

# **IDENTIFYING BARRIERS THAT AFFECT FARM MODERNISATION IN KORCA REGION, ALBANIA**

## **A CASE STUDY FOR APPLE PRODUCERS**

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### **Abstract**

*Fruit growers in Albania most of the time face dynamic and rapidly changing markets because of underlying factors such as consumer tastes and preferences, weather patterns, regulatory legislation, insect and disease infestations, production costs, and marketing logistics. In Korca region- Albania, (specialized in the production of apples) fruit growers usually find themselves in a continual cost-price squeeze, as the downward pressures on price forces growers to increase their volumes, in order to minimize the per-unit production and marketing costs. Nowadays, farmers must offer growing varieties that have been specifically designed for taste and nutritional qualities, using modern technologies in order to enhance quality and increase shelf life of fruits, customizing packaging and product labeling requirements that are traceable from the field to the site of sale, also produce in a manner that is "safe," free from microbial and pesticide contamination and develop trade contracts with wholesalers. Also they have to face high cost of inputs, high taxes and transportation costs. Based on a survey that consisted on a questionnaire distributed to farmers in the region of Korca (mainly focused on apple production) the aim of the study is to identify barriers that affect fruit production and farm modernization. The study presents an overview of all the factors mentioned above in the region of Korca, and also gives recommendations on what should be improved. Based on the statistical analysis, the most important barriers that have a greater impact on farm modernization, according to farmers*

*were high costs of agriculture inputs, high transportation costs and high taxes. In order to reduce the high costs of agriculture inputs, transportation and high taxes, farmers must consider the operation of farmer groups or farmer controlled enterprises.*

*Keywords: Fruit Growers, Production Barriers, Market-Access, Logistics, Agro-economics*

## **INTRODUCTION**

Since the beginning of the transition, from a central planned economy to an open market economy in the Western Balkan region, trade liberalization and adjustment toward EU integration have been regarded as the main changing forces that have significantly influenced the structure of the agriculture and food (agro-food) sector in the region. This change is seen in terms of input-output, production and product standards, competition, investment and the organization of the overall supply chains.

Agriculture is considered to be the most important sector of the Albanian economy. The value of agriculture production has been increased from 878 million Euros during the year 2000, to 1184 million Euros in 2007 and 1788 million Euros in 2012. The growth rate of the agriculture sector is characterized by frequent fluctuations. The economic performance of the sector is considered insufficient, because of the small size of the agricultural farms, slow levels of technology modernization and the total productivity of the factors of production, compared to those of EU. Based on these characteristics, greater efforts are required in order to increase the competitiveness of the sector.

In Korca region of Albania, agriculture it is estimated to be the most important sector of the economic development. This is based on the fact that the region is ranked as second in relation to the total agriculture land, counting almost 32% of the total income. Land fragmentation is identified as the most important barrier that affects the development of the sector. The average farm size in this region varies from 1.1 to 1.5 Ha. High level of land fragmentation has induced a decrease on agriculture production, affecting negatively the specialization of farms and their typology, decreasing the number of farms that are being market oriented and also has brought deficiency on the presentation of new agricultural technologies. In forward, high costs of chemical fertilizers and pesticides has evoked the inability of farmers that operate to fulfill the demand of agriculture products of the region, by increasing the costs of production.

Korca region it is mainly known for the production of apples, counting almost 60% of the total production in the country. Apple relatively high market prices and the high level of the generated income for units of production, compared to field crops, contribute to the awareness

of farmers, providing a huge increase of the total area cultivated with apple trees after 2004. Furthermore, a huge contribution in addition to the increased area cultivated with apple trees it is affiliated to different support policies, applied by the Albanian government.

During the last inventory of 2013, in the region of Korca resulted that the total area cultivated with apple trees was 2468 Ha, while 2018 Ha were on production and the total amount of apples in 2013 resulted to be 44814 tons.

Table 1: No of Apple Trees and Production during 2013

No	Region	Total No of trees	No of Trees in production	Production (ton)
1	Korca	1188669	956403	27788
2	Kolonje	129212	121862	3420
3	Devoll	687621	608885	11848
4	Pogradec	139539	95536	1759
5	County Total	2145041	1782686	44814

Source: Regional Directorate of Agriculture

In addition, fruit producers that are aiming to expand production, need to consider potential product demand, the need to locate, develop and secure markets, the prevalence of contracts and import competition. Even though the generated income from the production of fruits is considered to be satisfactory, farmers face different barriers that affect the cost of production and farm modernization. Irrigation needs, high herbicide and pesticide costs, specialized production and marketing expertise, all contribute to high production costs. Also, marketing of fresh produce can be even more daunting than growing it, because delivery of the product has to be quick.

Food security, income of farmers and sustainability will continue to be the objectives of agriculture development in Albania. Despite this, the farming community faces greater challenges with escalating food production costs and the need to push for higher productivity gains. Lower private investments as compared to other economic sectors have further exacerbated the situation. In addressing these challenges, farmers need to shift their focus from the traditional factors of production to the use of modern technologies, market-driven innovation and knowledge, as growth drivers. Moving forward, the Albanian government should give a greater emphasis to productivity improvement, strengthening of the food supply chain, improvement of the support systems and services, increscent of knowledgeable and skills of farmers, as well as the ensure of market compliance.

Despite the increased production of fruits during the last years, still Albania doesn't fulfill the consumption and market demand, because of different factors:

- i. The total amount of imported fruits has influenced negatively the interest of farmers for the cultivation of other fruits that have a relatively high cost of production compared to those that are being imported.
- ii. The seasonality of fruit production in different regions prevents the supply of the Albanian market with local products during the whole year, what makes inevitable the imports of these products.
- iii. The interest of the wholesalers for supporting during the whole year the market because of high generated earnings, combined with unsafe of the local products, low quality and continuity of supply based on fruits shelf life, leads to high imported quantities.
- iv. Lack of postharvest treatments and packaging techniques combined with cooling systems, causes high losses due to transportation damages.

All the factors mentioned above combined with high losses of production, small size of farms, lack of workforce, low levels of production technology used by a considerable number of farmers, high agriculture inputs and lack of farmer's cooperation comprise the main challenges that the Albanian farmers have to confront with. In the following sections of the study will be described statistically the most important barriers that affect production and farm modernization of the farmers in the region of Korca.

## RESEARCH METHOD

The main research methods that are used in order to identify the main objectives of the study are quantitative and qualitative research, combining primary and secondary data. The study was conducted in Korca region that is mainly specialised in the production of fruits. The primary data consisted on the application of interviews with different farmers of the region, in order to conclude a more specific study, aiming to identify and provide a clear overview of the situation. The sample population of the study comprised 160 farmers (selected purposively) and were distributed into all municipalities of the region of Korca. In order to identify the most important factors that affect farm modernisation and the access of fruits in the market, a statistical descriptive analysis was conducted, by calculating the mean and standard deviation. A detailed review of the available literature was explored and also secondary data were used that consist on official documents, provided by the Regional Directorate of Agriculture in Korca and Ministry of Agriculture and Regional Development.

## EMPIRICAL RESULTS AND DISCUSSIONS

The identification of the most important barriers that affect farm modernization according to farmers resulted as follow:

Table 2: Identified Barriers that Affect Farm Modernization in Korca Region

Barriers	Mean	Std. Deviation
High cost of agriculture inputs	4.6125	.70029
High transportation costs	4.4500	.75901
High taxes	4.3750	.95661
Limited possibilities of extension services	4.2750	1.05180
Limited capacities for storage, cooling systems and packing	4.2250	1.00283
Limited financial support	4.1750	1.04941
Insufficient irrigation capacities	4.1000	1.05925
Lack of information	3.7875	1.11810
Small size of agriculture land	3.7750	1.09860
Land productivity	3.7000	1.15905
Limited knowledge on good agricultural practices	3.6875	1.17193

According to table 1, all the above mentioned factors have a great impact on farm modernization. The mean of each factor is statistically different from 3 (taken as neutral value) for  $P = 0.000 < 0.05$

The average of each one of these identified barriers resulted to be on the level “Very Important” and its mean is statistically different from 4 (level of importance). From the analysis covered, result that the reduction of these barriers will guide to farm modernization. In the following section, it is analyzed the importance of each barrier individually and also some of the main problems that farmers of fruit production are facing on.

### High Costs and Difficulties of Securing Agriculture Inputs

The backbone of any agricultural revolution is the access of farmers to modern agricultural inputs. These agricultural inputs range from improved seeds, fertilizers, crop protection chemicals, machinery, irrigation and knowledge. Farmers are facing many problems regarding mechanization. Nevertheless, farmers do not yet have sufficient access to modern equipment. In the region of Korca, mainly in small and medium farms (1 – 2 ha) manual work is dominant. This phenomenon it is not linked mainly with the lack of various agricultural mechanical means, but it is related also to the high prices of the agricultural services, low efficiency of agricultural activity and small size of farms.

### **High Transportation Costs**

A principal disadvantage identified by the fruit grower it is frequently associated with the marketing of fruits and high level of logistical costs. The cost of logistic is often excessive in projects involving large numbers of small farmers who are spatially dispersed. Excessive logistical costs are generated as a result of the structuring, administering and enforcement. Smallholders are often also dispersed and difficult to reach, which adds on the costs of service delivery and monitoring. They also require more inputs and capital per unit of the farm production, as well as specialized machinery and much more extension assistance.

Another approach related to the high transaction costs of dealing with smallholders is to consider the promotion of farmer groups or farmer controlled enterprises, (commonly also referred to as cooperatives) in conjunction with a contract farming venture. It can also be instrumental in providing information, inputs, technical and quality assistance to the growers. Regarding cooperatives, there is a lot to be done from all the actors that operate on the agriculture sector. Government programs of agriculture should give more emphasis to this occurrence and apply more financial support for the creation of farmer's cooperatives. The logistics support for collection, distribution and marketing of agricultural produce should improve in order to ensure quality of produce, minimize post-harvest losses and reduce marketing costs.

### **High Taxes of Agriculture Production**

High taxes of production and agriculture inputs have been identified by the farmers as one of the most important factors that affect farm modernization, because of their direct impact on farmer's income. During 2015, the Albanian Government took some important steps regarding the taxes that farmers and agro-processors have to pay. In addition, for every quantity supplied from the farmers (verified by the tax voucher) the agro-processors will take back 20% of the amount that corresponds to the VAT tax. Also, from this tax will be excluded all imported agriculture machineries. These measures are supposed to have a positive impact on the modernization of technology.

### **Limited Possibilities of Extension Services**

The extension service consists on public and private service providers. The public service is the most organized and dominant form, as it is spread all over the country. To respond to the needs and requests of interested persons, the public extension service has implemented training programs that cover mainly issues of plant cultivation, elements of the farm budget, financial management and marketing. The extension service offers technical assistance for farmers, aiming to increase their earnings. The objective of the Albanian government is to develop the

agricultural innovation system because of the sector importance in the rural areas. In an environment with high competitiveness from the local and international markets, innovation is identified as a key factor for the development of the agriculture sector. Some of the main problems that are identified related to the extension service consist on:

- i. Limited number of extension specialists and the attribution of different charges that doesn't correspond to their education field.
- ii. Insufficient financial support for investments on information centers and the coverage of operational costs, in order to perform different extensions activities.
- iii. High average age of the extensions specialists and their limited access on information technology.
- iv. Limited capacities for farm management, marketing and business plans.

### **Limited Capacities for Storage, Cooling Systems and Packing**

In Korca region, infrastructure and relevant post harvest services (cooling capacities, packaging lines, etc) are limited. Even though, in the last years in Albania has been an increase in the number of these capacities. Limited cooling capacities and high losses of production, have encouraged a high deficit in the marketing of apple production. During the last years a greater emphasis is being given by the government on supporting new cooling and modern capacities, but still there is a lot of space for improvement as the impact of the support has been very low. The owners of these cooling capacities specify as great concern the high prices of electric energy, fuels and packing that affect the investments of new storage capacities.

### **Limited Financial Support**

Since the transition period, the financial support that is applied in the region of Korca can be grouped into indirect and direct financial support. The indirect support consist mainly on supporting farmers services, the establishment of a favorable trading environment, institutional strengthening and improvements on infrastructure, while the direct financial support include payments in the form of grants, that are being accorded to farmers through different schemes. Regarding to this barrier, different apple producers appointed that government and local institutions should do more on the information about the criteria and procedures of the application. Even though the financial support is considered to be very important for the development of the sector, the budget that it is accorded during the last years for the support of farmers has been fluctuated. The budget that the Albanian government has approved for the financial support of the agriculture sector (mainly direct payments) is considered to be the lowest in the Balkan region. More financial support should be given for investments on the

physical assets of farms, in order to improve the performance of the agriculture farms and help farmers to adapt standards that are being applied in EU, such as food safety, environmental protection, etc. According to different experts, the demand for funding of the agriculture sector has been increased. During the last years it is observed a growth on investments that tend to improve the technology that is being used, aiming to increase productivity and quality of production. Despite the tendency of banks for increasing the investments, land ownership problems hold the funding of the agriculture sector very limited.

### **Insufficient Irrigation Capacities**

Irrigation and drainage are considered from farmers as an important factor that has a direct impact on the sustainable growth of agriculture in the region. Korca region is identified as a enriched with water resources, however still farmers face irrigation problems. The Albanian government should invest more on the improvement of irrigation and drainage capacities, aiming to decrease the level of amortization that irrigation system has undergone in the past. Beside the commitment of the government, local farmers should participate more individually on the management of water resources, as it is considered to a huge problem that they are facing on.

### **Lack of Information**

The evolution and specialization of the agriculture sector need an appropriate level of technical and economical training, that include expertise on new information technologies, proper awareness in the area of product quality, results of different research and sustainable management of natural resources, application of production practices that are in compliance with the protection and improvement of the landscapes and environment. The interviewed farmers were aware that they lack the information on most of the elements that are mentioned above. The planning of agriculture activities needs even more information on land, in order to manage it sustainably.

### **Small Size of Agriculture Land**

The past reform on land privatization had a positive effect because transferred the ownership of land on rural families. However, the high level of land fragmentation due to this initiative and the small size of farms, contributed to the reduction of the agriculture production, inappropriate agriculture technologies and land degradation. All these factors had a negative impact on rural population in the region of Korca. During the interviews, farmers were announced that the consolidation of the size of agricultural farms is necessary for improving the efficiency of the



sector. The question that is addressed in this case is whether an arrangement of collective farming provides the solution to this challenge. Farm cooperatives may avoid the negative effects of this factor, but when farmers were asked about this suggestion most of them hesitated to negotiate or operate as a group. As mentioned on the above paragraphs, government policies must support financially farmer's cooperatives in order to reduce the negative effects of this barrier.

### **Land Productivity**

Based on the classification of fertility the agriculture land is classified in 10 categories. The land that is classified as the first category represent the best land that is mainly used for the cultivation of plants. In the region of Korca, the agriculture land varies from I to X category. The most productive land that belong to the first category is located on the land field of Korca, while shifting to the mountainous areas we find different land categories. This factor resulted to be important only to the fruit producers that live in different mountains areas.

### **Limited Knowledge on Good Agricultural Practices**

From the observations that were done resulted that most of the farmers in Korca region, lack important knowledge on best agricultural practices and also need to be familiar with different sustainable research that is done. This fact is linked with the education level of the farmers, as most of them resulted to have elementary and high school education. Even though it is estimated that in the previous years the apple production will overtake the demand of the local market, farmers lack of knowledge affect negatively the level of fruit exports.

## **CONCLUSIONS & RECOMMANDATIONS**

- i. Based on the descriptive analysis resulted that the most important barriers that have a greater impact on farm modernization, according to farmers were high costs of agriculture inputs, high transportation costs and high taxes.
- ii. All the barriers indicated by the farmers of Korca region were identified on the level "very important", suggesting that the reduction of these barriers will have a positive impact on farm modernization.
- iii. In order to reduce the high costs of agriculture inputs, transportation and high taxes, farmers have to consider the operation of farmer groups or farmer controlled enterprises (commonly also referred to as cooperatives) in conjunction with a contract farming ventures.

- iv. The Albanian government should increase the financial budget for supporting the agriculture sector, as compared to the other Balkan countries it is considered to be the lowest in the region.
- v. In order to increase the efficiency of production, a more sophisticated financial aid should be given to farmers that invest in irrigation and drainage systems, storing and cooling capacities and fruit processing capacities.
- vi. Based on the growth of apple production and estimating that in the future supply will equal demand, a greater emphasis should be given to quality and safety standards, so that the Albanian production of fruits can compete in foreign markets.

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