

THE POSITION OF AGRICULTURE, AGRO-FOOD SYSTEM AND NATIONAL ECONOMY

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Abstract

Modernization of agriculture had the effect of income transfers to other sectors and the boost of overall economic development but also led to a relative decline of agriculture in favour of the food industry. The industrialization of agriculture was realized by increasing inputs from industry through the expansion and generalization of industrial production processes in many agricultural activities. Gradually the share of intermediate consumption and capital per active person in agriculture has increased. For example the total industrialization of pig and poultry farming, as a result of the production of compound feed, a starring role in this process have the upstream industries from agriculture and the technical - commercial services. Food industry based on scale economies have developed and diversified as a result of major investments, food technologies were adapted to the new nutrition models thus diversifying food products and satisfying the demands of mass distribution. Food industry has grown at a different rate from that of agricultural production, as a result of the evolution of consumer demand and consumer behaviour, corresponding to the growth of their incomes. So from a simple activity of processing agricultural products, food industry has become an industry that produces more and more developed food products which highly increases added value compared to agriculture.

Key words: agriculture, gross domestic product, incomes, market economy, trades

INTRODUCTION

Definitions and characteristics of the agricultural activity are also contained in the International Financial Reporting Standards (IFRS) [9], namely IAS 41 Agriculture.

According to IAS 41, Agriculture, agricultural activity represents the management made by an entity of the transformation of biological assets in order to sell in agricultural production or additional biological assets.

Agriculture in modern economies is more and more being approached as a component of the food sector, and this in turn as an important component of the national economy. Modernization of agriculture had the effect of income transfers to other sectors [5] and the boost of overall modernization.

In advanced economies, agricultural exploitations, food industry and distribution of food products enterprises are dependent on each other in the process of organizing the market and increasing economic efficiency. As technological modernization is happening,

they establish strong links with upstream enterprises producing technical means and other inputs. [6] Thus the process of food sector integration is being developed, at branch, activity sector, national, regional level based on the increase of economic globalization worldwide.

Trade liberalization, increased geographical area of free markets following the collapse of the communist bloc [3] led also to the internationalization of agricultural markets and diversification of foreign trade with agricultural products. Thus it occurred and continued a process of rapprochement between different forms of organization of food economies created throughout history in different countries.

As an effect of general economic modernization agro-food systems know fundamental changes at national level the present effect being a decline of agriculture's place in modern economies, an objective process in the efforts to increase economic and social efficiency.

In developed countries agriculture occupies a small share in GDP and in employed labor force, but its contribution to gross fixed capital formation, superior to the two indicators, shows the important role played in overall economic development and in the formation of modern agro-food system.

Instead the share of agriculture in employed population, higher than its share in GDP, shows a lower economic power and a weak position of farmers on the market in order to impose a higher level of prices for agricultural products than those of industrial products and services.

MATERIALS AND METHODS

The relative decline of agriculture in modern economies and the implications of this are discussed in detail by Letitia Zahiu. *The processing activities and services in the final amount of food products have high shares in developed countries and in those with developing economies the largest percentage is held by agriculture. The increase of population incomes produces structural changes at the demand level for food consumption of the population. Gradually there is an increase in the demand for highly industrial processed food products and organic products, as well as public access to various services, in particular serving meals outside their homes.* [7]

The French economist Louis Malassis provides a clear delimitation of the agro-food economy, the food economy, the agricultural economy and the rural economy:

Agro-food economy includes all activities which contribute to achieving the food function in a given society. There are seven sectors involved: agriculture; agricultural and food industries, agricultural and food distribution, restaurants, industries and services offered (which provide to the agro-food sector, the intermediate consumption and equipment necessary for their operation), international trade and also socio-economic units of consumption.

Food economy focuses the activities related to meeting the nutritional needs manifested through the ratio between biological needs

and capabilities to access food, in parallel with the food offer and the capacity offer. The whole of this field can represent also a finality of the agro-food economy.

Agricultural economy deals with a branch economy, having as a sphere of connected activity related to the extent of their importance, the upstream and downstream branches, including also the intermediary activities and having priority openness towards rural economy.

Rural economy, a much broader field which includes all economic processes, their social extra-economic connotations deployed in the rural perimeter and especially in rural communities. Agriculture generally represents the main rural activity.

Agro-food economy is dependent on the level of general economic development of the given society, on the food policies, the state of agriculture and the development of agrarian structures, on the economic and social processes in rural communities.

There are three types of agro-food economy:

1. *agro-food agricultural economy;*
2. *agro-food transition economy;*
3. *agro-industry.*

These types of agro-food economy are found in different historical stages and in different combinations, demarcation criteria are:

- The share of agriculture, the processing and distribution activity in the final goods amount;
- The share of agriculture in the value added structure on the three sub-sectors;
- The share of agriculture in final consumption and in external trade etc.

In determining indicators of value creation with major significance in their company activity, **value added** is the basic element, since it presents many facets in order to measure and evaluate performance.

As a measure of **which the enterprise adds to the economic cycle via its activity, by using the production factors, namely the contribution of value added created by the enterprise** this indicator is being used to assess the size and structure of production.

The added value is a result of combining the production factors; it is the source of their remuneration and their behavioral

determinant, ensuring the maintenance of the enterprise on the market.

The basic indicator used in the analysis in order to determine the added value consists in the production of the exercise, given that the activity of the enterprise during the exercise is represented by the production of the exercise for which it has used external services in the form of various intermediate consumptions. The difference remaining after deducting these consumptions from the achieved production during a financial year represents the part of production that finds its origin in the operation of the organization by the contribution of the production factors and it represents *the produced added value*. [4]

The main methods used to determine the added value are: the subtractive method and the additive or analytical method.

a) Through **the subtractive (synthetic) method** value added is being calculated as the difference between the production exercise (Pex) plus the trading margin (Mc) and the inputs coming from third parties (Ci): $Vad = Pex + Mc - Ci$ calculated based on this method, the value added is placed between purchases (upstream market) and sales, being the measurement instrument of the enterprise's autonomous means of action that characterize more accurately than turnover, the company's performance.

Calculating the value added according to the subtractive method with the difference: $Vad = (Pex - Ci) + Mc$ has the advantage of highlighting the correlations that should exist between the dynamics of the production year and the dynamics of the material and energy costs reflected in the material expenses that are favourable to the growth of the value added:

- ▶ The exercise production should grow faster than material expenses;
- ▶ With the same material expenses to obtain a larger production;
- ▶ At the same production volume material expenses should be reduced.

Thus the share of value added in the exercise production is even greater than the intermediate consumptions have a lower share.

b) **The additive (analytical) method** involves

an opposite approach in the sense of encapsulating the structural elements of the new created value:

- ▶ Staff expenses (Chp);
- ▶ Taxes without VAT (I);
- ▶ Financial expenses (Chf)
- ▶ Amortization and adjustments for the depreciation of fixed assets (Ai), other operating expenses (with the decrease in records of the fixed asset, damages, others) and the net result (Rn) $Vad = Chp + Che + I + Ai + Rn$.

Eliminating amortization and adjustments related to the depreciation of assets we obtain **the net added value**.

RESULTS AND DISCUSSIONS

In judging the degree of integration of the company, the ratio between added value and the exercise production is an indicator reflecting the dependence or independence of the enterprise towards the external social economic environment. Basically the closer the value of this ratio is to 1, the more is the company vertically integrated.

In developed countries the new created value resulting from agricultural activity has a lower share in the final value of goods respectively of the obtained revenues compared to the other two sub-sectors, processing and distribution. Modernization of agriculture had the effect of income transfers to other sectors and the boost of overall economic development but also led to a relative decline of agriculture in favour of the food industry. Thus in the final amount of food products, the processing activities and services have high shares in developed countries and in those with developing economies the largest percentage is held by agriculture.

If in the state of food agricultural economy the spill over effects of the agro-food sector are low, in the agro-industry stage these effects are important because of its integration in the national economy. In the agro-industry stage the final demand multiplier of the food sector is high, which has a direct effect on agriculture which produces about 80% of intermediate consumptions of the agro-food system.

Agro-food firms, small in number, but with significant turnovers, have expanded in recent decades being organized as groups of companies dependent on a parent and technology control company based on patents and licenses (for eg. Danone, Hochland, Friesland Group etc.) [2].

Such private companies are less specialized in the agricultural field (livestock, intensive production of fruits and vegetables) and especially integrating agricultural production with processing and sale (vertical integration). It often uses the labor of small farmers and the production of peasant households or family farms, which they integrate based on delivery contracts (for eg. Danone in Romania).

In Romania, agriculture is still one of the most important branches of the Romanian economy. [1] Romanian rural economy dominated by agriculture, is still poorly integrated into the market economy.

Contribution of agriculture in gross domestic product is about 5%, while their contribution to GDP other EU countries is approximately 1.7%. [8]

The share of agriculture in GDP has declined in recent years by at least 15 percentage points. Thus, if in 1995 the share of agriculture in GDP was about 18%, today its share has reached 4-5%, according to Eurostat.

The decrease in share of agriculture in GDP was due on the one hand to the decrease of population's and investors' interest to activate in the field as a result of lack attractiveness through the correlation effort-result, and the effort to cope with the fierce competition of agro-food products coming from the EU market which are heavily subsidized, failure in implementing rural development programs.

In terms of total value, agriculture, forestry and fish have contributed in 2015 with the amount of 24,018.4 million lei, going down from the level recorded in 2014, namely 31,582 million lei, according to MADR.

Romania's agriculture contribution to GDP has always been high, Gross Added Value (GAV) of agriculture has represented 6,45 % from GDP and 7,2 % from the total GAV [8].

Tabel 1. The share of agriculture, forestry, hunting, fishing and fish in the GDP in evolution.

Year	1995	2000	2001	2004	2007	2011	2012	2013	2014	2015
% from GDP	18.1	10.8	13	12.5	4.8	6.4	4.7	5.4	4.4	4.6

Source: MADR, 2016

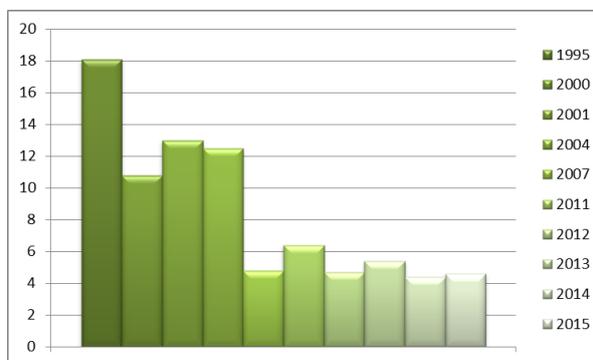


Fig.1.Evolution of the share of the GDP created in agriculture forestry, hunting, fishing and fish in Romania's GDP

Source; Own design based on MADR data, 2016

But even in these circumstances, it is still low considering the resources unused and reported to the share of employed population in this area (34%) reflecting unemployment and low labor productivity.

Due to the fact that most rural inhabitants are self-employed in agriculture, productivity and average incomes continue to remain low, as indicated by the share of employment compared to this sector's contribution to GDP. Lack of competitiveness is reflected in low production, low economic growth and a deficit of the agro-food trade balance as agriculture and food industry fail to keep pace with increasing demand for food, driven by a rapid overall economic growth and which can not cope with foreign competition, especially that in the EU.

CONCLUSIONS

Although Romania has been one of the countries in Central and Eastern Europe which recorded the smallest decline in agricultural production since the beginning of the transition period, however, as a branch of the national economy agriculture is declining. In the past years Romanian agriculture has suffered greatly because of the inability to cope with adverse weather conditions.

During the whole transition period, agriculture has played a very important social role, acting as an occupational "buffer" against socio-economic effects of the transition, absorbing a significant part of the workforce dismissed by urban industries.

Romanian rural economy, mostly dominated by agriculture, is still poorly integrated into the market economy. In today's market economy, the welfare of rural and urban citizens, as well as the welfare of farmers depends on the way marketing techniques are being understood and applied.

In the first year of transition GAV from agriculture has registered an inferior decline than the one in industry, but in 2000, the industrial sector had a continued growth, while the agricultural sector has fluctuated significantly due to vulnerability to droughts.

The structural changes that have occurred during the transition period have turned Romania into an importer of food products. Livestock numbers fell drastically during the transition period. Abolishing or privatizing agricultural cooperatives and state farms have resulted in the emergence of significant structural changes. Unable to use the former intensive production units, small farmers have relied mainly on animal breeding mainly for self-consumption.

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