification and Registration of Animals (2006) is on the way of implementation. The Law on Plant Protection (1999) establishes requirements for plant health and protection from diseases and pests. The Law on Protection of Consumers (2003) establishes requirements for

the protection of consumers, for accurate information and for consumers' rights.

One of the most recent laws is the Law 113 from 18.05.2012 on the establishment of principles and general requirements of the legislation regarding the food safety. The general objectives of the food safety legislation are to achieve a high level of protection of human life and health, consumer interests, fair practices in food trade, taking into account animal health and welfare, plant health and environmental protection; to facilitate trade between Moldova and other countries; manufacture and marketing of food and feed in accordance with the objectives and general principles of the law.

National Strategy for Food Safety for the years 2011-2015 creates preconditions for the adoption of the principles of the EU food safety and implementation of an integrated approach "farm to fork" in order to ensure public health and increase exports. A remarkable result of this strategy was the creation of the Food Safety

National Agency in 2012, which took over full control of food safety in Moldova, thus overcoming existing constraints related to the overlapping of functions and repetitive procedures in the field. However, one of the weaknesses of this strategic document, which may create problems in achieving longer-term goals, is the insufficient level of objective measuring and achievement.

### Food distribution

Distribution of food products in Moldova still relies on traditional markets, with recent occurrence of supermarkets in large cities. There are currently about 190 supermarkets and three “Metro Cash and Carry” stores dealing with trade of food products. According to the estimates made by local experts, about 10-20% of Moldova's population buys food in supermarkets. Respectively, the larger urban centres are, the greater is the share of supermarkets in food products sales. The most developed retail chains in the Republic of Moldova are “Fourchette”, “Green Hills”, “N1”, “Fidesco”, “Metro Cash & Carry”, “IMC Market”, “Linella”, “Cvin” and “Everest”. According to the interviewed experts, about 20-40% of food purchases are made in about 1,000 small grocery stores that are located near the place of residence. Many of these stores do not sell a full range of fruits and vegetables that occupy less than 3% of the commercial space. Moldavians usually procure foodstuffs at open-air agricultural markets, seasonal fairs and from the street vendors. However, in rural areas considerable part of the food products is produced for own consumption. Currently, the distribution network of fresh products comprises 3 wholesale agricultural markets in Chisinau and one in Balti, 12 retail agricultural markets in Chisinau, plus other 38 regional agricultural markets and more than 100 local agri-food markets. Overall, wholesale food markets that currently exist in Moldova are poorly equipped and under obsolete standards because they provide just a simple place for sale and have limited storage capacities. In some cases, the sales areas are not covered, only offering parking for transport from where sales are operated. As a consequence, the role of these wholesale markets is quite limited.

### Food consumption

At the national level Republic of Moldova is food secure. It produces the main food products, exports surplus food, and imports necessary food to meet its food requirements. Food security indicators prove that in the Republic of Moldova the level of per capita food consumption has stabilized during the last years. At the same time, the level of consumption is much lower than in neighbouring countries or in other East European countries.

The food security challenges in the Republic of Moldova have two major dimensions. The first dimension seeks to maintain and increase the country's ability to meet the national food demands through assurance of the internal food production, import of the food products that can not be produced efficiently in the country, and exports of products that have a comparative advantage. The second dimension is related to the reduction of the increasing inequalities and expansion of the poverty among the majority of the households of the Republic of Moldova that is manifested by inadequate and unstable food supplies, low purchasing power, weak institutional support networks, weak food emergency management systems and unemployment.

In addition to natural risks, commercial risks largely influence the level of food security in the Republic of Moldova. The evolution of prices in Moldova follows the trends of international food prices of agricultural products and resources necessary for agricultural production. Like other small countries with low income, Republic of Moldova faces additional challenges to restructure and modernize the sector of primary production and processing industry in order to supply the local market with basic food products.

The level of food self-sufficiency of the country is rather high, however in several years it decreased to a critical level due to severe droughts (see Table 3).

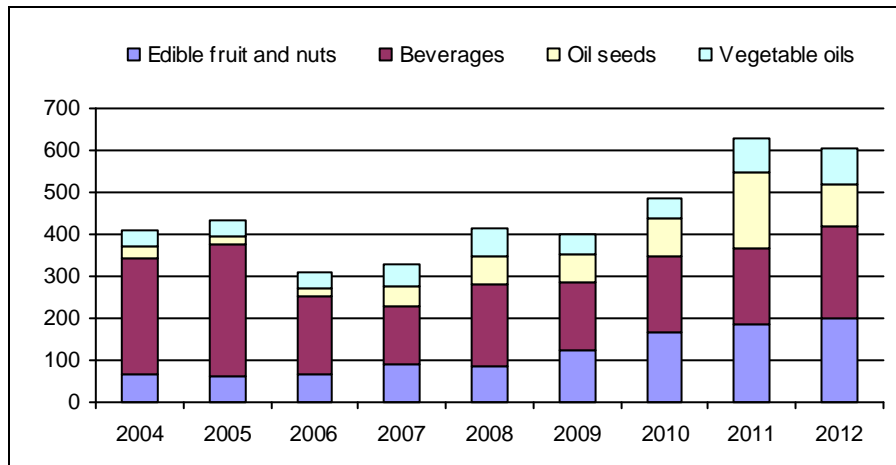
**Table 3.** *Self-sufficiency rate (%), 2006-2013*

	2006	2007	2008	2009	2010	2011	2012	2013
<b>Cereals</b>	99,2	70,6	143,4	105,0	117,8	115,6	60,8	150,3
<b>Sunflower</b>	145,0	65,5	178,0	121,4	156,6	195,9	143,8	326,3
<b>Potatoes</b>	91,7	67,0	93,4	89,4	100,4	116,2	66,6	89,8
<b>Vegetables</b>	103,5	84,8	110,1	98,6	104,2	100,5	93,3	102,4
<b>Fruits</b>	195,8	227,0	222,2	213,9	207,7	237,7	245,2	264,2
<b>Grapes</b>	102,4	106,8	102,6	104,3	104,6	102,8	103,9	103,7
<b>Meat</b>	67,8	84,5	67,8	86,7	86,0	86,1	81,5	69,8
<b>Eggs</b>	112,7	101,6	100,0	100,3	98,8	95,4	102,2	98,0
<b>Milk and milk products</b>	97,5	95,0	97,1	95,0	94,1	92,0	84,7	86,8

### Food export

Food sector represents one of the pillars of the national economic development of the Republic of Moldova. The export structure is dominated by a few groups of products which reflect a rather

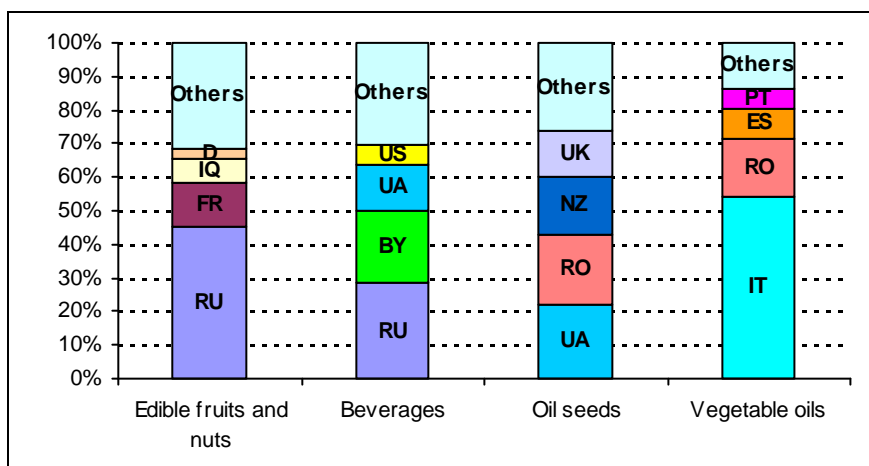
primitive structure of the agri-food exports in which prevails wine production and raw material of plant origin such as nuts, grains and oil seeds (see Figure 2).



**Fig. 2.** Most important groups of exported food products of the Republic of Moldova 2004-2012, Mil. USD. Sources: National Bureau of Statistics, 2014

The main export destination countries for these groups of products are Russia, Ukraine, Belarus, Romania, Italy, France and Spain. Out of these four major groups of products only two, namely "Oil seeds" and "Vegetable oil" were not

included in the restriction list imposed by Russian authorities. While external trade with other two groups of products was seriously affected by these restrictions. Title of paper



**Fig. 3.** Structure of agri-food exports of the Republic of Moldova by major products and trading partners in 2012

Agri-food exports of Republic of Moldova have been strongly marked by a significant reduction of supplies to Russia in 2001-2008 and the embargo in 2013. In 2013, more than one quarter of Moldovan export revenues originated from Russia. Currently, Russia uses this economic leverage to exercise pressure on Moldova through a number of trade restrictions.

### Conclusions

- The agro-food sector in the Republic of Moldova is characterized by weak links between primary agricultural production, processing industry and trade sector, underutilization of the production capacities,

lack of investments, outdated equipment and standards.

- There are positive trends in the development of the agri-food sector of the Republic of Moldova during the last years. However the vulnerability of this sector to natural, economic and commercial risks remains to be very high.
- The level of country's food security for major agri-food products has stabilized during the last years. Nevertheless in several years it decreases to a critical level due to negative impact of natural hazards. Trade restrictions exacerbated by natural calamities could increase the risk of food insecurity.
- The current situation in the international trade with agri-food products placed the Republic of Moldova in a difficult position. Exchange of sanctions between a number of Western countries and the Russian Federation provides multiple restrictions on the conduct of economic activities, including international trade that makes it necessary to review existing economic policies. Prohibitions and restrictions on the part of the Russian Federation on the import of agricultural products from the Republic of Moldova are forcing the government to urgently diversify export markets and to take measures to strengthen the economic security of the country.
- The food sector of the Republic of Moldova needs specific actions in order to stimulate

development of the high value agriculture through creation of product sales centres, strengthening quality control, organizing regional wholesale markets, assisting producers to sell their products, development of market infrastructure at central level, development of the post harvest and market infrastructure.

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