

II. Marketing of Macedonian Agricultural Products

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Abstract

Application of marketing concepts in production of agricultural products in the Republic of Macedonia is a very important activity for successful entrance of these products at the markets of the countries that are members of the EU. The present condition of Macedonian agrarian sector does not meet the requirements of these markets.

This production is organized through agricultural enterprises with production capacities of around 27% tilled soil and around 10% cattle fund, and through private family firms which own around 73% of agricultural tilled soil and around 90% of cattle fund. Every private family farm owns a relatively small land (on average around 2.5 ha) and their land is dispersed in small parcels which are not greater than 0.4 ha on average.

The total agricultural production shows great variations in the last ten years. Aside from all economic difficulties, this production maintains an important role in the economy of the Republic of Macedonia and takes part in GDP with around 16 to 18%, and also employs around 18% of the total labor population.

Due to economic difficulties and poor accumulative capability, insignificant investments have been made in this area.

Different purchase realization at agricultural enterprises and family farms (family farms use part of its production for personal purposes in natural shape), condition the products to have low market, which ranges from 20 to 100%. Industrial cultures accomplish the highest market.

A large part of agricultural products in the Republic of Macedonia do not meet the requirements for quality and standard for successful participation at taste-specific markets, especially those from EU. This situation arises from the absence of adequate marketing institutions. Thus we confront different prices from place to place and from case to case.

Price formation for many products is free at the market (with few exceptions where the price formation is administrative). The scientific observation and analyses of the prices is made difficult due to the absence of valid data at the family private farms. Therefore, in order to enable an entrance of our agricultural products on the market of EU, a change in the production philosophy is necessary, which in future should be based upon the principle of applied modern marketing concepts.

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Introduction

The marketing, as a very important activity of the economic subjects in the area of agriculture in Republic of Macedonia, was not given substantial attention. It came from the fact that the Republic of Macedonia until the beginning of the 1990's was a federal unit of the former SFRY, and all the activities connected to the disposal of its agricultural products were towards that mutual Yugoslavian market. A small part of the own agricultural production of Republic of Macedonia, as a market surplus, went outside the borders of the mutual state of that time, and the biggest part of the export-import transactions were accomplished through firms registered outside its borders. But, with the independence, what was a home market of around 22 million inhabitants decreased to around 2 million, which created problems for the previously measured production capacities of the agricultural production connected to their disposal. Now, the previous domestic market became foreign where the performance of the Macedonian agricultural products meets the acute foreign competition and that makes the path of their simple and quick realization more difficult. On the other hand, by the membership of Republic of Macedonia in the WTO where it is foreseen to abolish gradually the import-export barriers for all products and services, a new concept and strategy about the performance at these markets is imposed. Because of these circumstances, the marketing as an activity imposes itself as a necessary need at the economic subjects for a successful realization of its business goals. This is especially needed if we want to enter the EU markets where basically they ask for a standard product with an impeccable quality and a relatively low price.

Data Sources and Working Method

The main data sources for the creation of this paper are published or unpublished data from the State Statistical Office of Republic of Macedonia. However, one part of the data is also taken from other sources such as: scientific studies, scientific works published in bulletins and magazines. We used two studies the most: "Strategy for the Development of Agriculture in Republic of Macedonia until 2005" (Galev & Murarcaliev, 2001) and "Export Strategy for the Republic of Macedonia" (Bogoev, Zikov & Blazevski, 1999). Both the strategies were developed by the Macedonian Academy of Sciences and Arts.

The work methodology is adjusted to the source and the size of the data that we had available. Actually, we used the basic standard scientific methods. Because of the character of the data we used mostly the method of comparison and the method of analysis and synthesis.

Analysis of the Market of Agricultural Products in the Republic of Macedonia

The market performances of agricultural products in the Republic of Macedonia are not at a significant level, which clearly makes the trade more difficult. Because of that it is necessary to take certain measures for their improvement and gradual approaching to those that exist in the developed European countries. The agriculture, together with the total economy, has those possibilities and will have to put maximum efforts in the creation of a better market ambience for its own products both for the domestic and the foreign markets, because there is not another alternative. For the fulfillment of that goal it is necessary to choose an appropriate marketing strategy. Considering the social-economic situation of Republic of Macedonia on one hand and the global economic movements on the other, the choice of the proper marketing strategy in the agriculture would be of enormous importance. In the literature there are different approaches in the choice of a marketing strategy. Thus, according to Kotler, there are three basic strategies in the marketing:

- Strategy of a non-differentiated marketing
- Strategy of a differentiated marketing
- Strategy of a concentrated marketing

But lately, with breaking down the walls that create trade barriers also in world dimensions, where the competition is the basic condition for survival or failure of the economic subjects, prevails the need for a choice of a marketing strategy that would be used in a totally free market. For the agricultural production in Republic of Macedonia the use of such a marketing strategy would give satisfactory results, taking into consideration the conditions that were found in the Macedonian agriculture. At first, when the competition with all its force would act in all subjects of the agriculture, the farmers and other firms would choose the strategy for permanent change of the situation.

Theoretical Assumptions and Perspectives for Successful Operation of the Market for Agricultural Products

If we define the market as a spatial and time meeting of the supply and the demand, then its stability will depend on their relations. Taking into account that the supply will represent the production, the stability of the market will depend on the possibility of the economic subjects in the measured production capacities to obtain that quantum of products with proper structure and quality. On the other side is the demand. It is represented by the consumption of certain goods and services by individuals or the society as a whole. Between the supply and the demand are the prices as a basic market regulator. At this market ball, where the supply, the demand and the prices have their market dance, the market provides its stability. However, that stability is provided if the supply and the demand show stable relations. This especially refers to the agricultural production where, because of its seasonal character, it conditions cycle price, and with that cycle

market movements. In order to avoid these market disturbances, it is necessary to provide certain market institutions for the market. These market institutions would be put in a function of providing a market stability, where a continuous supply would be provided that would satisfy the demand, and that on the other hand would give stable prices (without big oscillations), acceptable both for the manufacturers and the consumers. These institutions that would make the trade easier and faster, and at the same time would make the market more stable would be:

- Designer centers and institutions
- Standardization bureaus
- Purchase stations
- Different forms of transport companies
- Various storehouses
- Bureaus for goods reserves
- Insurance companies
- Banks and savings banks
- Market research institutes, *etc.*

Destabilization of the market can also occur if there is not enough and prompt market information. Information on the consumers' requirements is provided through the informative function of the market, so that the manufacturers could point their production in that direction on time in order to respond to those requirements. That information should be provided by the marketing information system. The marketing information system collects information with the purpose of making the work around the making of the decisions easier for the manufacturers. Every action for making a decision on behalf of the management structures in the companies will be successful only if it is made on the basis of much information that has the possibility to be used. The information itself can be internal and external, past, present and future, referring to the activities in the company, the competition and the market. The stability of the market depends on the precise defining of the property. Without any correct specification of the title for the property of the subjects with determination of the rights, duties and responsibilities for every participant, there will be no possibility for stable functioning of the market.

Experiences from the Countries that Candidate to Enter the European Union

The countries that candidate to enter the European Union are obliged to fulfill certain preconditions in the domain of agriculture so that they can "face" the market of over 350 million inhabitants. The factual condition of the agricultural sector in the candidate countries is the following:

- Even though the process of proprietary restructuring is finished, and the production stabilized, only two countries, Romania and Slovenia have achieved the level they had before the transition.

- The agricultural trade deficit towards EU for 1999 is 760 million euros. For that purpose there will be negotiations for tariff concessions for liberalization of the trade of certain products in this sector. We should mention that the export of live cattle and meat of these countries participates in the total export with 25%, and vegetables with around 11%.
- The market surpluses of grain growing products until 2005, according to the forecast of experts, will be 30 million tonnes for which export at the world markets will have to be found. In this period, the stock breeding production is expected to be in a more difficult situation where it is estimated that these surpluses only with the milk would be 2 million tonnes.
- The employment in the agricultural sector of these countries in comparison to EU is too high, which conditions the productivity of the labor to be around 11% of the one of the EU. By increasing the productivity to 50% of the productivity of EU it is expected 4 million people to be left without a job.
- The production capacities of most of the countries of this sector are too big and obsolete and in a large amount amortized. This condition is especially present with the processing capacities, where the direct foreign investments play the key role for their reconstruction.
- The structural changes in the agricultural production are gradually coordinating according to the world requirements with regard to quality, standards and prices, but most probably more time will be needed for a complete equating with what EU has done.
- It should be expected the intensive process of structural adjustment of the agricultural production towards the new challenges to create certain political problems, of the so called "rural dissatisfactions" which can reflect at the needed reforming steps in this sector. But with EU allocating over one billion euros annually from the budget for the program ISPA (Instrument for structural changes before the association), through the PHARE program with the allocated means of 15 billion euro, indirectly helps the rural development in the period from 2000 to 2006. But the special program for association in the agriculture and rural development (SAPARD) is concentrated on direct help. This help is primarily used for:
 - Improvement of the market efficiency, quality and health standards;
 - Maintenance of the old and creation of new working places;
 - Protection of the environment.

As it can be seen from the previously given information, becoming a member of EU, apart from the support and help that EU gives, is not simple, painless and quick. But, because of the bright perspective all the efforts done to pass that road are valuable.

Some Characteristics of the Agricultural Production in the Republic of Macedonia

The agriculture as an economic area is a very significant sector for the economy of Republic of Macedonia. With its share of 10 - 12% or together with the food and

tobacco industry of about 16-18%, it gives a substantial contribution in creating the GDP. As an addition, it provides employment for about 18% of the total population capable for work from where more or less over 175 000 statistically registered households in Republic of Macedonia provide the family incomes.

Size of the Agricultural Production

The size of the agricultural production in Republic of Macedonia in the last 12 years shows many oscillations with a decreasing trend. This is noticed almost with all products from all branches and sub-branches in the sector. The reason for this condition is the economic crises that took hold of Republic of Macedonia because of the failure of the market system of SFRY in which it acted as its integral part and because of the embargo that the world established towards Serbia and Montenegro and Greece towards Macedonia. For these reasons there was a disruption of the economic courses as well as the free flow of products and services towards the country and outside the country. The movement of the agricultural production per year and products can be best seen from the data shown in Table 1.

Table 1. *Movement of the production of agricultural crops per sector. I=Individual, S=Social. Structure in % (Source: The State Statistical Office of Republic of Macedonia)*

Crops	1993		1995		1997		1999		2001	
	I	S	I	S	I	S	I	S	I	S
Wheat	57.34	42.66	60.63	39.37	61.64	38.36	65.38	34.62	69.04	30.96
Rice	98.83	1.17	88.88	11.12	89.49	10.51	91.74	8.26	93.04	6.96
Potatoes	98.61	1.39	98.76	1.24	98.69	1.31	99.30	0.70	99.53	0.47
Tomatoes	90.38	9.62	92.59	7.41	95.78	4.22	90.00	10.00	92.39	7.61
Peppers	97.80	2.20	97.78	2.22	96.69	3.31	99.39	0.61	99.75	0.25
Apples	76.95	23.05	84.02	15.98	87.46	12.54	94.28	5.72	90.53	9.47
Grapes	54.57	45.43	63.00	37.00	60.00	40.00	64.00	36.00	72.36	27.64
Cattle	91.39	8.61	91.66	8.34	92.90	7.10	95.26	4.74	95.91	4.09
Pigs	62.45	37.55	62.14	37.86	67.44	32.56	66.66	33.34	57.40	42.60
Sheep	94.60	5.40	93.30	6.70	92.40	7.60	91.65	8.35	93.00	7.00
Poultry	66.00	34.00	63.70	36.30	65.80	34.20	69.70	30.30	70.00	30.00
Milk	68.83	31.17	79.07	20.93	82.71	17.29	88.59	11.41	89.33	10.67
Eggs (1000)	38.34	61.66	37.98	62.02	41.62	58.38	63.50	36.50	51.63	48.37
Sugar beet	45.81	54.19	33.71	66.29	82.93	17.07	61.43	38.57	90.14	9.86
Grapes (Proc.)	-	-	44.93	55.07	31.72	68.28	34.75	65.25	-	-
Tobacco	97.37	2.63	96.49	3.51	97.70	2.30	97.70	2.30	96.91	3.09

These kinds of tendencies are also shown by its structure. If you look at *Figure 1* where the percentage representation of the plant and stockbreeding production is given, it will be noticed that the share of the plant production increases on account of the stockbreeding production.

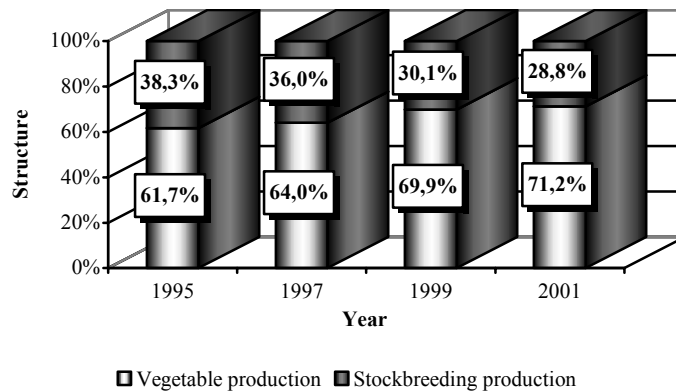


Figure 1. Structure of the physical size of the production in Republic of Macedonia. (Source: Statistical yearbook of Republic of Macedonia)

Thus, according to the data given above, the share of the plant production has increased from 61.7% to 71.2% whereas the share of the stockbreeding production has decreased from 38.3% to 28.8%.

The reason for the decreasing of the participation of the arable land and the conditional heads of cattle at the agricultural organizations with regard to the individual economies is coming from not making use of the entire available land fund and decreasing of the stock fund, as well as from giving 15% of the agricultural land in favor of the state according to the law. Similar tendency is noticed at the movement of the tractors. That participation is useful for the individual farms in the given period.

Agricultural Structure

The agricultural production in Republic of Macedonia is developing through two kinds of farms: Agricultural organizations (enterprises and cooperatives) and individual economies (family farms). They form the agricultural structure.

Their participation and tendencies in the development of the agriculture up to now will be shown in the following table.

Table 2. *Indicators of the agricultural development in the Republic of Macedonia (Source: Statistical yearbook of Republic of Macedonia)*

		1997	1998	1999	2000	2001
Index of production (1990=100)	Total	104	109	110	111	100
	Agricultural enterprises	63	63	58	62	48
	Individual farms	123	129	132	132	123
Share of purchase and realization (%)	Agricultural enterprises	73	57	48	49	54
	Individual farms	27	43	52	51	46
Tractors	Total	53 384	57 893	58 827	61 063	63 280
Conditional heads of cattle (in '000)	Total	319	311	287	319	274
	Agricultural enterprises	33	31	30	31	26
	Individual farms	286	280	258	288	248
Arable land in thousands of hectares	Total	647	635	633	621	612
	Agricultural enterprises	189	174	174	161	153
	Individual farms	458	461	459	460	459

The data in Table 2 show that the index of the value of the agricultural production in 2001 in comparison to 1990 in the agricultural organizations is decreased with 52%, whereas at the individual farms, despite the crisis, there is an increase of 23%. As for the purchase, because of the increased consumption of its own production in natural form, the participation of the individual farms in relation to the agricultural organizations shows small values.

The Structure of the Farms

As we said in the previous point, the agricultural production is organized and is developing through the agricultural enterprises and the individual family farms. The size of their production capacities as well as the arable land and the number of the stock is different. That difference imposes various approaches in the organization of the production as well as in the way of managing the farms. At the agricultural organizations the decisions for acting are made by certain managing structures, whereas at the family farms the farmer makes these decisions. This situation conditions different access, achievements in the way and the size of the investments, the structure and the size of the products produced, achievement of the added value, the choice of the distribution channels, the size of the number of the purchasers as well as the direction of the production flows.

Investments in Agriculture

The investment in the agriculture in Republic of Macedonia is restricted by two reasons: first because of the low productivity of the labor on one hand and the small working capital on the other, which condition low accumulative rate of this

economic area. It decreases to a great extent the possibility for providing the means for dynamic development. Second, because of the bad economic condition of Republic of Macedonia as well as the small influx of foreign accumulation, the credit potential of the financial institutions has been reduced because of which the credits become expensive and unattractive. In Table 3 and 4 reviews of the movement of the investments for basic means in the agriculture in Republic of Macedonia are given.

Table 3. *Investments in basic means in the agriculture in the private sector, in '000 Denars (Source: Statistical Yearbook of Republic of Macedonia)*

Indicator	1997	1998	1999
Total	1 090 062	940 009	1 060 527
Construction objects	251 099	207 799	227 593
Equipment	604 409	677 629	583 310
Other	234 554	54 581	249 624

Table 4. *Accomplished investments with the purpose of depositing in the social, collective, mixed and national sector, in '000 Denars (Source: Statistical Yearbook of Republic of Macedonia)*

Indicator	1997	1998	1999
Total	436 182	251 899	341 825
Agricultural production	423 864	235 438	339 888
Agricultural services	11 478	13 913	1 557
Fishery	840	2548	380

Marketing of Agricultural Products

The market for agricultural products and processed food in the Republic of Macedonia is characterized by all the specifics that comes from the character of the agriculture as an economic area and they are: different size of supply because of the influence in the process of production of the soil-climate factors; change of the supply because of accepting new techniques and technologies in the production, the seasonal character of the supply *etc.*

The distribution of the agricultural products is going through several channels such as: sale through purchase, sale at the green markets, direct sale of the consumer's inter-rural and rural trade *etc.*

Even though there are a relatively large number of distributive channels for realization of the agricultural production, their efficiency is not satisfactory. Because of that, there is a need to form new channels for distribution, such as the wholesale market and the agricultural-stock exchange. Because of the non-functioning of the agricultural-stock exchange (even though it was formed by the government) and the non-existence of a wholesale market, that role was taken by the bulk market that functions in Skopje, where during the "formation" of the prices there are sometimes different pressures and blackmails on the manufacturers in order to purchase their products at the lowest price possible. In

Table 5 we show the marketability of some more important agricultural products (Kotler, 1988).

Table 5. *Marketability of some more important agricultural products*

Product	% of production	Product	% of production
Wheat	39.1	Apples	22.9
Rice – un husked	59.4	Cherries	12.3
Sunflower	92.3	Peaches	51.2
Sugar beet	98.2	Apricots	22.0
Tobacco	94.0	Grapes	36.0
Potato	6.1	Beef	40.6
Beans	15.0	Pork	61.3
Onion	8.9	Mutton and lamb	40.0
Cabbage	4.8	Poultry meat	26.3
Tomatoes	25.4	Fresh milk	25.3
Peppers	12.5	Eggs	75.0
Melons	9.5		

As can be noticed from the data in the table, the marketability of the agricultural products, which is calculated and shown as a relation between the purchase plus the green market and the production, is relatively low. The largest marketability can be noticed for those products which go for a further processing and finishing such as the industrial crops where the marketability achieves almost 100% (tobacco, sunflower, sugar beet), and at some products, as the largest part of the vegetables, the marketability is below 20%.

This brings us to the conclusion that the marketability of the product depends on the possibility the same product to be used in its natural form by the manufacturers.

All the products that serve the processing food industry as raw materials through the added value increase their value, which according to a certain rule should benefit for increasing the income of the primary manufacturers. Unfortunately, for the way of comparative connection that has existed so far among the manufacturers of primary agricultural products (except at agricultural enterprises) and the processing workers that possibility has been denied.

Structure and Formation of Prices

Even though the prices of the agricultural products are formed according to the cost principle plus rate of income as well as the influence on the market through the supply and demand, because of the character of these products and their essential need for the society, the state forms so called administrative prices for some of them. Therefore in the agricultural sector in Republic of Macedonia the mechanism of the prices of the market for the agricultural products can be seen from:

- production prices;
- market prices and
- administrative prices.

The production prices are formed on the basis of costs plus a certain rate of income. But because of the weak evidence on behalf of the primary manufacturers (especially the private farmers), their defining in practice has become very difficult for the bigger part of the agricultural products and it is formed freely on the market, under the influence of the supply and the demand. Their forming has been greatly influenced by the movement of the prices of the agricultural products in the neighbouring countries, the world prices as well as the interventions by the state through the bureau for state reserves and through the export and import.

The administrative prices are formed from the state with an aim to protect both the manufacturers and the consumers. Indicative, protective minimal prices and the entrance price are applied for that purpose. For example, the products with a minimal price are purchased with the protective price and a minimal income is provided. It is used in the purchase of grain products, sunflower, oil beet, sugar beet, tobacco *etc.* Through the entrance price the home production is protected from the import of cheaper products with an addition of an appropriate import levy so that the price can be equated with the home price.

The movement of the purchase of the agricultural products in size and structure and the movement of the average prices at one part of the agricultural products can be found in the appendices I, II and III given in this work.

The Condition of the Markets of the Former Agricultural Farms

The agricultural farms were until recently the basic backbone on which the agricultural production in Republic of Macedonia was leaning on scientific basis. The most arable lands, the qualified staff and the greatest part of the processing capacities were concentrated within them. But, in the period of transition when the public capital became private, these manufacturers suffered great economic collapse. Namely, the great responsibilities because of the taken credits and the high interest accounts have created such a debt that most of them are not in the condition to continue their production. The banks, which are their greatest creditors, do not support them with new credits because of the weak credit potential and the risk from new disposals at these subjects, complicating their position even further. On the other hand, the entrance of direct foreign investments in this sector of the agriculture is completely insignificant. Exactly these conditions need their transformation and privatization. That process has begun and great deals of these capacities are privatized. Their functioning as joint-stock companies or as an association with a limited responsibility is expected.

Price Practices of Agricultural Products Produced by these Manufacturers

With regard to the size and the structure of the production as well as the expert staff the agricultural farms (the society farms) made (and are still making)

accounting evidence for all inner-outer elements from the production process. According to the costs made and the calculated rate of income they formed the price of their products. But this price is then the subject of the market correction and its adaptation depends on the supply and the demand. The seasonal character of the supply and the entrance of controlled or non-controlled import from abroad have great influence on its level. It will be good if the price of the primary agricultural products of these subjects is increased with the added value from their processing in the processing capacities, which were until recently part of them.

Information Systems

The system of information of the agricultural farms is hierarchically well set but because of the financial problems it is possible that it does not function well. With the existence of accounting evidence and expert staff, the system of information can function well. There are plans of analytical services as well as a commercial service with purchasing – selling departments in a large number of the agricultural enterprises. All the information about the happenings in the enterprise and outside it which serve for proper making of decisions, their controlling and a possible intervention in their correction are collected there.

Quality Warranties

The agricultural organizations which have processing capacities and other parts for circling the technological units (stock-breeding farms, factories, wine cellars, fisheries, greenhouses, institutes, experimental stations, laboratories *etc.*) in their structure, unless they do not break their business relations based on the principle of profitability it should be expected that their products will be produced with great quality. Because of their available expert staff and the institutions for controlling the quality with the use of modern technology they can produce products with standard quality and give proper warranty for that quality. With regard to the fact that these enterprises have bigger producing capacities they can organize a production of greater producing series where there is a possible use of standard technology with which the supplied products will have standard quality. That quality can be constantly controlled and improved in their laboratories and so they can guarantee their constant quality.

Achievements in Branches and Sub-branches in the Agriculture Sector

The agriculture as an economic area creates the agricultural sector. It consists of four sub-sectors or sub-branches: grain growing, fruit growing, wine growing and stockbreeding. The participation of the separate branches in the agricultural farms is different and it depends on the soil-climate conditions where the economic subject exists. Because of the use of modern technique and technology from a qualified expert staff these enterprises achieve great production results. This particularly refers to the production results achieved in the wine growing and the

fruit growing. However, the harvests fails at almost all branches because of the use of low-productive varieties and breeds, even though the productive varieties and breeds are far more used compared to the individual family farms. Here the world experiences will also have to be used to improve the situation.

Main Challenges

The first basic challenge is to finish the transformation and the privatization of these enterprises sooner. It will create an ambience for influx of financial means for financing of the production. These enterprises are suitable for an entrance of direct foreign investments because they have production capacities and built infrastructure. With a change of the old technique and technology and with a little education of the work force, with the use of the marketing concept in the production and with the establishment of a modern management, the results achieved will be identical with those achieved in the developed countries. Namely, these enterprises will be in the condition to increase the productivity of the labor, to decrease the costs of the production, to decrease the production prices, and in the same time to improve the quality of its own products. It will soon make them competent on the external markets especially on the markets in the EU.

Market Conditions for Family Farms

In Republic of Macedonia around 178 000 family farms are registered with 460 000 ha arable land and with a participation of 73% of its total arable land. The average size per farm is something little more than 2.5 ha with approximately around 6.5 parcels whose size is around 0.4 ha. These small parcels are spatially dispersed which contributes to make the production process harder and in the same time to increase the production costs.

50% from the production of the family farms serves to satisfy their own needs, and the other 50% are intended for the market. Their market supply mostly depends on the natural factors but also on the movement of the market prices.

Price Practices of Agricultural Products from Family Farms

The family farms lead their business activities without any accounting evidence. Because some valid data are missing it is hard to make an analysis of their economic working and to create their development according to that analysis. From this aspect it is not possible to determine the average production prices more accurately which will be the reference point for the creation of the policy of the market prices in Republic of Macedonia. Also here with the largest part of agricultural products the market price is formed freely under the influence of the supply and the demand. The state intervenes from time to time at the market through the Bureau for state reserves in order to calm the prices and to stabilize the market if there are certain disproportions between the supply and the demand. But because of the price fluctuation on the market, a large number of the farmers leave the production, causing its cycle movement. Only those farmers who do not

have possibilities for other orientation of the production or are traditionally connected to some production do not make any changes. Also here the state applies some administrative prices for some strategic products such as wheat and tobacco.

Information Systems

As we have mentioned before, because the farms do not have any evidence about the previous expenditure part, the disposal of data for their own working is very poor. Also the access to information outside the farm is very limited. The technical possibility to connect with Internet is very small, and the equipment with computers is symbolic. Because of the huge deficit of information, many happenings at the market regarding to supply, demand, price movement, quality of the products and their assortment, the distribution channels and similar, the farmers are not in a position to make rational decisions with which they would improve their market situation and thus increase their income. Because of wrongly made decisions many farmers face a lot of economic problems.

Quality Warranties for Agricultural Products from Family Farms

The great number of family farms that use various techniques and technology offer a large number of products with different quality to the market. In other words, the farmers in Republic of Macedonia use non-standard technology in the production process from which, as a final result, products with non-standard quality are offered at the market. They are not in a position to follow the quality of their products with regard to many parameters. And following the quality from authorized institutions is hardly acceptable and relatively expensive for the farmers. Because of the bad package and storage of the product, the expiry date of the product is drastically shortened. In most cases the farmers evaluate the quality of the product according to the external appearance (color, size *etc.*) not taking into consideration the chemical structure, the nourishing value, bacteriological and chemical pollution *etc.* All these circumstances prevent the farmer to give warranties about the permanent quality of his products.

Achievements in the Performances of the Sub-Sector

The biggest achievements also at the family farms are achieved in the fruit-growing production. Here a modern technology is used and as a result relatively satisfactory harvest is obtained. A little worse results are obtained in the wine-growing production where the harvests per ha are far behind those obtained in world scale. The variety structure is not highly productive, and it does not suit the world market requirements. Above all the frequent spraying because of the protection from diseases and the non-controlled fertilizing pollutes the products with chemical residues, and at the same time increases their production price. The condition is bad also in the grain-growing production. Also here relatively low

harvest is obtained. Relatively good results are achieved in the gardening especially in the production of peppers, tomatoes and watermelons.

In the stockbreeding relatively better results are achieved in the cattle breeding especially in the production of milk. The other sub-branches, pig-breeding, sheep-breeding and poultry-breeding are either in stagnation or show a decreasing trend.

Main Challenges

The main challenges for the farmers according to our evaluation are:

1. Enlarging their properties and increasing the production. That will provide creation of bigger market surpluses and their family income will be increased with their disposal;
2. Bigger finalization of their products where with a vertical connection to the processing food industry their products would get a bigger value and a standard quality;
3. Performance at the world market, especially at the EU markets where if it succeeds to standardize the production and provide a proper quality and quantity, it will provide a more secure economic future for the family.

Adaptation of the Agricultural Sector of the Republic of Macedonia for Integration in the EU

On the basis of the given conditions and problems in the agriculture the need for radical changes in its production orientation and economics can be noticed. But basically all the solutions should be sought within the own material possibilities and available resources. The process of transformation in the agriculture contributed many of its parameters to aggravate to that level that without international financial support they will not be able to come near to the level of development that the EU countries have.

In order to integrate the agricultural sector in the EU, the following should be done:

- To adjust the whole regulation in the area of agriculture according to the one of the EU.
- To organize the agricultural production in the way the agriculture in the EU countries is organized with a complete use of the marketing concept.
- In that direction more scenarios are possible, but we will talk about two.

The first scenario:

According to this scenario, the adaptation and integration would be done with a performance on the markets in the EU countries with labor-intensive products, which the manufacturers from EU are not interested to produce because of the high expenses in engaging the work force. Here their production is possible to be organized because of the vast unemployment that exists. This production is

suitable to be organized at the family farms. The production would run by using modern technology. The buyout would be organized in such a way that the products which are intended for export would get all the marks necessary for that goal. Because of that it is necessary the production to be coordinated, supervised and informed. The farmers do not have that possibility. That could be done by the proper marketing institutions, which would be organized by the associations of agricultural manufacturers or by the state in marketing centers, contemporary wholesale markets or agricultural stock exchange. The marketing institutions would organize all the marketing activities. With a built infrastructure and with a proper expert staff these institutions would make sure that the products achieve the necessary quality, and through their sorting, calibrating, package, storage and transport would get to the EU markets. Marketing information system would be available from where the information would flow in two directions: from the market to the manufacturers and from the manufacturers to the market. The products that have had the possibility to be disposed at the markets of the member countries in EU so far, will continue to be exported but with bigger dynamics. The market surpluses of the other agricultural products that cannot be sold at the EU markets, their disposal will be oriented towards the neighboring countries. These products would get lower export prices, but their quality and standard would be at a higher level.

The second scenario:

According to this scenario, Republic of Macedonia would export its agricultural production in the type of high quality primary and processed products, where a deep change of the marketing strategy is needed which means:

- Essential improvement of the external appearance of the products to reach a better position in the competition.
- Better organization in the buyout of fresh products for closing the circle, the manufacturers of the agricultural products, the manufacturers of the packages, the transport companies, the warehouse companies, the machines for sorting, calibrating, packing, the cooling appliances *etc.*
- Gradual changes of the varieties of some crops (apples, pears, grapes, tomatoes *etc.*), and some cattle breeds (cows, sheep *etc.*).
- Changes in the period of the supply of the amount of vegetables and fruit for a disposal in moment when their lack at the home and foreign market can be felt.

Adaptation of the agricultural sector for integration of the shown principle asks for bigger investments (because of a big amortization and old age of the production capacities, especially those in the food industry), bigger expertise of the manufacturers and the management staff, as well as a long period for its efficient use. It is suitable for using the marketing concept, contemporary management and entrance of foreign direct investments. Here also the export of environmental products can be included, whose production is possible to be accomplished in Republic of Macedonia.

These products can be disposed at other markets in the world, in countries with a high standard such as the USA, Canada, Japan, but also in countries with a lower

standard such as the neighboring countries: Serbia and Montenegro, Albania, Bulgaria and the countries from Eastern Europe.

The realization of this scenario will bring a big net currency effect to Republic of Macedonia, and a large income to the manufacturers.

Conclusions

The joining of Republic of Macedonia to the EU can bring many favors to the agricultural sector. These favors will derive through the goals of the mutual market and the agricultural policy and through the support of the fund for warranty and directions in agriculture. The effects can be seen in the following:

- Flow of products, capital and work force
- Expanding the market for disposal of agricultural products
- Possibility for a more intensive export supply
- Optimal use of the national comparative advantages for production of competitive agricultural products
- Increasing of the assortment and their approach to the consumers with favorable prices
- Elimination of the fluctuation of the prices is provided and stability of the market is achieved *etc.*

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Appendix A

Buyout of agricultural crops per sectors (in tonnes)

Crops	1993			1995			1997			1999			2001		
	Indivi- dual	Social	Total	Indivi- dual	Social	Total	Indivi- dual	Social	Total	Indivi- dual	Social	Total	Indivi- dual	Social	Total
Wheat	61 714	73 481	135 195	82 556	64 508	147 064	40 661	71 947	112 608	67 982	72 153	140 135	35 562	61 523	97 085
Rice	3 153	2 928	6 081	134	128	262	69	1 183	1 252	61	1 688	1 749	231	359	590
Potato	876	415	1 291	354	260	614	68	114	182	103	570	673	79	223	302
Tomatoes	4 586	12 359	16 945	12 848	13 540	26 388	679	4 520	5 195	17 632	13 927	31 559	6 750	7 697	14 447
Peppers	4 100	1 818	5 918	1 022	803	1 825	356	756	1 112	2 016	665	2 681	4 082	135	4 217
Apples	10 256	12 301	22 557	4 396	5 280	9 676	1	6 613	6 614	265	6 094	6 359	75	4 599	4 674
Grapes	71	6 830	6 901	2	9 746	9 748	391	8 983	9 374	729	18 451	19 180	549	13 335	13 884
Cattle	326	856	1 182	116	148	264	68	104	172	21	98	119	5	144	149
Pigs	181	4 360	4 541	96	4 329	4 425	25	5 657	5 682	40	6 435	6 475	30	6 302	6 332
Sheep	328	617	945	136	138	274	134	112	246	78	97	175	33	242	275
Milk	13 568	17 775	31 343	29 860	14 295	44 155	30 129	16 789	46 918	63 412	16 790	80 202	64 897	18 613	83 510
Cheese	56	572	628	41	362	403	14	487	493	28	386	414	48	629	677
Eggs (1000)	74	221 924	221 998	24	294 919	294 943	37	140 288	140 325	49	180 341	180 390	55	132 680	132 735
Sugar beet	2 524	2 959	5 483	1 841	3 566	5 407	5 598	3 227	8 825	4 104	2 488	6 592	2 860	383	3 243
Grapes (process.)	7 690	7 966	15 656	5 086	20 089	25 175	19 683	78 248	97 931	50 652	27 562	78 214	24 754	33 283	58 037
Tobacco	19 890	21	19 911	17 668	0	17 668	12 273	21	12 294	37 842	44	37 886	23 965	0	23 965

Appendix B

Buyout of agricultural crops per sector (in percent)

Crops	1993		1995		1997		1999		2001	
	Individual	Social	Individual	Social	Individual	Social	Individual	Social	Individual	Social
Wheat	45.65	54.35	56.14	43.86	36.11	63.89	48.51	51.49	36.63	63.37
Rice	51.85	48.15	51.15	48.85	5.51	94.49	3.27	96.53	39.15	60.85
Potato	67.86	32.14	57.65	42.35	37.36	62.64	15.30	84.70	26.16	73.84
Tomatoes	27.06	72.94	48.69	51.31	13.00	87.00	55.87	44.13	46.72	53.28
Peppers	69.28	30.72	56.00	44.00	32.00	68.00	75.20	14.80	96.80	3.20
Apples	45.47	54.33	45.43	54.57	99.98	0.02	4.17	95.83	1.60	98.40
Grapes	1.03	98.97	99.98	0.02	4.17	95.83	3.80	96.20	96.00	4.00
Cattle	27.58	72.42	43.94	56.06	39.53	60.47	17.65	82.35	3.36	96.64
Pigs	3.99	96.01	2.17	97.83	0.44	99.56	0.60	99.40	0.47	99.53
Sheep	34.71	65.29	49.64	50.36	54.47	45.53	44.57	45.43	88.00	12.00
Milk	43.29	56.71	67.63	32.37	64.22	35.78	79.00	21.00	77.70	32.30
Cheese	8.92	91.08	10.17	89.83	2.82	98.78	7.26	93.24	7.09	92.91
Eggs (1000)	0.04	99.96	0.01	99.99	0.03	99.97	0.03	99.97	0.04	99.96
Sugar beet	46.03	53.97	34.05	65.95	63.43	36.57	62.26	37.74	88.20	11.80
Grapes (process.)	49.12	50.88	20.20	79.80	20.10	79.90	64.76	35.24	42.65	57.35
Tobacco	99.89	0.11	100.00	0.00	99.83	0.17	99.88	0.12	100.00	0.00

Appendix C

Movement of the average prices at part of the agricultural products in Denars

Crops	1995		1997		1999		2001	
	Market	Buyout	Market	Buyout	Market	Buyout	Market	Buyout
Wheat	-	9.81	-	10.07	-	11.58	-	10.43
Rice	52.32	31.44	62.11	35.57	52.43	33.70	58.89	36.03
Potato	19.93	13.55	20.00	13.10	19.79	10.17	21.88	13.79
Tomatoes	-	37.15	-	36.00	-	21.46	-	33.07
Peppers	-	110.75	-	83.15	-	33.47	-	36.37
Apples	31.20	18.65	22.40	8.00	25.39	10.99	26.55	10.74
Grapes	-	14.35	-	11.75	-	17.56	-	18.37
Cattle	-	60.60	-	53.50	-	56.71	-	56.20
Pigs	213.51	76.20	224.62	73.55	228.83	78.22	221.15	83.46
Sheep-slaughtering	117.32	39.40	107.94	30.90	113.76	35.29	117.47	35.15
Poultry	-	176.06	-	104.43	-	51.66	-	47.66
Milk	24.82	18.50	25.70	15.50	26.04	17.69	28.06	17.29
Cheese	243.14	205.84	222.85	188.00	242.19	211.66	244.49	219.16
Eggs (1000)	5.25	3.50	5.73	4.00	5.07	3.58	5.78	3.90
Sugar beet	-	2.05	-	2.12	-	2.34	-	2.30
Seed of beet	-	68.90	-	193.58	-	278.80	-	263.49
Grapes (processed)	-	6.80	-	7.70	-	9.96	-	11.09
Tobacco	-	54.75	-	83.85	-	117.78	-	114.97

Marketing Macedonian Agricultural Products

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Abstract

Since declaring its independence from the former Yugoslavia, the Macedonian agri-food sector has started a major transition – from the planned economy to the market economy. Prior to business marketing activities, proper conditions for markets must be created. In the transition process the prevention of market failures through institutional development has turned out to be crucial. The institutional changes required by this process include the definition of property rights and information that is a prerequisite for the market economy. In order to gain future competitiveness in the agri-food sector a clear division of roles family farms and agro-combinates in the production-processing chain is foreseen. Family farms are relatively productive and they meet the needs for self-sufficiency as well as sales to the local markets and sales for further processing. The processing is to a large extent carried out by agro-combinates, where the development of clear ownership structure will gradually create the market for sharing profits and exchanging shares. The prerequisite for structural changes is the land reform and functioning land markets. Development of grades and standards improve the domestic markets and pave the way to market relations with EU and other countries. Gradual adjustment to the EU markets, where institutional conditions develop in conjunction with the change in actors' minds, is seen as a fruitful and necessary development towards possible future EU membership.

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Background and Problem

Since declaring its independence from the former Yugoslavia, Macedonia has tried to modernize the agri-food sector towards a market economy. The transition from planned economy into the market economy has implied major challenges for market institutions and information systems.

Agricultural production and processing represents about 16 per cent of Macedonian gross domestic production¹. However, the production and distribution system has not been able to satisfy domestic demand, thus making Macedonia a net importer of food (Galev & Murarcaliev, 2001, p 23). The fact that at the same time a great proportion of agricultural production resources are underutilized indicates that the food marketing system has not been able to provide sufficient incentives for domestic food production.

The purpose of this paper is to analyze Macedonian agri-food marketing systems and discuss alternative strategies for improving their performance. The objective of the Macedonian agricultural production is interpreted primarily as meeting the domestic consumer demand for good quality food at affordable prices (Ericson, 2003). Although agricultural production is a part of social wealth distribution and rural development (Jakimoski, 2002), this paper is delimited from these aspects.

Theoretical Perspective

A market may be defined as a mechanism that coordinates information concerning individual desires, referred to as the demand, and the incentives to produce, referred to as the supply. One might think of a loaf of bread: Somebody has woken early in the morning to bake it. Prior to that, somebody has bought flour and built an oven. Months before somebody has made the decision to sow wheat. Decisions to invest in agriculture, perhaps years ago set the conditions for production of this loaf of bread. "In the modern food system activities of thousands of people and resources scattered over thousands of miles contribute to the production and distribution of a single hamburger" (Shaffer & Staatz, 1985, p 53).

The traditional view in economics in its simplest form is that the so-called free market is able to coordinate all the information leading to optimal allocation of resources. However, this assumption undermines the fact that the market cannot function without rules, institutions set by society. In fact, the high performing markets need a well-designed institutional setting (Williamson, 1975). The task of marketing is to design market institutions, and rules of exchange, in such a way

¹This information is based on estimates made by the Department of Economics and Organization, Faculty of Agriculture, University of Skopje. However, according to the official statistics "Agriculture, hunting and forestry" represent 23.3 per cent and "Manufacture of food products, beverages and tobacco" 16.9 per cent (Anon. 2001, p 322).

that all actors are able to make sensible decisions. In this framework business marketing can further help individual firms to adjust to customers' desires.

Characteristics of a high performing market include a transparent information base for marketing decisions, a fair deviation of prices with no excessive fluctuations, ability to bring demanded products to consumers and an enforcement system for safeguarding the performance of the system. Imperfections may lead to ineffective performance that will lead to market failures (Ollila, 1995).

Sources for market failures may be multiple. A framework is presented by Williamson's (1975) "Market Failures Framework" in *Figure 1*.

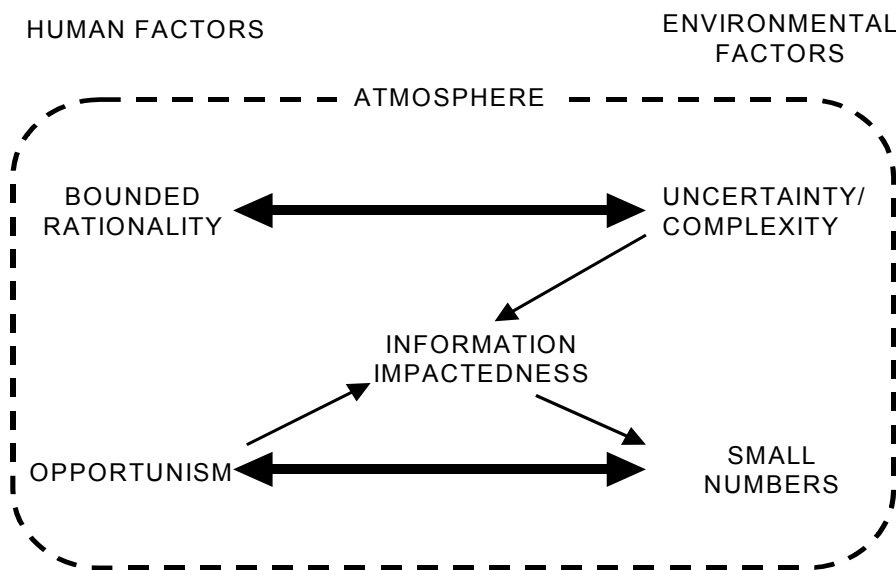


Figure 1. Market failures framework (Williamson, 1975, 40).

The basic assumption concerns the nature of human behavior. Individuals intend to be rational but due to a limited neuro-physiological capacity and language limits only bounded rationality is possible (Simon, 1965). Another assumption is that instead of complete honesty individuals may provide incomplete, false or misleading information, make self-disbelieved promises for the future, or break earlier promises if new opportunities make it advantageous. These actions are all examples of opportunistic behavior, which refers to strategic action of self-interest.

According to Williamson (1975) the bounded rationality becomes a source of information 'impactedness' leading to market failures if uncertainty or complexity in the environment increases. In the case of "large numbers", *i.e.* what traditional economics calls perfect competition, there is little chance for opportunistic behavior. However, the chance of gaining from opportunistic behavior increases when the number of actors becomes smaller.

Externalities are often sources of market failures. For instance, if a vegetable broker handles the produce carelessly in order to operate more quickly, this may

cause unintended quality deterioration of the produce, which may not be observed until on the distributor's shelf (Ollila, 1989). Narrowly interpreted, externalities are technical failures of markets. Externalities arise if it is technically difficult or costly to isolate the costs and benefits for the parties involved in a transaction. This was the case in the example of a broker's negligence, influencing the transaction between the distributor and the consumer.

Each actor in the market must also know who has the right to use, sell, buy or rent a good. Well-defined property rights are seen as a prerequisite for well performing markets. One of the main functions of society is, thus, to protect property rights.

In this paper, characteristics of Macedonian food marketing systems are analyzed in the light of concepts presented above. Special consideration is given to pricing practices, information systems and quality assurance. Based on these assessments of the sub-sector market performance, major challenges are identified in three scenarios.

Approach

The point of departure for this project is the common understanding of the challenges that lie ahead for the Macedonian agro-marketing system in meeting both the domestic and international market. After two brief meetings, in Sweden (the fall of 2002) and in Macedonia (the spring of 2003), a rough outline was drawn up. This outline has guided the continued work in finding primary empirical material through interviews and investigations, and secondary material in available literature.

Future EU Market Entries

Since the formation of the European Union (EU) in 1952 the number of member states has steadily increased. Access to the common market with harmonized policies and market conditions is an attractive option for many non-member states, Macedonia being one of them. Several countries are in preparation for 2004 membership in the EU, for example, Czech Republic, Estonia, Cyprus, Latvia, Lithuania, Slovenia, Slovakia and Poland. Most of these countries battle high unemployment rates and a significantly lower GDP/ capita than the EU15 average (Anon. 2000, p 42). Statistics also show that the market exchange with the EU in these countries is considerable (30 - 70% of the exports and 42 - 67% of the imports, Ibid, p 44). The harmonization of agricultural policies and legislation in these countries are steps towards membership in the European Union.

The process of transition, from the planned economy towards the market economy, has been a long and complex process. In almost all former planned economy countries the organizational form of agricultural production has been

large collective farms cultivating state-owned land. In most cases, prices (both levels and ratios), interest rates, and profitability were centrally administered and existed as planned norms rather than as indicators of scarcity and performance. Even in the Russia the first stage in the agrarian reform has been to create production units capable of operating under market conditions, by establishing incentives for private farming (von Braun *et al.* 1996).

The most significant aspect of the transformation in former European planned economy countries has been the change of ownership (Katalin, 2000). Generally accepted opinion is that after increasing the influence of the market economy, collective farming has not been competitive in any of those countries. After starting the land reform the number of small farms has increased remarkably. Small farms have increased the production efficiency. Zawalinska (2001, 179) reports from the Check privatisation process “In contrast to larger farms, family farms significantly increased their profitability in recent years.” In the Russia “It was this small-scale farming sector rather than the large-scale farms that helped stabilize the Russian food economy after reforms were initiated” (von Braun *et al.*, 1996).

Different to most other planned economy countries, in Poland 76 per cent of the land was in private hands in 1990 (Katalin, 2000). This has made the transition process much easier. According to the World Bank (Anon.1997, 19) “Poland ranked among the top performers in an analysis of the progress of transition economies, in particular in the area of small-scale privatisation, trade and foreign exchange reforms...”

Agriculture has been a significant employer in all the planned economy countries. Agricultural reform has resulted in remarkable increase in the unemployment. The problem has been bigger the more rapidly the reform has taken place.

The speed of the transition has varied from country to country. Countries with the most drastic changes such as Estonia or Poland liberalized their agricultural markets quickly. Thereafter those countries have been obliged to move towards more regulated agricultural markets (Zawalinska, 2001, 182). Seven years after the liberalization shock in Poland the World Bank (Anon., 1997, 19) recommends that the sustainability of the transformation should be ensured through strengthening the legal foundations for a smooth-working market economy by implementing the unfinished agenda: enforcing the collateral law and registry of liens, regulating leasing activities, strengthening bank supervision, and developing more fully the institutions of free markets and commercial law. Despite the shock the establishment of market institutions seems to take time.

In order to join the Union, countries need to fulfil the economic and political conditions known as the 'Copenhagen criteria', according to which a prospective member must:

- be a stable democracy, respecting human rights, the rule of law, and the protection of minorities;
- have a functioning market economy;

- adopt the common rules, standards and policies that make up the body of EU law.

The EU assists candidate countries in taking on EU laws, and provides a range of financial assistance to improve their infrastructure and economy. EU signed the Stabilisation and Association Agreement (SAA) with former Yugoslav republics, including Macedonia, in the beginning of 2003.

Agricultural Production in Macedonia

Agricultural production in Macedonia is carried out on family owned farms and on large so-called agro-combinates (former state farms). These agro-combinates and the family owned farms that produce above and beyond their own needs are of particular interest in the marketing perspective.

A simplified model of the Macedonian agri-food marketing system (Figure 2) provides a common base for the analysis below.

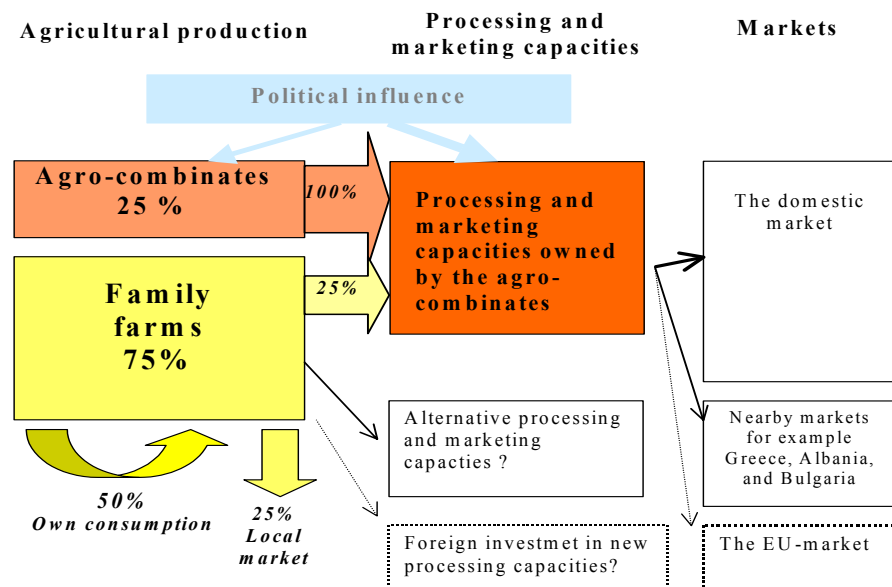


Figure 2. Suggested model for the agri-food marketing system in Macedonia.

In Figure 2 the actors in agri-food markets are divided into agro-combinates and family owned businesses. About 75 per cent of the agricultural production is produced by the 178 000 family farms. The total area of cultivated land is 460 000 hectares. However, only about 230 000 hectares are presently cultivated which makes the average size of a family farm 1,3 hectares (Karlson, 2003, p 29). The average farm size has been continuously decreasing (Galev & Murarcaliev, 2001, p 51). Roughly half of the production is used on family farms, *i.e.* self-sufficiency,

25 per cent is sold in local markets, and the remaining 25 per cent is sold to food processing firms owned by the agro-combinates.

The agro-combinates, former state farms and kolkhozes produce one fourth of the Macedonian agricultural production. This production is further processed in their own processing plants. There are about 240 such agro-combinates registered, and they are utilizing about 1.5 million hectares of arable land (including forests and pasture land). Agro-combinates cultivate only 27 per cent of their available land, implying that the land use for production is about 850 hectares. However, the variation in cultivated areas is large. Almost 40 per cent have arable land under 300 hectares. The 35 largest agro-combinates cultivate altogether 165 000 hectares (Galev, 1999), thus, having an average of 4 700 hectares. About 85 per cent of the fields are used for cash crops, 8 per cent for wine-yards, 4 per cent for meadows and 3 per cent for orchards (Anon., 2001, p 432). About 11000 employees work in these agro-combinates.

Food processing takes place in 170 enterprises employing 13 000 workers (Anon., 2001). Most food processing firms are parts of agro-combinates. The main products are wine, fruits and vegetables. In addition, there are about 20 tobacco factories employing about 4 000 persons.

Market Situation in Agro-Combinates

The agro-combinates are remainders from the era of the Socialistic Federal Republic of Yugoslavia. There are about 240 such enterprises registered. 145 of them have already been privatized and 53 are in the process of privatization. 13 have been shut down and 32 have gone into bankruptcy. Smaller agro-combinates have been privatized according to the model where the employees buy the enterprise and 52 per cent of the large ones have been bought by the managers (Galev & Murarcaliev 2001, p 56). In the following, some observations about the performance of agro-combinates are presented.

Production Inputs

The *labor* on agro-combinates is mostly old kolkhoz workers who are now shareowners of the combine. The workers have a fixed salary independent of the output. The possibility for dividend is rare because of poor performance of the agro-combinates. Changing the ownership from the state to the combine's workers has not remarkably diminished the monitoring problems related to work. However, it has presumably increased monitoring problems concerning the management. The complexity of processes connected with limited information and small numbers of managers seems to provide the possibility for the management to exploit the situation.

The *land* used by agro-combinates is owned by the state. This creates several problems: 1. The structural development of farming units becomes difficult if buying and selling of land is not possible. The present ownership situation is

possibly the main cause that only less than a half of the field resources are actually utilized. 2. Incentives for maintaining the land in the best possible condition are low. 3. The absence of utilizing land as collateral for loans hinders possibilities of getting *external capital* for investments. The absence of land markets may be expected to become a major problem when the role of the government as lender diminishes in the future.

It has been reported that the markets of *other inputs*, *i.e.* machinery, fertilizer, pesticides and quality seed are working insufficiently. This has led to high prices and questionable quality. Individual agro-combinates as well as groups of them have bypassed these markets and imported inputs with better quality and lower prices.

Agricultural Production

Large field areas and other agricultural production units should, in principle, provide economies of scale in production. Climatically favorable growing conditions usually allow the utilization of such scale economies. However, there are no examples where such organizational forms of agricultural production as worker-owned share companies or cooperatives have been able to compete with entrepreneurial or family owned farming. Among reasons are above-mentioned labor monitoring problems, limited possibilities for labor adjustment to seasonal variations as well as year-to-year variations and low labor efficiency. Possibilities for utilization of economies of scale are mostly the function of mechanization and capital intensity. However, in Macedonia there is plenty of cheap labor and limited possibilities for high-capital production.

Food Processing

A major part of food processing takes place in agro-combinates. Agro-combinates own processing capacity where they process their own agricultural production as well as products bought from small family farms. The government sets prices of many products such as wheat. Wine prices are influenced by cartels owned by the government. This provides a stable base for long-term planning. However, administered prices not reflecting the real supply-demand situation do not act as incentives for production decisions based on actual demand. Also have the consumers only a limited possibility to indicate what kind of food items they want to consume. In addition to these, there are no incentives for cost minimization. On the contrary, the costs tend to increase to the level of selling price (Liebenstein, 1979). There is evidence about such a development in Macedonia.

Open information about the market situation and prices would also be extremely useful information for the small family farmers selling their products to agro-combinates. Without such information there is a chance for small farmers' exploitation. When small farmers notice this, it leads to diminishing supply of their products.

Administered prices without clear quality criteria provide an insufficient means for quality assurance of food products. Quality assurance through raw material quality criteria and pricing according to these criteria provide incentives for improved quality. However, even this is not enough. Externalities causing food safety hazards must be monitored through inspections, records about the origin of seeds and animals, animal breeding methods, feed, and veterinary activities (This has also been noticed by Galev & Murarcaliev, 2001, p 240). Such programs are prerequisites for export markets such as EU as well as foreign investments.

The monitoring of complex of food processing activities requires well functioning and transparent management information systems. This is even more important in agro-combinates where without transparency and well-defined production-processing indicators the follow-up is difficult. This information impactedness leads easily to managers' exploitation of owner-workers.

Distribution Systems

Improved supply of processed food items with more centralized processing units requires strong attention to the development of distribution systems. The importance of good logistics, wholesale and retail outlets and related information systems increases along the increasing processing rate of food items. In addition to quantitative coordination, quality assurance and minimized spoilage rate become important.

Main Challenges

Based on the discussion above, among the main challenges with respect to agro-combinates can be mentioned:

- *The land reform.* Well performing land markets must be developed. Land reform is a deep-impact political activity having extensive effect to the entire structure of agricultural production. If the production will be more entrepreneur-based, who has the right to continue farming? What will happen to the people being without this possibility? How to avoid corruption in this process? Thus, the reforms may not happen in one night but need a gradual long-term plan. However, the reform may be regarded as prerequisite for the development of agricultural markets.
- *Improved capital markets including affordable credit.* As mentioned above, collateral for credits is related to the ownership conditions of land. However, in order to assure the proper performance of credit markets, also governmental activities are needed.
- *Further development of agricultural input markets.* This requires inputs to price information systems, quality standards and easier access to input imports from abroad. Improved input markets are connected to the credit markets as well.
- *Gradual liberalization of agricultural product prices.* Due to the fact that the price structure is at present so distant to any kind of market conditions the

price liberalization must happen gradually. Otherwise the development of market institutions lags behind causing market failures.

- *Separation of agricultural production from food processing.* In order to assure well-performing agricultural product markets and efficient food processing, those units should be separated into independent units. This could improve the effect of price liberalization and decrease the inefficiencies caused by non-transparent internal pricing.
- *Quality assurance, food safety and hygienic systems, including the upstream and downstream trace-ability of products.* All those, as well as harmonized production standards are prerequisites for the EU markets. Even if those markets may be long ahead the improvement of such items should start soon. Research is needed in this area. Without well-developed standards the possibilities of attracting foreign investments remain low.
- *The standards are also needed in the development of distribution systems.* The government together with research and private firms should plan a program for improved distribution systems. This includes logistics, cold-chains, storages, retail outlet equipment, etc.

Recommendations presented above do not only concern agro-combinates but also have implications on the entire agro-food marketing system. Furthermore, the marketing environment of the agro-combinates is significantly influenced by activities in other fields of markets, including credits, energy and foreign trade.

Market Situation on Family-Owned Farms

The estimated number of family farms in Macedonia is 178 000, with an average size of 1.3 hectares. The limited acreage is in part explained by state limitations for private ownership in the past. Few of these family farms are members of any kind of association or agricultural cooperative. In fact, statistical reports from Macedonia fail to see these farmers as part of the working force. They are accounted for as unemployed. For family farms, unclear property rights leads to succession problems and lack of incentives that promotes structural rationalization (and taxation problems for the government).

In the following paragraphs the situation for family farms as described by a milk-producing farmer will serve as an illustration and background for a brief reasoning of what there is to gain from organizing in an association².

A Family Owned Farm

A farmer, Mr. Alekso Josifovski, a representative for small milk-producing family farms, expresses his awareness of the weak bargaining power. He explains the

² The term *association* is used synonymously with *cooperatives*. An overview of different forms of co-operatives for various institutional conditions and objectives is provided by Bateman et al (1997),

prevailing problems as effects of the system of the former Yugoslavia, where farmers were encouraged to produce large volumes with no emphasis on product quality. The farmers' expectations, from the former planned economy system, echoes their disappointment with the current situation where there is no guarantee for markets or a certain price level for the products. (Söderberg, 2002)

Mr. Josifovski is an exception in many ways, in that he is on the board of a local supply cooperative, thereby hoping to strengthen his and fellow members' market position. His cooperative is active as opposed to many that have been started but carry no activity. Mr. Josifovski estimates that the benefits from such an association could cut his costs for inputs by at least 20 percent. He also foresees other advantages of the co-operative such as training in the area of quality management. In spite of these advantages he has trouble in enrolling other farmers; "...the toughest job is to convince farmers that the association will work to their benefit" (Ibid, p 53).

Organizing Collectively

Could the formation of agricultural cooperatives contribute to enhanced marketing of Macedonian agricultural products? If so, what kind of cooperative organization? The questions about when and how to organize collectively has been studied from many different perspectives (Staatz, 1989) and depending on the theoretical standpoint different arguments for and against co-operation may be used. Most economists, however, will agree on that the reasons for organizing co-operatively as counteracting "market failures" such as:

- limited number of actors in the market,
- limits in establishments,
- transaction specific investments and
- information asymmetry (Nilsson, 1991, 10).

Cooperatives can be efficient in preventing opportunistic behavior of actors in markets having transaction specific assets on both sides of the market (Ollila, 1989, p 294). Co-operative activity is defined in terms of economic activity that is carried out by members in a co-operative (association) that is owned and managed by its owners (Nilsson, 1991, 42).

"A cooperative is a user-owned and user-controlled business that distributes benefits on the basis of use. More specifically, it is distinguished from other businesses by three concepts or principles. First, the user-owner principle. Persons who own and finance the cooperative are those that use it. Second, the user-control principle. Control of the cooperative is by those who use the cooperative. Third, the user-benefit principle. Benefits of the cooperative are distributed to its users on the basis of their use" (Barton, 1989, 1).

Many different kinds of co-operatives are found in different parts of the world, in various institutional settings with a variety of objectives (Bateman et al, 1979). It is not a coincidence that 30-70 per cent of the agricultural market in different

sub-sectors is accounted for by cooperatives in North America and within the EU (Cropp & Ingalsbe, 1989). In these countries farmers' co-operatives have not meant collective farming but joint efforts in both agricultural input markets and output marketing, including further processing. Assuming that Macedonian farmers face a number of these market failures, what are the options for a successful development of co-operatives?

Nilsson (1991) provides a number of indicators of when collaboration is successful:

- if the gains from the collective goods are large,
- if organizing in itself has a value,
- if the organization lowers the member's transaction costs,
- if political influence can be achieved,
- if the organization has enthusiastic "change agents",
- if the members are a fairly homogenous group which lowers the interpersonal transaction costs for the over all activities,
- or if there are good examples of successful precursors.

One inhibiting factor for establishment and development of co-operatives can be explained in terms of "the prisoners dilemma" (Axelrod, 1984). A lack of trust can be argued as a reason for not organizing in co-operatives. However, even if members do not trust each other there is a potential for collaboration, provided that each party experience benefits. Axelrod even goes as far as to argue that even antagonists may collaborate, as long as there is a gain for each party.

The answer to Mr. Josifovski's problem (of persuading his fellow farmers to joining a farmer's co-operative) is thus not communicating the present conditions as a good base for starting a farmer's co-operative. It is rather to provide credible arguments of the future value of a co-operative, which refers to making the future more important relative to the present. Macedonian agricultural co-operatives need to represent an alternative for the farmers in which they improve their economic position. Of the existing 321 cooperatives in 2001 less than a third carry any activities (Galev & Murarcaliev, 2001, p 59). The transformation process will lead to a certain degree of worker redundancy and liquidity problems when former farmers associations adjust to a new market situation (Ibid., p 216). Studies of attitudes among farmers towards agricultural co-operatives show a difference in values, which ultimately leads to different motives for being a member of a co-operative. While the younger farmers emphasis economic factors as crucial the older generation remain loyal to the co-op based on self-help values (Hakelius, 1996). Visits from Slovenian farmers who have been successful in starting co-operatives have also proven to be valuable experiences as they represent a trustworthy source of information for the Macedonian farmers (Söderberg, 2002).

Most European farmers' co-operatives are organized as traditional cooperatives, *i.e.* one member one vote principle. These co-operatives have significant collectivistic traits when it comes to ownership, governance and trading conditions (Nilsson & Van Bekkum, 2000). The collectivistic elements may be reduced if the co-operative introduces differentiated votes where a member votes in proportion to his production volume (Sekovska & Ažderski, 2002). An alternative co-

operative model is, for example, Farmer-Controlled Businesses where a co-operative goes public and a part of the shares are sold on the Stock Exchange market. Yet another model is the New Generation Cooperatives with closed memberships and freely tradable delivery rights. This type of co-operatives are commonly found in areas where the production volume must fit a certain sales volume or quality measure (for example sugar beets and starch potatoes).

Among these models, two may be considered in the Macedonian case. The traditional co-op could contribute in creating more bargaining power and reducing the transaction costs for the family farms. A condition is, however, that the cooperative formed can be run with limited financial resources. The second option is a liaison between groups of farmers and various processing firms, domestic or foreign, where the latter provide the capital needed and the farmer's role is to secure the source of raw material (for example tobacco production).

One of the key objectives with a co-operative is partial vertical and horizontal integration (Williamson, 1975) – but should these efforts aim at vertical integration forward or backward in the processing or distribution chain? For Macedonian needs it seems that backward integration, forming co-operatives that purchase inputs and extension services for its members *and* forward integration, in marketing products, would be favorable. The co-operative would thus ensure favorable prices on inputs, loans in financial institutions and carry out marketing efforts (Sekovska & Ažderski, 2002).

Organizing co-operatively is not the solution to all problems. It is merely one way to counteract some of the market failures that the individual farmer faces. Many problems arise in organizing collectively (Nilsson, 2001). These problems are faced by many co-operatives today. The possible future gains, however, are desirable – lower prices for inputs, stronger bargaining power towards the processing industry (*i.e.* agro-combinates, for the most part), access to information, training and markets – and a possibility to influence political and social life (Sekovska & Ažderski, 2002). Organizing collectively would thus appear to be one way for the farmers to gain a stronger market position.

Possible Scenarios

In the twenty first century, the Macedonian agro-marketing sector faces a transition period during which a number of scenarios are possible developmental pathways. Independent of the future Macedonian EU-membership, domestic needs and nearby markets will provide the base for the efficient agro-marketing system.

Institutional conditions (*i.e.* democracy, land ownership laws and an open information flow) set the framework for efficient agro-marketing systems. Without the efficient domestic agro-marketing system, exports would require substantial subsidies (called “protection” as argued for by Galev, 2002; Ažderski & Gjorgjevski, 2002). Therefore the three different scenarios presented below are interpreted as possible pathways.

Continuation at Present Conditions

The development of the Macedonian agro-food sector at present market conditions will unavoidably lead to diminished agricultural production with higher costs and even more deteriorating in quality (Galev & Murarcaliev, 2001). Lower income from agriculture leads either to lower utilization of land and other agricultural resources, or increasing production subsidy levels. Decreased competitive position increases the need of border protection with customs.

Agriculture at present conditions cannot presumably continue much longer. Protection of agriculture having a reduced competitiveness compared to neighboring countries will be unprepared for future market development.

Most agro-combinates are in a financial situation that is not sustainable (Galev & Murarcaliev, 2001, p 218). There are no signs that their economic situation can improve under the present market condition. There is a possibility that if the agro-combinates become valueless, they will move into the hands of oligarchies. Present worker-owners of agro-combinates may find themselves unemployed and at risk of becoming cheap labor exploited by the oligarchies.

The family farms may survive better. The self-sufficiency, being relatively independent of the markets, may fulfill the same purpose that they have today. However, their structural and technical development continues to be as difficult as it is today.

Lacking industrial standards and hygienic and food safety measures, it is difficult to increase the value added through processing and distribution. The outcome of this is that Macedonian food industry remains unattractive for foreign investors and closer contacts are delayed with the European Union.

Rapid Adjustment to the EU Markets

In many transition countries, the economists have recommended rapid adjustment to market economy price structures. The thought behind this is that the removal of governmental regulations provides a good base for market development without biases caused by the past.

Rapid change would favor production and processing units with great flexibility and low degree of transaction specific assets. One could presume that to such units would belong small family farms with a high degree of self-sufficiency and some agro-combinates with high degree of manual labor compared to capital investments.

If the rapid liberalization of markets would include opening the borders for foreign competition, new-built distribution systems operated by foreign retail industry would appear in Macedonia (as it has to some extent already happened). These foreign retail chains would quickly gain market-leading positions and out-compete domestic production. In the long run, however, the low cost level would provide a good base for competitive food production and processing. This would attract foreign capital and knowledge into the country.

Capital-intensive production would probably be out of business and reallocated to either domestic or foreign investors. This would be attractive for foreign investors because the price of land could be expected to increase in the long run.

The main problem is the absence of rules set and enforced by the society. The absence of democratic rules insufficient administrative capacity may easily be filled by rules set by the mafia, as seen in many other former planned economies (Pyszna & Vida, 2002, p 33). Insufficiently defined and protected property rights may lead to a chaotic situation with regard to, for instance, the ownership of land.

Gradual Adjustment to the EU Markets

A gradual adjustment to the EU markets is based on the thought that the changes in the institutional market environment must take place prior more liberalization of market economy is allowed. According to this logic, there are no well-functioning markets without a well-defined rule structure and institutions. With well-planned institutional reforms, the transition process can be controlled and the risk of market failures prevented as much as possible.

The prerequisite for the well-performing markets is that ownership is well known. Thus, the definition of property rights is the first step towards better markets. On agro-combinates the ownership is, in principle, defined. However, the large number of small owners with limited decision-making power makes that property to a great extent 'masterless'. As suggested in the section 6.5, the agro-combinates should be gradually changed into more entrepreneurial-type ownership structures. On small family farms the ownership may be very complex with fathers and sons, people living abroad, *etc.* (Mirevska, 2003). The unclear ownership structure for family farms and the lack of definitions for family businesses needs to be addressed. The government of Macedonia faces a great challenge with the land reform and well-performing land markets.

As the land reform establishes market information systems, including price information, quality standards and supply-demand conditions should gather momentum. This system provides the government with a means for the gradual liberalization of prices in the phase of the establishment of market institutions, such as the development of contracting, inspection authorities, and competition rules.

The development of functioning credit markets also belongs to the prerequisites for well-performing markets. The present system, where the seller of agricultural products finances the next step because of delayed (and uncertain) payments, must be replaced by a proper banking system.

Market information systems with traceable products may lead to the markets' ability to signal customer preferences, which can then be transmitted to various actors in the production-distribution chain. Based on such information, each participant in the system may make better and more justified decisions. The market starts to function.

As mentioned above, the harmonization of industrial standards, hygienic and food safety requirements and records with the ones in the European Union is a large and long-lasting process. Thus, that development should start as soon as possible.

Concluding Discussion

Assuming that the objective for Macedonian agro-marketing systems is to provide good quality food products at affordable prices for primarily the domestic market, it faces great challenges to reach the performance level comparable to most Western countries. The first challenge is the development of *institutional conditions* concerning property rights, land and capital markets, and information and quality systems. These institutions are seen as prerequisites for subsequent developmental steps, and they require governmental involvement in development as well as enforcement.

A gradual accommodation to market economy (section 8.3) includes a continued privatization process of formerly state-owned agro-combinates to market-oriented entrepreneurial organizations with distributed profits and tradable shares. A structural land reform of the primary production in the family farms may also stimulate a rationalization and the need to organize in co-operatives or associations.

In the adjustment process to market economy, some changes can be made rapidly, for example, alternating the price system. However, if these changes lack institutional support the risk of market failures increase. A *simultaneous development* of institutional reforms and changed activities may therefore enhance the motives for a continued gradual adjustment process.

The most difficult and time-consuming process may be *changing peoples' attitudes*. Actors in the agro-food marketing system are still poorly accustomed to the market economy, and many farmers wish to return to the era of a stable planned economy (Mirevska, 2003, 20). A gradual adoption of the market economy conditions will be possible, if strong research and educational institutions and supporting extension organizations are provided.

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