

Edlira Llazo

SMALL SCALE FARMING AND AGRICULTURAL PRODUCT MARKETING IN ALBANIA

MAŁE GOSPODARSTWA ROLNE I MARKETING PRODUKTÓW ROLNYCH W ALBANI

Department of Marketing, Aleksander Moisiu University Durres, Albania,
e-mail: edlirallazo@uamd.edu.al

Streszczenie. Historycznie, rolnictwo zawsze odgrywało ważną rolę w gospodarce Albanii. W związku z przejściem do gospodarki rynkowej oczekuje się, że sektor rolniczy przyczyni się do rozwoju gospodarczego kraju. Dzięki posiadanym zasobom rolniczym, potencjalnie konkurencyjnemu przemysłowi rolnemu i zasobom ludzkim, Albania posiada potencjał by wykorzystać rolnictwo jako podstawę do rozwoju i wzrostu gospodarczego kraju. Biorąc pod uwagę najistotniejsze problemy przed jakimi stają systemy produkcji rolnej gdy wdrażane są w kontekście gospodarki rynkowej, niniejsza praca podejmuje próbę określenia systemów produkcji, które sprzyjają integracji rolników z rynkiem oraz czynników wpływających na poprawę ich sytuacji. Praca skupia się na opisanu działalności komercyjnych gospodarstw rolnych. Badaniem objęto trzy lokalizacje, w których funkcjonują gospodarstwa specjalizujące się w produkcji rolnej nastawionej na rynek. Z zastosowanej analizy regresyjnej wynika, iż w gospodarstwach rolnych nie występuje silna korelacja pomiędzy kapitałem a zyskiem. Wyniki wskazują raczej na to, że zyskowność gospodarstwa zależy od przyjętego modelu prowadzenia biznesu, z czego z kolei wynika fakt, że gospodarstwa, które się wyspecjalizowały i wzięły pod uwagę potrzeby rynku są bardziej dochodowe.

Key words: agriculture, Albania, market, specialised farm.

Słowa kluczowe: Albania, rolnictwo, rynek, wyspecjalizowane gospodarstwo rolne.

INTRODUCTION

Through the transition to a market economy, economic improvement of Albania is expected to come from the agricultural sector. Albania has the potential to use agriculture as the basis for economic growth and development based on agricultural resources, a potentially competitive agro-industry and human resources.

In the longer term agricultural production should be guided by constructive policies that favour effective farm systems, encourage land allocation processes, provide support schemes and offers in farming and agriculture (livestock and agriculture), through the development of marketing systems, etc.

Agriculture over the last 20 years has undergone a long and slow transition from the level of merely meeting needs to that of living in a commercial system. But while other sectors of the economy have increased significantly, the contribution of agriculture to the GDP has not reached the same level. Albania has been experiencing economic growth since

2000 (excluding 2010, 2011, 2012). This growth averaged 7% while the growth of the agriculture sector was only 3–3.5%.

Agricultural production must increase by 7–8% per annum in order to meet the requirements for food growth, job creation, provision of raw materials for agro-industrial development, and supporting the development of regional investment creating a market exchange. This optimistic view puts Albania's agricultural and livestock production levels on par with neighbouring countries.

The development of the sector is an important and complex problem. Its importance stems from:

1. The growing development of the agribusiness system.
2. The need to increase agricultural production and livestock farms above subsistence production for the market and increase their reproductive abilities.
3. The current problems that face agriculture in terms of WTO membership, Albania, etc.
4. The continuous increase in the standard demanded as a condition for the country's EU membership.

The level of complexity is increased by the fact that the solution requires the analysis and evaluation of important aspects such as:

1. The level of development of agriculture and farming systems and agribusiness systems that support their development.
2. Possible alternatives to improving the production systems by developing comparative advantages of agriculture and livestock by area.
3. Support and protection of agricultural and livestock producers while at the same time protecting the consumer.
4. Competition in regional and inter-regional markets, as well as future trends in their development, etc.

This study aims to focus on the perfection of production systems aimed at developing comparative advantages in agriculture as areas that will lead to a better integration of agricultural products on the market.

An overview of the development of the sector in recent years

The concept of small farms can be approached from a variety of perspectives. Small scale agriculture is often, although not always correctly, used interchangeably with smallholder, family, subsistence, resource-poor, low-income, low-input, or low-technology farming (Heidhues, Brüntrup 2003). The following definitions illustrate the diversity of conceptual approaches to the term:

- Lipton defines family farms as “operated units in which most labour and enterprise come from the farm family, which puts much of its working time into the farm” (Lipton 2005);

- The World Bank’s Rural Strategy defines smallholders as those with a low asset base, operating less than 2 hectares of cropland (World Bank 2003);
- A recent FAO study defines smallholders as farmers with “limited resource endowments, relative to other farmers in the sector” (Dixon et al. 2003);
- Narayanan and Gulati characterise a smallholder “as a farmer (crop or livestock) practicing a mix of commercial and subsistence production or either, where the family provides the majority of labour and the farm provides the principal source of income” (2002).

As a result of the implementation of economic reform in agriculture, new structures were created for production and marketing. In 1993 Albania had about 560,000 small farms, in 2000 there were about 472,000 farms, and today there are about 360,000 farms. Nationwide agricultural area per capita is about 0.338 ha, which varies according to the geographical area from the minimum of 0.118 to the maximum of 0.634 ha. However, not all of the agricultural land is arable. Referring to statistical data, it appears that the average farm size in Albania varies between 0.3–3.5 ha, with an average of 1.5 ha/farm.

Farmers have their farm made up of, on average, between 4–6 plots, the distance between the farmhouse and these plots is between 5–9000 meters and the distance from the market is between 10–20 km. These factors inhibit the use of large scale and modernised agricultural inputs, transport, irrigation and the use of agricultural machinery.

The farm structure is as follows:

1. family farms with no or little land, that make a living from other sources;
2. family farms that deal mainly with livestock;
3. family farms involved in many activities that produce for self-consumption;
4. family farms with mixed activity, producing for self-consumption and to sell surpluses;
5. family farms that produce mainly for the market (commercial farms).

The third and fourth group account for the largest share, while the fifth group is small, but more or less consolidated.

Empirical analysis shows that the majority of farms are more inefficient and more than 50% of the variation observed in farm production is attributed to differences in technical efficiency. The average technical efficiency of smallholder farmers is around 28%.

A characteristic of family farms in Albania is their overcrowding. The total number of rural households ranges from 1 to 15 with an average of 6 members. Including the head of household, the number of adults in the average farm is 5 and the average number of children 2. The contribution of family labour is more important in rural areas in Albania than non-household work. Urbanisation and migration have led to a reduction of the labour force in agricultural and rural areas.

Low levels of crop yields and livestock show low levels of agricultural productivity (the ratio of farm output/input unit) and labour productivity in agriculture.

In Albania, farmers in rural areas require a minimum capital to produce, this capital is used in relation to land and the rent of work services. Currently many farmers use income from abroad for the repair or construction of houses and the purchase of agricultural machinery and other inputs which are used in the production process.

Few farmers have tractors or other vehicles. Most farmers use rented mechanical farm machinery for processes such as plowing, planting, etc. In lowland areas it is necessary to use tractors with a large capacity and as such there is a need for long-term loans for the rental of agricultural machinery, which is considered by some farmers to be profitable.

Marketing of agricultural products and the improvement of agricultural production systems

Analysis of the market and the quality of Albanian products, shows that there is a growing potential for greater commercial success as neighbouring countries are seen as potential target markets. A large number of farms are being directed towards foreign markets.

Vegetable and fruit products have the best chance, compared with cereals, and their increasing trend can be interpreted as a move towards market-oriented production, as well as this the number of large livestock farms is increasing. This shows that the sector is layering in stable operations, which can be specialised, stratified and commercialised.

“In a rural development frame, the area of land cultivated may not be the significant criterion for defining a small farmer. One ha. of irrigated land can be very productive” (FAO 1997). The potential for increased productivity is often larger on smaller farms because of their efficient use of family labour.

Another research paper by the World Bank about Albanian agriculture states, “our results suggest that land fragmentation has far-reaching economic consequences. Yet, most of the effects seem to arise not because a large number of fragments are too small to be viable economically but because, as a result of defects in the land tenure regime, productive land is left idle (World Bank 2012, Land Fragmentation, Cropland Abandonment, and Land Market Operation in Albania”, Policy Research Working Paper).

Virtually all households in rural areas are, by preference, both producers and consumers, buyers and sellers; and many sell agricultural produce and buy their food at different times of year. However, rural households which, for one reason or another, are unable to interact with these markets are prevented from using these diverse livelihood strategies; and indeed, in many parts of the world, rural poor people often say that one reason they cannot improve their living standards is that they face difficulties in accessing markets.

Rural incomes will not be substantially increased by exclusive emphasis on subsistence food crop production; rather, more market-oriented production systems are needed. These require the intensification of agricultural production systems, increased commercialisation and specialisation in higher-value crops.

And these must be built on the establishment of efficient and well-functioning markets and trade systems – that keep transaction costs low, minimise risk and extend information to all players, and that do not either exclude, or work contrary to the interests of, the poor – particularly those living in areas of marginal productivity and weak infrastructure"(FAO 2003).

Agriculture is a key element of their strategy; however, many are also engaged in non-agricultural activities, including microenterprises such as agro-processing, trading and other off-farm occupations. The agricultural and agro-processor sector has large potential in Albania, not only in supplying the local market, but also in exports. Despite this potential, data shows that exports are still poor. The possibilities for Albanian agricultural and processed products are limited for several reasons:

1. The low level of agricultural production and agro-processing industry.
2. A lack of marketing facilities (management, packing of products).
3. Low level of market competitiveness of Albanian agricultural products, because of the low quality and the elevated prices.

Marketing of foodstuffs, generally, forms an essential contribution to a country's economy. This is detectable in the contribution that is given to agriculture, food processing, food trading in large or small amounts, social food etc. In the inner brute production, if we refer to statistics, for different countries, this index varies from 15 to 50%.

The improvement of agricultural production systems is primarily related to the application and respect of standards in all processes, which can only be accomplished by those subjects that have a total quality management (Kolnikaj et al.).

The improvement in the quality of agricultural and farming products and those processed from the food industry is connected to the application of standards, such as; ISO 9001: 2008, ISO 14001, ISO 22000, HACCP, etc. In Albania there is a lot of work to be done.

From the modern viewpoint of the quality chain, it can be said that; if the raw product does not have the quality that the client expects, no processing can improve that quality. Damage to a product during transport is also a consideration. So, in all cases full cooperation between farmers, brokers, processors, wholesalers and retail dealers to guarantee the quality of agricultural and farming products is required. Taking this into consideration, it can be seen that the farmer and the client lack the efficiency and effectiveness of producers, wholesalers, and retail dealers.

METHODOLOGY OF RESEARCH AND THE RESULTS

The objective of this study is, to identify the systems of production that increase the level of integration of the farmers in the market. For that:

1. The actual manufacture systems are analysed and identified.
2. Profitable agricultural and farming activities are identified in the studied zone, based on denomination analysis and the secured income.

For the completion of this research, there are three localities to the area of study:

1. Tiranë,
2. Lushnje,
3. Durrës.

This study aims to show the activity of the commercial farms. In each locality, farms specialised in agricultural and farming products manufacture, in which the main feature is the market will be tested.

In all cases, municipalities were chosen in cooperation with specialists from the Department of Agriculture, Food and Consumer protection and in cooperation with specialists from the Agricultural Technology Transfer Centre in Fushe Kruje and Lushnje.

In the comparison of the agricultural and farming activities, the aim is to give the actual situation of farming in the country compared to five farming and manufacturing ways of the average manufacture as well as technological ways, which are habitually found in almost every country.

Details of exponential factors of the development of the farms and their structure in the studied localities are given below in Tables 1 to 3.

Table 1. Farm size and the average size of parcels

District	Farm's size	Average size of the parcels
Tirana	1.28	0.27
Durrësi	1.13	0.29
Fieri (Lushnja)	1.70	0.37
Shqipëria	1.26	0.27

Source: Ministry of Agriculture, Food and Consumer's Protection, 2011.

Table 2. Work days in the farm divided by activity

District	Agriculture	Farming	Arboriculture	Total	Work days out of the farm
Tiranë	268	83	206	557	334
Durrës	161	65	133	360	342
Fier (Lushnje)	163	71	119	353	158
Albania	161	64	156	381	166

Source: Ministry of Agriculture, Food and Consumer's Protection, 2011.

Table 3. The income to the farm according to the annual statistical activity 2011

District	Income from plants	Income from farming	Total Income
Tiranë	127.760	174.681	302.441
Durrës	130.819	156.196	287.015
Fier (Lushnje)	167.774	192.410	360.184

Source: Ministry of Agriculture, Food and Consumer's Protection, 2011.

In the analysis the following points are considered:

- Vegetable product in the plastic greenhouse with central heating (1 yard),
- Vegetable product in open field (1 yard).
- Fruit product (1 yard).
- Milk and meat product /cow (1 head – to 1 yard supplying capacity with food),
- Corn production (1 yard).

The aim of the study is to identify production units which increase the possibility for integration in the market together with factors that influence their improvement. In order to do this regressive analysis will be used to ascertain the connection between capital and the profit in some types of farms directed at the market.

Hypothesis 0. There is a strong relation between the capital of the farm and its profit.

Hypothesis 1. There is a weak relation between the capital of the farm and its profit.

Table 4 shows the correlation between capital and profit according to the farm activities and the kind, and level of production, aiming an econometric model.

Table 4. Capital and profit of farms

Activity of farm	The average capital of the Farm (Lek)	Net profit (Lek)
Vegetable product in the plastic greenhouse with central heating. (1 yard)	50.000.000 (20.000.000 greenhouse, 30.000.000 land)	7.819.700
Vegetable product in open field (1yard)	30.000.000 (land)	1.351.834
Fruit product (1 yard)	50.000.000 (20.000.000 trees, 30.000.000 land)	324.500
Milk and meat product/cow (1 head – to 1 yard supplying capacity with food)	30.000.000 (land)	155.900
Corn production (1 yard)	30.000.000 (land)	(net loss) – 100.200

Source: own study.

The data in the above table presents the actual common workings carried out in the farmers daily course of activities and not theoretical lists of activities. The data used is an average of farms of this type (Table 5).

Coefficient of correlation:

$$r = \frac{\sum (X_t - \bar{X}) \cdot (Y_t - \bar{Y})}{\sqrt{(\sum (X_t - \bar{X})^2) (\sum (Y_t - \bar{Y})^2)}} = \frac{n \sum X_t Y_t - (\sum X_t)(\sum Y_t)}{\sqrt{[n \sum X_t^2 - (\sum X_t)^2] [\sum n Y_t^2 - (\sum Y_t)^2]}}$$

The data shows processes based on an analysis of the regressive correlation to obtain the result, compared to the average of the farms at the national level. Information from the Ministry of Agriculture, Food and Costumer Protection and INSTAT Albania has been considered as a reference (Table 6).

Table 5. Capital and profit for each farm

No.	Capital (Xi)	Profit (Yi)
1.	50.000.000	7.819.700
2.	30.000.000	1.351.834
3.	50.000.000	324.500
4.	30.000.000	155.900
5.	30.000.000	-100.200
Average	38.000.000	1.910.346

Source: own study.

Table 6. Regression data

X_t	Y_t	$X_t \cdot Y_t$	X_t^2	Y_t^2
50.000.000	7.819.700	390.985.000	2.500.000.000.000.000	61.147.708.090.000
30.000.000	1.351.834	40.555.000	900.000.000.000.000	1.831.518.711.000
50.000.000	324.500	16.225.300	2.500.000.000.000.000	105.300.250.000
30.000.000	155.900	4.677.200	900.000.000.000.000	24.304.810.000
30.000.000	-100.200	-3.006.120	900.000.000.000.000	10.040.040.000
190.000.000	9.551.743	449.436.380	7.700.000.000.000.000	63.118.871.901
Average 38 000 000	Average 1 910 346			

Source: own study.
 $r = 0.00035887642$.

The coefficient of correlation results is very low. This shows that there is no connection between the capital in the farm and the profit, but it can be understood that the a connection exists to the business model.

All the farms in the analysis (and also in all the nationwide farms) show that land is the largest contribution to capital. In the 1 yard that is considered in the analysis, with the total price 30.000.000 Leke, gives 3.000 Leke/m² of the agricultural land (average price),but the highest profit is of those farms that specialise inproduction targeted at market (greenhouses, plants, milk).

According to regression, the equation of the straight is $Y = a + b \cdot X$ (see Figure 1) and, coefficients a and b are found by the formulas:

$$b = \frac{n \sum X_t Y_t - (\sum X_t)(\sum Y_t)}{n \sum X_t^2 - (\sum X_t)^2}, \quad b = 0.000583 \quad \text{and} \quad a = 1.910.346 - 38.000.000 \cdot b$$

$$a = 1.910.346 - 38.000.000 \cdot 0.000583 = 1.888.192$$

Arguing the case of dairy farming, it results that if the breed of the cows is improved,the production of milk increases, which obviously increases the profit. As a conclusion we can say that the Hypothesis H_1 is not true and H_0 is proved.

Information that makes the achievement of this study possible is obtained from different sources such as.

The data from the official institutions, and other independent resources such as : Department of Agriculture,Food and Consumer Protection in these regions and the Centres of Transfers and Agricultural Technologies in Fushe Kruje and Lushnje.

Direct interviews with leaders of faming organisations, farmers at a national and regional level were carried out, together with interviews with farmers who were selected in three regions and 6 municipalities.

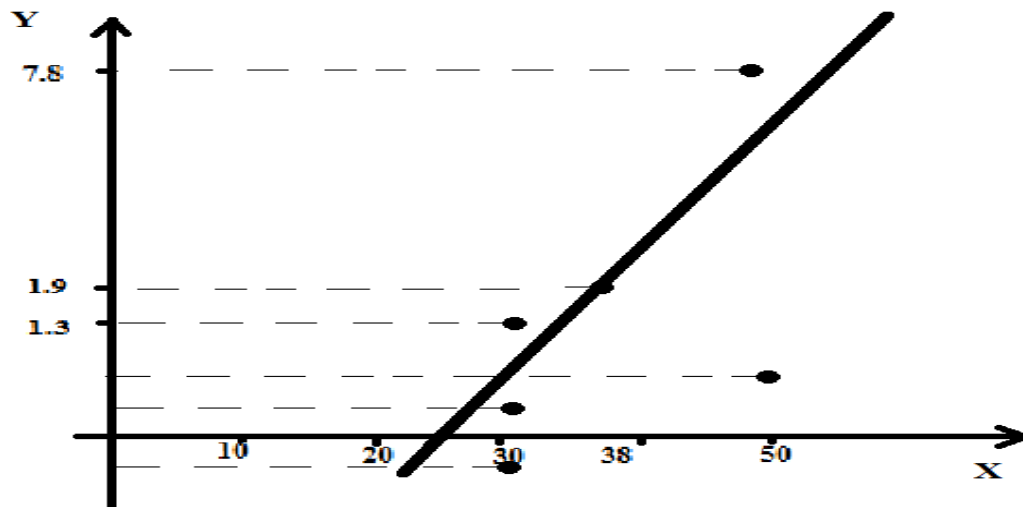


Fig. 1. Graphic presentation
Source: own study.

CONCLUSIONS AND RECOMENDATIONS

One of the factors that is seen as an obstacle in the development of farms in Albania is the limited quantity of land. On the other hand, farmers do not tend to follow horizontal integration due to the difficulties that they had to cope with. during the time of comunist regime.

Furthermore, the farm capital is mostly land because there have been fewer investments in other aspects of the capital. To overcome this obstacle the study shows that it is not the capital which defines the profit of the farm, but it is the model or the way of the business.

As a result the specialisation of the product and the valuable capital in the farm are very important for the steady profits in the actual conditions of the agricultural business in Albania.

It is believed that farms which are specialised in products that are required for the market, and those that have possibilities for investments in all aspects of human resources (trainings) as well as in the usage of the agricultural inputs and the increase of the mobility of land including the elements of drainage, watering, productive structures with high efficiency and keeping in touch with the markets, etc.

The complex problematic aspect of agricultural production, processing, storage, normalisation, and marketing and trading of these products impact on each other in the form of cause and result creating a vicious circle which prevents agricultural and rural development and the connection between the trade of agricultural products and the application among markets.

In Albania there are potential possibilities for the strengthening of the agricultural marketing connection and the increase of the agricultural production, and there are also

powerful possibilities to stabilise and guarantee parallel development between the agricultural market and the increase of the agricultural production, in order to develop a strong agricultural base as potential support for the economy and the markets at home and abroad, for export.

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