

THE IMPACT OF SUBSIDY AND RISK INSURANCE MEASURES ON THE EFFICIENCY OF THE AGRICULTURAL SECTOR IN THE REPUBLIC OF MOLDOVA

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Abstract

In this paper the author presents the results of scientific research on the problems faced by the farmers in the Republic of Moldova concerning the proper use of various forms of subsidies. The conclusion contains some recommendations on the effective measures for the state support of the agricultural sector, resulting from the research of the experience of other countries in this field.

Key words: state insurance programs, agricultural risk, price and income support of farmers.

INTRODUCTION

Agriculture is a significant sector of the national economy of the Republic of Moldova and raising efficiency of this sector represents an objective of the agricultural policy in view of promoting growth and reducing poverty in rural areas. Agricultural land accounts for 56.2% (1.9 million hectares) of the total territory of Moldova that is 3.38 million hectares. Despite the fact that the number of

enterprises is increasing, the number of employees decreased by 2.5 times in 2011 compared to 2005 (Table 1).

Over the past two years of the period analyzed there was recorded an increase in all indicators of economic activity of the agricultural enterprises in the Republic of Moldova. Some experts claim that one factor that influenced the situation in agricultural sector is reviewing Moldovan government policy on objectives of agricultural subsidies.

Table 1. Indicators of the agricultural enterprises' activity during the years 2005-2011

Indicator	Year						
	2005	2006	2007	2008	2009	2010	2011
Number of enterprises ¹	1 989	2 086	2 187	2 198	2 302	2 360	2 438
Average number of employees, people	117 648	100 262	83 522	73 062	67 103	60 751	46 713
Global agricultural production, million leis	12688	13734	12825	16503	13300	19873	22619
Global agricultural production as a percentage of the previous year	101	99	77	132	90	108	105
Sales revenues, million leis	4 303.7	4 003.2	4 038.5	5 475.6	4 677.4	6 867.2	8 119.0
Financial result before taxation. Profit (+) Loss (-), million leis	20.4	115.1	477.2	794.1	-208.6	1 086.0	1 309.6
Number of enterprises that obtained profit	853	861	1 074	1 166	902	1 386	1 412
Financial result of the enterprises that obtained profit, million leis	244.1	395.3	770.1	1 027.0	514.3	1 319.5	1 643.7
Return on production sold by agricultural enterprises, % including:							
crop production	17.1	17.1	23.1	27.9	5.2	43.2	45.3
animal production	25.0	20.1	-3.0	18.4	21.4	20.7	14.6
Return on sales, %	15.2	16.0	16.6	20.7	11.5	25.8	25.6
Economic profitability, %	0.7	3.3	10.1	12.9	-2.8	12.9	19.5

Source: www.statistica.md

¹ not included in this category are peasant households (farms)

Agricultural subsidy system is constantly in the focus of executive authorities. Subsidizing of agriculture represents an imperative aid for agricultural development as well as a means of attracting investments in this area. The allocation of subsidy fund is intended to achieve the following objectives:

- 1) To increase the productivity and competitiveness of Moldovan agricultural products on domestic and foreign markets;
- 2) to stimulate technology transfer and extension services;
- 3) to increase the income of agricultural producers, ensure the food security and reduce the level of poverty of Moldovan population;
- 4) to widely attract the young farmers in initiation and development of agricultural activities in rural areas;
- 5) to ensure the efficient use of natural resources and environmental conservation.

MATERIALS AND METHODS

The survey on agricultural subsidies in Moldova is based on materials of National Bureau of Statistics of the Republic of Moldova, Ministry of Agriculture and Food Industry and Agency of Intervention and Payments in Agriculture, as well as studies by some researchers in agricultural economics (Timofti, 2009). The author has used for this survey monographic method; analysis, synthesis, logical method, time series analysis, trend analysis, etc.

RESULTS AND DISCUSSIONS

The subsidy system applied in the period 2002-2009 was appreciated by experts and researchers in the field (Timofti, 2009 page 154) as: inefficient, non-transparent and bureaucratic. Currently subsidies are aimed

specifically at investment issues that are designed to enhance competitive advantages of the agricultural sector and its integration into the international trading system.

The evolution analysis of subsidies in Moldovan agriculture carried out by the author and based on the data from National Bureau of Statistics of the Republic of Moldova, Ministry of Agriculture and Food Industry and Agency of Intervention and Payments in Agriculture, indicates that since 2002 when subsidies allocated to this sector totaled only 11 million leis, their amount experienced considerable growth as of 2005, reaching the highest level of 658 million leis in 2008. In the last three years from 2010 to 2012 the annual fund of subsidies in agriculture constituted about 400 million leis. During 2009-2010 debts have accumulated towards the beneficiaries of subsidies, thus in fact in 2011 Agency for Intervention and Payments in Agriculture had to administer only about 215 million of the 400 million granted. In this connection, in 2012 the subsidies were awarded in two installments, the first installment of 75% - at the moment of signing of the contract, and the remainder was paid after November 1. This way the accumulation of debt for the following years was avoided, providing a more rational management of subsidy funds.

In 2011 in agriculture were attracted investments worth 1.526 million leis that were subsidized with 214 million. In the years 2011 - 2012 subsidies amounted to about 13% of the total investments in this sector.

Table 2 shows that during the years 2007 – 2009 subsidies allocated to agriculture made up about 1% of the respective year's GDP at current prices, whereas in 2010 their share was reduced to 0.55%, and in 2011 they constituted only ¼ of GDP.

Table 2. Subsidies for agriculture in the Republic of Moldova during the years 2002-2011

Indicator	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Gross domestic product at current prices, mln.leis	22555.8	27618.9	32031.8	37651.9	44754.4	53429.5	62921.5	60429.8	71885.5	82348.7
Subsidies, mln. leis	125.6	162.0	302.6	644.0	653.6	1326.0	1214.0	968.4	761.5	780.9
Subsidies for agriculture, mln.leis	11.0	30.0	36.0	251.0	319.4	622.6	658.0	614.0	400.0	215.4
Share of agriculture subsidies in GDP, %	0.05	0.11	0.11	0.67	0.71	1.16	1.04	1.01	0.55	0.26
Subsidies per 1 hectare of agricultural land, leis	5.79	15.79	18.95	132.10	168.10	327.68	346.31	323.16	210.53	113.39

Source: developed by the author on the basis of sources (Press release of AIPA, www.aipa.md, www.statistica.md)

It should be noted that in European Union countries (EU-27) there was also recorded a downward trend in the amount of aid granted by State to agricultural sector (<http://ec.europa.eu/competition>):

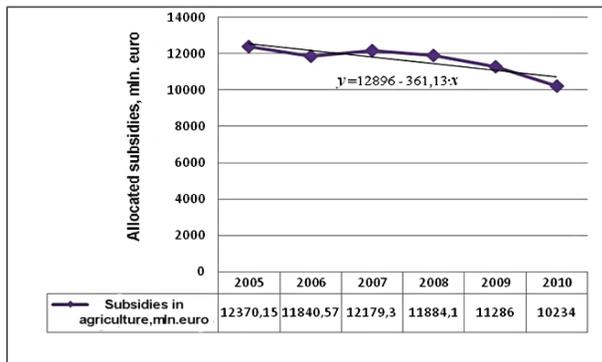


Figure 1. Evolution of agricultural subsidies in the European Union countries (EU-27) during the years 2005 - 2010

Whereas at the initial phase of the period the directions of subsidizing were limited to lending stimulation, granting subsidies for agricultural works, establishment of machine technological stations, then since 2006 they were extended to setting of tree plantations,

supporting the livestock sector, subsidies for risk insurance in agriculture, purchase of plant protection products and fertilizers, subsidies for sugar beet producers and tobacco producers. Since 2007 subsidy fund was directed to support the promotion and development of organic agriculture, encouraging the development of walnut sector, boosting investment in procurement of agricultural machinery and equipment, etc.

Survey on sectoral distribution of subsidies granted in the Republic of Moldova during 2008 - 2011 shows an increase in the share of subsidies directed to agriculture from 42.4% in 2008 to 61.6% - in 2011. The highest share was reached in 2009, when they accounted for 71.3% (www.statistica.md). For the year 2013 a number of subsidization directions are planned, also the mechanisms of funds allocation are to be reviewed in order to increase their efficiency (Press release of AIPA).

Table 3. Forms of supporting agriculture in the years 2011 - 2012 and actions planned for 2013 in the Republic of Moldova

Actions	Forms of support	Year 2011		Year 2012		Amount planned for 2013, thousands leis
		Total amount paid, thousands leis	No. of contracts	Total amount paid, thousands leis	No. of contracts	
Action no.1	Stimulation of lending to farmers by commercial banks, microfinance, savings and loan associations	3279	58	40641	896	50000
Action no.2	Stimulating insurance of agricultural production risks;	14615	164	37807	266	35000
Action no.3, including	Stimulating investments for setting up perennial plantations	41268	240	74379	713	80000
Vineyards		16422	114	43774	304	45000
Orchards		24846	126	30605	409	35000
Action no.4	Subsidies for investments in production of vegetables on protected land (winter greenhouses, solariums, tunnels);	6238	43	10677	149	30000
Action no.5	Stimulating investments in purchasing agricultural machinery and equipment, irrigation equipment and antifreeze systems, as well as hail protection facilities;	97250	664	165147	2255	100000
Action no.6	Stimulating the investment in equipment and technological renovation of livestock farms	786	13	16960	81	25000
Action no.7	Stimulating the purchase of breeding animals and their genetic fund maintenance	12044	19	11183	24	25000
Action no.8	Stimulating investments in the development of post harvest and processing infrastructure	10124	23	43006	245	100000
Action no.9	Stimulating the agricultural land consolidation	x	x	x	x	2000
Action no.10	Stimulating the agricultural land irrigation	x	x	x	x	8000
Other actions		29847	97	x	x	x
TOTAL		215451	1321	399800	x	455000

One of the most demanded actions in 2011 in terms of the number of applications submitted and disbursement of subsidy funds was the stimulation of purchasing agricultural machinery and equipment. Half of subsidies for this sector (52%) were targeted in this direction. In 2012 the government has limited the subsidies for purchasing agricultural machinery to 1.5 million leis per beneficiary and 500 thousand leis per unit. In connection with frequent droughts it was decided to increase subsidies for acquisition of irrigation systems from 25% to 40% of their value. Despite this, the share of subsidies awarded for this item in 2012 was over 41% of the subsidies disbursed, with 2255 contracts concluded, that means that the number of beneficiaries increased 3.4 times.

In 2012 the following actions have been taken in the framework of subsidizing system for stimulation of investments (www.aipa.md):

- set up 5017 hectares of orchards (groves of apple, plum, peach, etc.);
- set up 1020 hectares of vineyards (674 - table varieties, 347 - technical varieties);
- built and equipped spaces for production of vegetables on protected land (greenhouses, solariums, tunnels) for a total area of about 60 hectares;
- purchased 1046 units of agricultural machinery (tractors - 959, including 603 (up to 290 horsepower), 356 - over 290 horsepower, combines - 87) and 1843 units of agricultural equipment (irrigation equipment - 142 units, hail protection installations - 4 units).
- purchased breeding animals to maintain the genetic fund (embryo donor cows - 198 heads; primary cows, bulls and heifers - 270 heads; boars aged 6-8 months - 18 heads; non-inseminated gilts - 704 heads, sheep and goats - 124 heads.
- in the framework of the subsidy action no. 8 there were purchased and installed 122 technological equipments and machineries for processing enterprises, drying and freezing fruits and vegetables, processing of products of animal origin:
 - processing meat, including fish - 8 units;
 - grain processing - 31 units;
 - refrigerators - 49 units;
 - packaging houses - 6 units;

- vegetable processing - 7 units;
- fruit processing - 9 units;
- milk processing - 4 units;
- processing seed crops - 8 units.

The Law on State Budget for 2013 (Law on State Budget for 2013, no. 249 of November 2, 2012) has stipulated subsidies to farmers within the same range as in the previous year, but due to aid granted by European Union, the fund was supplemented by 60 million leis.

In recent years, the Republic of Moldova is increasingly affected by unfavorable climacteric factors, however agriculture due to its specific activity is affected the most. In accordance with the legislation of the Republic of Moldova (Law no. 243-XV of July 8, 2004) the insurance of agricultural production risks is eligible for subsidization. But this insurance is carried out only by accredited companies. Currently only two insurance companies (Moldasig and Moldcargo) are providing such services of insurance in agriculture with the possibility of subsidizing from the state.

According to official statistics in the Republic of Moldova only 2.5% of the worked agricultural land is insured, whereas in Europe this figure is an average of 15-20%.

Risks associated with crop production, horticulture, viticulture and animal husbandry, under which insurance premiums are subsidized from the fund of subsidies for agricultural producers for 2013, are caused by following factors (Law no. 243-XV of July 8, 2004):

1. Excessive drought (which caused a drop in yield of over 30%);
2. Hail;
3. Low temperatures below biological plant resistance;
4. Storms;
5. Flooding;
6. Perishing of animals, birds, bee families because of sickness, storm, hail, flood, excessive cooling, traumas;
7. Slaughtering, if necessary, of animals, at indications of National Agency for Food Safety.

The fund of subsidies for agricultural producers for 2013 was intended to subsidize insurance

premiums under the following agricultural crops and species of animals and birds:

- Sugar beet, sunflower, corn, soybean, vegetables and tobacco - the harvest of 2013.
- Wheat, barley and winter rape - the harvest of 2014.
- Perennial plantations (vineyards, orchards, viticultural and fruit-growing nurseries, as well as harvest of grapes and fruits);
- Animals, birds and bee colonies.

Table 3. Subsidized risk insurance of agricultural production in 2012 in the Republic of Moldova

Indicator	Insurance company		Total
	Moldasig S.A.	Moldcargo S.A.	
Contracts concluded	223	32	255
Subsidies (state share), leis	23 497 903	11 393 194	34891097
Indemnities paid, leis	41 113 196	7 700 000	48813196

Source: www.aipa.md

The largest share of all risk insurance contracts in agriculture in 2012 accounted for MOLDASIG SA - 87.45% (223 contracts) and only 12.55% (32 contracts) have been concluded by the insurance company Moldcargo SA, which however received 32.65% of the state subsidies allocated for this subsidy action.

In 2012 due to precarious situation it was planned to stimulate the development of the cattle breeding branch. According to experts about 92% of those in charge of cattle breeding hold at most 2 cows. The age of the persons who keep cattle is quite advanced, thus the livestock sector in Moldova is about to disappear, unless the branch is radically reformed. This also requires a development strategy for this sector, including measures to subsidize it.

Some subsidy actions existent by 2011 were excluded at the suggestion of European experts as to ensure better management of funds. Thus, following the IMF suggestion, the compensation of fertilizers and plant protection products, water pumping and organic farming were excluded from subsidy actions for 2012, as they imply current expenses and do not

belong to rational policy of subsidization. Excluding these actions imply a more efficient subsidizing of other subsidy actions.

Agricultural producers can no longer apply to subsidize the purchase of pesticides and fertilizers. Such a decision was adopted to counteract cartel agreements between importers of plant protection products. Also in 2012 subsidization of seedlings and seedlings grown in cell trays have been excluded due to detected fraud and lack of effective monitoring mechanism of the subsidies utilization according to their destination. There was decided to subsidize only investments in greenhouses, solariums and tunnels.

Currently in the Republic of Moldova it is difficult to furnish a quantitative estimate of the efficiency of subsidies impact on the agricultural development, both globally (at the level of agriculture as a sector of national economy) and at the level of agricultural products. These difficulties are due to lack of consistent policy on the allocation of subsidies in this sector. At the same time, the amount of allocated subsidies is too small as to contribute to the effectiveness of certain products. Agricultural policy reforms in developed countries are aimed at long-term gradual reduction of agricultural subsidies and ensuring that market mechanisms would adjust the level and structure of agricultural production.

Analysis of information on funds allocated in agriculture since 2002 shows that such a statistic is not done properly, contradictory data being published in various sources. Thus the lack of transparency on the allocation of resources to support agriculture, makes it difficult to assess agricultural protectionism both at the product level and at the sectoral level. For the same reason it is impossible to determine who are the real beneficiaries of agricultural subsidies: producers or consumers. We can affirm with certainty that none of them feels this protection: consumers are forced to buy food at high prices not because farmers have increased their revenues, but due to high costs imposed by the industry processing agricultural raw materials and by traders.

CONCLUSIONS

In author's opinion, efficient allocation of subsidies in agriculture of the Republic of Moldova can be achieved if the strategy of supporting agricultural producers would be reformed through creating a system of markets stabilization and supporting the agricultural producers' income compatible with EU Agricultural Policy.

Another measure aimed at facilitating access of agricultural producers to subsidy fund would be demonopolization of agricultural insurance market, which is currently regulated and limited to only two companies providing insurance services in agricultural production risks.

Granting of subsidy funds requires their rational use and monitoring their efficiency as to avoid scams, fraudulent schemes and abuses and to ensure transparency in the field. To avoid such cases and in order to assess efficiency of these funds' disbursement it is necessary to ensure transparency for directions of the subsidies use, for their size and results of their allocation.

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