

## **CONSIDERATIONS ON DIMINUATION OF THE ECONOMIC-FINANCIAL CRISES IN AGRICULTURE OF MOLDOVA**

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### **Abstract**

The functionality of the new system based on market relations and open for the people is often marked by dynamism, uncertainty, risk, even by hostility and undoubtedly will be affected by the current economic and financial crisis.

Negative effects within this segment of national economy could be reduced through land plots consolidation, development of agricultural market on the Best Practices base. It's considered economic mechanisms for the increase of land plots production through irrigation, landscaping, soil protection, etc.

The specific of small agricultural exploitations is that entrepreneur is owner, manager, investor, worker at the same time, and must have a wide range of knowledge to achieve the success and to do all rolls mentioned above in a proper way.

**Key words:** Agriculture, crisis, inflation, taxes, credits, property, legal forms, instruments and economic mechanisms, managers, training, consultancy.

### **Contemporary agriculture- an important branch of the national economy**

For the Republic of Moldova the agriculture was, is and in the nearest future will remain the most important segment of the national economy. Today the agriculture of the Republic of Moldova contributes substantially to the formation of the Gross Domestic Product, even if as it is shown in table 1, the contribution of agriculture to the formation of GDP in our country is reducing from 22.4% in 2001 to 9.9% in 2007. In 2006 the value of agriculture in our national GDP exceeded the industry sector as it is shown in table 2, it has been reduced from 50.6% in 2000 to

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33.6% in 2006. It is necessary to mention that the figure of the population in our country decreased from 3644.1 thousand in 2000 to 3581.1 in 2007. The active economic population has decreased from 1655 in 2000 to 1357 thousand people in 2006. If the population from the rural sector in 2000 was 58.5% then in 2006 it was 59.1% from the total number of people in our country.

Table 1 The evolution of GDP structure per branch of formation, %,

Economic branch/Year	2001	2002	2003	2004	2005	2006
Agriculture	22,4	21	18,3	18,2	18,4	15.1
Industry	18,7	17,3	17,6	16,4	15,9	14.3
Services	46,9	49	49,3	50,9	51,4	54.0
Net taxes on products and import	12	12,7	14,8	14,5	14,3	16.6
Nominal GDP	100	100	100	100	100	100

Source: Statistics annual book of the Republic of Moldova

Table 2 The active economic population of the Republic of Moldova, thousand of people

Year	2001	2002	2003	2004	2005	2006	2007
Total	1499	1505	1356	1316	1319	1257	1247
Including: agriculture	764	747	583	533	537	422	409
Industry	165	171	164	162	159	161	158
Wholesale and retailing, hotels and restaurants	164	175	176	179	183	196	198
Public administration, education, health and social assistance	241	243	246	246	247	247	250
Other types of activities	165	169	187	196	193	231	232

Source: Statistics annual book of the Republic of Moldova

### **The diversification of agricultural products-is an important factor in over coming the crisis**

In all countries and obviously in our country as well, the agricultural products are produced mainly for the internal market. The internal market of the Republic of Moldova is limited by 3.6 million of consumers and conditioned by the purchasing power of the latter. As from Table 3 monthly medium income per person from 2001 to 2007 had increased by 4.2 times, but even in 2007 it covers

only 93% from the monthly medium value. In the structure of the consumption costs of economic entities in 2007, the agricultural products constituted 44%. Without doubts, our country is obliged to export agricultural products.

Table 3 Incomes and costs

Year	2001	2002	2003	2004	2005	2006	2007
Average monthly income per person, MDL	241.0	321.6	422.4	491.4	568.6	839.6	1022.6
Average minimum monthly value for the existence per person, MDL	468.7	538.4	628.1	679.9	766.1	935.1	1099.4
The income reported to the existence minimum, %	51.4	59.7	67.2	72.3	74.2	89.8	93.0

Source: Statistics annual book of the Republic of Moldova

Table 4 External trade per sections according to the Harmonized System (HS),  
(mil. USD)

Year	2001	2002	2003	2004	2005	2006	2007
Total export	565.5	643.8	790.0	985.2	1091.2	1051.6	1341.8
Including:							
Animals and animal products	18.3	15.3	28.6	20.2	17.2	16.2	13.6
Vegetable products	78.8	106.1	91.2	120.0	131.9	136.5	162.9
Fats and animal or vegetable oils	8.2	16.8	28.9	41.2	37.8	34.9	55.3
Food products, alcoholic and nonalcoholic drinks	251.6	267.4	314.3	345.9	396.0	276.4	276.0
Total import	892.2	1038.0	1402.3	1768.5	2292.3	2696.2	3689.9
Including:							
Animals and animal products	23.8	23.9	24.8	38.8	57.2	51.9	61.7
Vegetal products	37.6	43.5	82.3	73.5	65.0	72.8	150.4
Fats and animal or vegetable oils	3.0	7.1	5.5	7.4	9.9	11.1	16.0
Food products, alcoholic and nonalcoholic drinks	78.9	72.6	92.0	105.3	147.5	179.8	237.9

Source: Statistics annual book of the Republic of Moldova

Both, the import and export in our country, as from table 4 are increasing. If the total export increased by 2.37 in 2007 compared to 2001, then the total import in the same period increased by 4.12 times. Consequently, the loss from the external trade increased by 7.19 times or from 326.7 million USD in 2001 to 2348.1 mil USD in 2007. This should concern us a lot.

Table 5 External trade with main partner countries, millions of USD

Year	2001	2002	2003	2004	2005	2006	2007
Total Export	565.5	643.8	790.0	985.2	1091.2	1051.6	1341.8
CIS countries, total	344.4	350.4	423.6	502.4	551.4	424.1	550.3
Inclusive: Russia	247.0	238.9	308.4	353.3	347.5	182.0	232.7
Ukraine	57.2	61.4	56.1	64.8	99.9	128.8	167.9
EU countries, total	140.9*	171.2*	211.0*	400.7	443.4	537.7	679.3
Inclusive: Romania	37.9**	56.7**	90.2**	98.9	111.7	155.6	211.2
Other countries: USA	25.0	34.9	33.6	42.7	37.5	16.2	15.2
Turkey	2.3	4.1	7.2	12.3	24.7	28.5	32.1
Total import	892.2	1038.0	1402.3	1768.5	2292.3	2696.2	3689.9
CIS countries, total	340.2	408.9	593.4	764.8	905.2	1020.8	1333.7
Inclusive: Russia	143.9	153.4	182.9	212.3	267.8	417.0	498.6
Ukraine	152.6	203.6	309.3	436.3	479.7	516.5	687.0
EU countries, total	317.5*	356.8*	505.4*	774.8	1038.8	1218.5	1681.3
Inclusive: Romania	93.4**	90.4**	97.9**	164.1	257.3	346.0	449.1
Other countries : USA	28.1	48.0	34.5	29.4	40.8	35.9	46.8
Turkey	19.7	32.7	48.2	69.1	93.0	113.8	166.8

Source: Statistics annual book of the Republic of Moldova

\* European Union countries to corresponding years:

\*\* In corresponding years Romania was part of Central-Eastern Europe

In 2001 the export of agricultural products represented 63.1%, alcoholic and nonalcoholic drinks 44.5%, then in 2007 this represented 37.8% including agricultural products, alcoholic and nonalcoholic drinks-20.6%. In 2007, the import

of animal products increased by 2.6 times, vegetables by 4.0, fats and vegetable oils by 3 times.

If in 2001 the rapport between the export and import of food products, alcoholic and nonalcoholic drinks was 3.1:1, then in 2007 this rapport is 1.6:1. In this way our country known as an exporter of food products becomes an importer of them. The external trade geography has changed categorically. As it is indicated in table 5 the export has increased in all countries.

In this way the export of CIS increased from 344.4 mil of USD in 2001 to 550.3 mil USD in 2007 or by 1.6 times. The export in EU countries has increased more from 140.9 million to 679.3 USD or by 4.8 times. In 2007 the export to EU countries overcame the one to CIS by 1.24 times. The situation with the export is almost similar. If the import from CIS in 2007 increased in comparison with 2004 by 1.74 times, then in EU countries by 2.17 times. Thus, starting from the situation created on the food and agricultural market, we consider that the economic and financial crisis is quickly approaching to Moldova can be diminished by the evaluation of the offers from the side of European market.

### **Property and organizational forms in food and agricultural sector and the crisis**

The land fund represents the main natural resources of the country and offers opportunities to diminish the crisis. The main orientation of the national agricultural policy was and remains to be the de monopolization of the state property, the change of the property type of the land. 1st of January 2007, as it is seen from table 6, the surface under private property was 1844.5 thousand hectares or about 73% from the agricultural lots. The surface of gardens was 83.6% and the vine yards -94.7%.

Table 6 Agricultural fields as to the property type, 1st of January 2007

Indexes	All types of property		From which			
			Public		Private	
	thousand ha	%	thousand ha	%	thousand ha	%
Agricultural fields, total	2511.8	100	667.3	100	1844.5	100
From which: arable land	1820.1	72.5	264.8	39.7	1555.3	84.3
Multi annual plantations	301.8	12.0	37.8	5.7	264.0	14.3
inclusive: gardens	131.5	5.2	21.6	3.2	109.9	5.9
vine-yards	158.6	6.3	8.4	1.2	150.2	8.1

Source: Statistics annual book of the Republic of Moldova, 2007

Such a policy is opportune as the private sector efficiency is very much significant. In 1995 the global agricultural goods obtained from the private sector overcame those from the public sector by 9 times and in 2006 by 11.4 times correspondingly. Comparing the prices in 2005 the global agricultural production increased by 0.7% in the public sector and by 4.2 in the private one. No comments.

The juridical and organizational forms practiced in the national economy will have a great impact on the development of economic and financial crisis. Nowadays, the micro enterprises are dominating. This represents 75.9% from the total, followed by the small ones of 18% and medium-size that make 4.4%. The agricultural fields that belong to small enterprises, represented by farms, have decreased from 1048.7 thousand ha in 2003 to 987.4 thousand ha in 2007 that is shown in table 7.

Table 7 Agricultural fields according to the land owner category,  
at the beginning of the year,  
(thousand ha)

Indexes	2003	2004	2005	2006	2007
Total	2269.6	2264.0	2257.4	2254.0	2245.8
From which: enterprises and organizations	798.5	835.2	841.2	848.0	839.0
Farms	743.5	706.7	692.9	685.6	678.9
Surface less than 50 ha	607.1	611.7	604.1	620.0	605.8
From which a surface less than 10 ha	600.4	586.5	601.9	611.6	591.3
Plots near the house	305.2	298.6	299.1	306.9	308.5
Other land owners	422.4	423.5	424.2	413.5	419.4

Source: Agricultural activity of small producers in Moldova Republic in 2007, Ed. Statistica Chişinău, 2008.

Today people are oriented to develop small and medium-size businesses. In statistical researches it is stated that “in 2007 the average size of the near house plots was of 0.4 ha. The medium size of the individual farmer fields was 1.62 ha.

First of all we consider that this size of 1.62 ha represent a near house plot of 0.4 ha together with the land share attributed to one person which in 2006 was 1.3 ha. Indirectly, the current idea is confirmed by the same statistical investigation which shows that “those from the total number of the farms, 80% possessed both near house plots and land share given to people. Consequently, if one person is

subject to 1.3 ha of land share and in the majority of families there are about 3 share holders, then the size of the farm should be of about 4-5 ha.

Secondly, the comparative study of the experts of countries with a highly developed agriculture shows that in 2004, in Great Britain the exploited land was of 67.9, in Denmark – 34.7, in Sweden-33.7, Luxemburg-32.4, France-28.4, Ireland-26.1, Germany-17.9, Holand-16.2, Belgium-15.9, Spain-15.8, Finland-12.8, Austria-12.2, Portugal-6.9, Italy-5.6, and Greece-4.2 ha.

Thirdly, according to the annual statistical bulletin of Moldova, the households and the farms provide for the consumer's disposal over 70 % of the total volume of agricultural products they produce. According to the results of statistical studies, the personal subsistence farms of citizens and farmer's units with areas under 10 ha in the year 2007 occupied only 40% of agricultural lands and have provided 70% of the total volume of agricultural products in the country, including 58% of crops and over 87% of livestock. Labor productivity is higher in small and middle-sized enterprises. The average income per one employee in the middle-size and small business is 176.7 thousand lei compared to the enterprises of the same size in agriculture – only 39.9 thousand lei. In small enterprises – respectively 270.6 and 74.6 thousand lei, while at micro enterprises - 128.3 and 61.4 thousand lei respectively. This is an incontestable demonstration of higher efficiency of small producers.

However, one has to mention that the agricultural lands are highly fragmented, even within the same agricultural enterprise. Obviously, we consider it advantageous to consolidate the agricultural lands by following the western model granted that this process would take place in accordance with the provisions of the EU-Moldova Action Plan for the year *2007 that urges us to „Continue the processes of voluntary re-parceling and consolidation of agricultural lands through the land market mechanism”*.

In the conditions of the Republic of Moldova, as well as in the countries of European Union the growth of average area of farming units takes place by: donation and successors; *lease; sale-acquisition; association and cooperation. For the consolidation of small agricultural producers it is extremely important for the state not to impose any of the above-mentioned modalities but to mediate impartially and to encourage them by fiscal facilities and financial support, simultaneously providing adequate legal framework.*

The extension of private property on land and formation of farmer's enterprises have contributed substantially to the growth of the number of persons capable of making decisions in agriculture.

**Economic tools and mechanisms to be implemented in agriculture for the attenuation of crisis**

The economic and financial crisis in the sector of agriculture and foodstuffs may be attenuated by economic tools and mechanisms. Another important aspect is the *price* that generally expresses the "society's power" over its members. In agriculture it may have both positive and negative effects. According to the Table 8 below, the consumer price index for foodstuffs is growing from year to year practically at the same rates, oscillating from 104.3% in 2002 to 113.7% in 2005. The difference between the price indexes of products sold by the agricultural enterprises and the compared to the previous years is more pronounced and varies from 93.7% in 2004 to 139.2% in 2007.

Table 8 Evolution of consumer price index

Year	2001	2002	2003	2004	2005	2006	2007
Consumer price index for foodstuffs, annual average, previous year =100	110.8	104.3	113.6	112.8	113.7	109.1	111.0
Price index of products sold by agricultural enterprises, annual average, previous year =100	99.5	100.2	120.3	93.7	105.5	102.9	139.2

Source: Annual Statistical Bulletins of the Republic of Moldova

Most of them want to buy as much as possible. In the conditions of economic and financial crisis direct and indirect intervention of legislative, executive and legal powers is necessary in order to regulate the price policies and in such situation one should consider the experience of EU in the application of *indicative prices, or suggested prices, equitable for both producers and consumers; intervention prices* are aimed at triggering the community mechanism of *maintaining the incomes of the farmers and the threshold prices* – minimum prices at which the imported products may enter the internal market.

*Taxes and duties* are efficient intervention tools that the public authorities may use for the regulation of agricultural sector. Indirect taxes, such as VAT, equivalent land unit fee, etc. are the dominating elements in the structure of taxes levied from agricultural producers. The direct collections, such as income tax are insignificant. Non-fiscal collections in the form of duties, including the customs duties also have a significant impact on the situation in agriculture. Besides fiscal scopes they also may pursue:



- increase of prices for the respective products on the international market (given that the state in case is an important exporter of these products);
- limitation of certain exports (as a rule, of non-processed products in order to have them processed in the country in bigger quantities and exported as manufactured products) to stimulate certain industries.

In the conditions of economic and financial crisis one may find useful to apply selective temporary interdictions on the imports of agricultural products in order to maintain the necessary equilibrium between the supply and demand for the national agricultural products and cancellation of all interdictions on the exports of foodstuffs in order to encourage the domestic producers.

*Credits.* The specifics of agriculture imply a need to borrow resources both for long and short terms. Pursuant to the results of a selective statistical study, the cash income from agricultural activity generated per hectare of agricultural parcels located adjacent to the farmers' houses in the year 2007 have attained a value of 10364 lei while the income per hectare obtained by the farmers having both adjacent parcels and farming lands was only 5033 lei. Hence, such income opportunities are rather limited to enable adequate investments. This situation requires us to elaborate and implement measures to encourage borrowing.

In the conditions of economic and financial crisis *subventions* meant to stimulate the development of certain segments of agricultural sector are extremely important. They may take the form of specialized assistance for biological agriculture in order to encourage the alternative use of agricultural lands, for the maintenance of agriculture in less attractive zones and communes, for the professional training, etc. The EU-Republic of Moldova Action Plan for the year 2007 in the agricultural compartment requires „Optimization of agricultural subventions (allocation of funds in the form of investments). For this purpose we consider relevant the following measures:

- cancellation of the existing system of compensations for agricultural-climatic conditions even if they do affect the agricultural sector and encouragement of creation and implementation of private insurance systems;
- removal of limits on existing funds, creation of budgetary and extra-budgetary funds using the income from agricultural activities for the strictly targeted financial assistance of certain agricultural activities and processing of primary agricultural products;
- stimulation of exports of agricultural products and foodstuffs by implementation of preferential exchange rates. Every euro obtained from

exports would be exchanged at a rate increased by 1-2 lei compared to the prevalent one;

- assurance of transparency of costs incurred by the state for the agricultural sector;
- abandonment of support *ex ante* / before obtaining the products / that as a rule is inefficient and the state intervention *ex post* /after the products are obtained /. In order to stimulate the farmers to produce highly demanded products, especially for the external market, we must analyze the spectrum of sold products. The *ex post* support may be provided via two mechanisms:
  - a) the state provides subventions for a part of the market price, covering the production costs;
  - b) the state procures the products at a negotiable price not less than the production cost. The products are then sold, including to the processing industry at a price smaller than the one paid to the farmers in order not to affect the purchasing power of the population.

In the conditions of crisis the public authorities could support agriculture by taking the surplus of products from the farmers at a price sufficient for covering the costs, for their subsequent storage and sale when the demand on the market becomes high. Considering all consumers together, i.e. the total demand in the society, one may make a conclusion that the possibility of buying more products would increase when the prices become smaller. Nowadays the country's agricultural sector requires elaboration and implementation of a new system of tools and economic mechanisms aimed to reduce the effects of economic and financial crisis.

#### **Entrepreneurs and managers may contribute to the attenuation of crisis in agriculture**

Assuming risks and incertitude, the entrepreneur and/or the manager of an agricultural enterprise has to find new sources of certitude to limit the instability and reduce the effects of economic and financial crisis, providing for the profitability of his business. The "perfect" ones are practically impossible to be found or are insufficient to satisfy all needs. Rather limited is the number of personnel with higher education.

As seen in the Table 9, the share of staff with higher education in the total number of employed persons is around 19 percent. In agriculture the share of personnel with higher education is only 3 percent of the total number of workers

employed in this branch. Clearly, "perfect" entrepreneurs and/or managers have to be educated. Making people more productive by education,- in the vision of Peter Drucker [7, 76], is the „top challenge of our era”.

Table 9 Structure of personnel education by occupations 2007, thousand persons

	Total occupied labor force	Education					
		Higher	Special secondary	Professional secondary	Lyc-eum	Gym-nasia	Primary or no education
TOTAL	1247,2	247,4	211,3	308,6	253,6	205,4	20,9
Agriculture, hunting, forestry and fishery	408,6	12,8	36,9	102,5	106,0	131,7	18,8
Industry	158,1	27,0	28,7	53,5	31,3	16,9	0,7
Construction	75,7	9,4	10,5	25,9	16,4	12,6	0,8
Commerce, hotels and restaurants	197,9	42,5	43,0	52,9	41,5	17,6	0,2
Transport and communication	68,7	13,4	13,7	25,3	12,7	3,6	0,0
Public administration, education, health and social assistance	250,5	104,2	63,1	33,8	31,4	17,8	0,3
Other branches	87,8	38,0	15,4	14,8	14,2	5,1	0,1

Source: Annual Statistical Bulletin of the Republic of Moldova

Here one should mention at least two stages of knowledge accumulation by the entrepreneurs and/or managers:

- Before starting the business
- While performing entrepreneurial activity

Before starting his business any entrepreneur would need to have the competence that by Boettinger is acquired by the „methods transmitted from teacher to pupil ...” Already in 1911 Frederic Taylor wrote about the „optimum method”, while Henry Fayol pointed that „managerial ability may and should be acquired in the same way as technical ability – at school and then in the workshop”.

The entrepreneurs of agricultural enterprises consider that the best knowledge comes from experience – both their own experience and the experience of others. As a consequence the entrepreneurs often learn things after they „hit the problems with their heads” as they appear in the course of the business they have started. „Learning by doing” is a recipe recommended by Peter Drucker in his „Landmarks of Tomorrow” [7,76]. In the conditions of competitive economy and highly dynamic changes, as well as of the need for innovation one would want to have better training in the testing of ideas and elaboration of concepts to be applied for the reduction of effects of economic and financial crisis. Qualification upgrade courses for entrepreneurs and/or managers of agricultural entrepreneurs should include 60-90 hours of contact with the professor and around 360-450 hours of individual activity during a period of three to six months, four hours a week. It would be good for such trainings to include the following three components:

One third of the activities shall be organized based on the program elaborated by didactical staff and include the most actual problems of developing business in agriculture in the conditions of crisis; One third of the activities shall be organized based on the problems and situations faced by the entrepreneurs and/or managers following the qualification upgrade program; One third of the activities shall be dedicated to the elaboration of a development strategy for the agricultural enterprise by the entrepreneurs and/or managers with the help of a coordinating professor.

The entrepreneur and/or manager as any other human being is capable of effectively using only one or two of the competencies he has. Being unable to perform all of his managerial functions he is forced to employ permanent staff or apply for assistance to the respective specialists. As for the small agricultural producers it is not rational to hire specialized staff, the need to organize and develop consultancy services becomes absolutely clear. Obviously, consultancy services must be provided by specialized companies. The consultancy services would be the „business incubators”.

***In conclusion*** we should stress that only by supporting private property, gradual consolidation of agricultural lands based on the principles of market relations, development of efficient organizational and legal forms, use of tools and mechanisms adequate for the competitive economy, training of persons working in the agricultural sector and foodstuffs production and widening of consultancy system the state may reduce the negative effects of the economic and financial crisis.

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