

FROM VALUE ADDED TO REVENUES IN AGRICULTURE

DANIELA SIMTION¹, ROXANA LUCA²

1 Faculty for Agricultural Sciences, Food Industry and Environmental Protection, Lucian Blaga University, Oituz Street No. 31, Sibiu, code 550373, Romania.

simtiondaniela@yahoo.com

2 Faculty for Business Administration, Academy of Economic Studies, Bucharest, Romania.

roxana.luca@gmail.com

Abstract: *Specific features of agriculture caused primarily by the characteristics of its resources, distinguish it from other industries. Modernization of agriculture resulted in income transfers to other sectors and an overall economic development boost, but also led to a relative decline of agriculture in favor of the food industry.*

Keywords: *value added, agriculture, food, economy.*

INTRODUCTION

As an effect of general economic modernization, food systems encounter at national level fundamental changes, currently being a decline of agriculture in modern economies, an objective process in the increase efforts of economic and social efficiency.

Agriculture in modern economies is addressed more and more as part of the food sector and this, in return, as an important component of the national economy. Modernization of agriculture has resulted in income transfers to other sectors and a boost of overall modernization.

In advanced economies, farms, food industry and distribution enterprises of food products are dependent on each other in the process of market organization and growth of economic efficiency. As technological modernization, they establish strong links with upstream companies, which produce technical equipment and other inputs. This is the way the agro-food integration process is being developed, at branch level, activity sector, national, regional, based on increased economic globalization at global level.

Trade liberalization, increasing the geographical area of the free markets following the collapse of the communist bloc led also to the internationalization of agricultural markets and diversification of trade with food products. An approach process took place and is being continued between different organization forms of food economies created throughout history in different countries.

In developed countries agriculture occupies a small percentage in GDP and employed labor, but its contribution to fix gross capital formation, upper to the two indicators, shows an important role in overall economic development and the formation of the modern food system.

Instead the percentage of agriculture in employed population, superior to its percentage in GDP, shows a lower economic power and the weak position of farmers on the market in order to impose a better price level for agricultural products, compared to the industrial products and services. Agriculture generally represents the main rural activity.

MATERIALS AND METHODS

Agro-food economy depends on the overall economic development level of the given company, food policies, and the state of agriculture and the development of agrarian structures, the economic and social processes in rural communities.

There are three types of agro-food economy: agro-food agricultural economy, transition agro-food economy and agro-business.

These types of agro-food economy can be found in various historical stages and in different combinations, the delimitation criteria are:

- The share of agriculture, of manufacture activity and distribution in the final value of the goods;
- The share of agriculture in the value added structure on the three subsectors;
- The share of agriculture in final consumption and foreign trade etc.

In determining some indicators for value creation with great significance in the business activity, value added is the basic element, because it has multiple meanings for measuring and evaluating performance.

As a measure to what the company adds to the economic cycle through its own activity, by using production factors, namely the value created by the enterprise this indicator is used in order to appreciate the size and structure of the production.

The basic indicator used in the analysis in order to determine the added value is represented by the production exercise. Since the business during the year is represented by the production exercise for which it has used external benefits in the form of various intermediate consumption. The difference remaining after deducting these consumptions from the achieved production during a financial year represents the production part which finds its origin in the business operation through the production input factors and it represents the value added produced.

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

a) Through the subtractive (synthetic) method the added value is calculated as the difference between production year (exercise) (Pex) plus the commercial margin (Mc) and the consumption from others (Ci):

$$\mathbf{Vad = Pex + Mc - Ci}$$

Based on this method, the added value is between purchases (upstream market) and sales, being the measuring instrument of the independent action means of the enterprise which characterize more accurately the enterprise performance, than the turnover.

Calculating the value added with the subtractive method by difference:

$$\mathbf{Vad = (Pex - Ci) + Mc}$$

highlights the advantage of correlations that must exist between the dynamic of the production exercise and the dynamic of the material and energy costs reflected in the material costs which are favorable to the growth of the added value:

- Production exercise should grow faster than material costs;
- The same material expenses to obtain the largest possible production;
- The same volume of materials to reduce production costs.

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

b) The additive method (analytical) implies an opposite approach, meaning the structural embedding of newly created value: personnel expenses (Chp), taxes without VAT taxes (I), financial expenses (Chf), depreciation and impairment of fixed assets (Ai), other exploitation expenses (recording the decrease in current assets, compensation, other) and net result (Rn).

$$\mathbf{Vad = Chp + Che + I + Ai + Rn}$$

By eliminating the amortization and depreciation adjustments on assets the net added value is obtained.

The analytical method offers the possibility to conduct analyzes of growth factors, the structure of added value according to participants in the capital and its distribution in order to pay the production factors - labor and capital - the only contributors to the realization of new value created.

In order to understand the influences occurred in trends of the production indicators that know different developments over time, it requires deepening the interdependence relationships among these by analyzing the relationship between added value, production exercise and turnover.

In order to characterize the relationship between value indicators, turnover, production exercise, added value, in the financial analysis: the static and dynamic report, are being used.

The static ratio (Rs) compares the value indicators in pairs, being a ratio between two absolute values, while the dynamic ratio (Rd) compares the indicators growth rates by the ratio of two indexes:

1. The relationship between turnover and value added:

$$Rs1 = CA / Vad * 100 = Gdex = \text{external dependence degree}$$

$$Rd1 = ICA / Ivad = (CA1/CA0) / (Vad1/Vad0)$$

The external dependence degree depends on the nature of the enterprise's activity, makes a difference among enterprises according to the sector, being higher in distribution, where the value added is lower than the turnover, and lower in industry and agriculture.

2. The relationship between value added and turnover:

$$Rs2 = Vad / CA * 100 = Giv = \text{degree of vertical integration}$$

The report evolves opposite to the external dependence degree: as the economic integration of the enterprise is higher, so the dependence on the external input and the degree of risk are lower. $Rd2 = IVad / ICA = (Vad1/Vad0) / CA1/CA0$

A low level of the static report (RS1) and a value under zero of the dynamic report (RS1) reflect the reduction of external dependence degree, as a consequence of the vertical increasing integration degree expressed by the static ratio Rs2 and the over-unit value of the dynamic report Rd2, so the reduce in risk of dependence on external input resources is confirmed.

The degree of vertical integration is opposite to the degree of external dependence and reflects the company's ability to secure a number of material contributions from its own production without any external input, which reduces the risk of dependence on suppliers of material resources.

A low degree of economic integration will require the company to purchase outside material resources which will increase the risk degree.

Judging the degree of integration of the enterprise, the ratio between added value and production is the indicator reflecting the enterprise's dependence or independence towards the social economic external environment. Practically speaking the closer the value of this ratio is to one (1), the more the company is vertically integrated.

RESULTS AND DISCUSSIONS

In developed countries newly created value resulting from agricultural activity has less weight in the final value of the goods or income obtained from the other two subsectors, processing and distribution. Modernization of agriculture has resulted in income transfers to other sectors and a boost in overall economic development but at the same time there is a relative decline of the agriculture's place towards the food industry. Thus in the final value of food products, the processing and services activities have higher weights in developed countries, and in developing countries the main place is owned by agriculture.

If in the state of agricultural food economy the trained effects of the food sector are low, in the case of agribusiness these effects are important due to its integration in the national economy. In the case of agribusiness the multiplier of the final demand of the food sector is high, which has a direct effect on agriculture, which produces 80% of the intermediate consumption of the agro-food system.

The industrialization of agriculture has been achieved at the expense of increasing inputs from the industry, by extending and generalizing industrial production processes in various agricultural activities.

Gradually the share of intermediate consumption and capital per active person in agriculture has grown. For example the total industrialization of pig and poultry farming, following compound feed production, an important role in this process is taken by the upstream industries from agriculture and technical - commercial services.

Food industries based on scale economy have developed and diversified as a result of significant investments, food technologies have adapted to new nutritional models thus diversifying food products and satisfaction of mass distribution.

Food industry has grown at a different rate from that of agricultural production, as a result of the developments of consumer demand and consumer behavior, according to their revenue growth. Thus from a simple activity of transforming agricultural products, food industry has become an industry that produces more developed food, which increases the added value compared to agriculture.

Food companies, that come in a small in number, but with important turnovers, have expanded in the last decades, being organized as groups of companies dependent on a parent company and technological control, based on patents and licenses (for e.g. the Danone, Hochland, Friesland group, and so on).

Such private companies are less specialized in agriculture (farming, intensive production of fruits and vegetables), and especially integrate agricultural production with processing and marketing (vertical integration). These often use labor of smallholder farms and production of farmers or family farms, which are being integrated based on delivery contracts (for e.g. Danone in Romania).

CONCLUSIONS

The modernization process of agriculture develops interdependence relations between sectors, resulting in a more complex integration. An organized food sector creates a network of specialized relations, which are closely related to successive activities that have become complementary, representing branches of agricultural production. Development of the vertical integration process is the result of several developments which substitute simple, random links of the open relation market, but mandatory, between different partners successive of an integrated chain. This form of integration has led in great industrialized countries to the transition of farms under the control of trade or upstream or downstream industries. In order to mitigate these negative developments the government of each country and in the European Union at its level promotes measures to protect its agriculture and the countryside, and to limit the expansion of monopolies.

In Romania, agriculture remains one of the most important sectors of the Romanian economy. Romanian rural economy dominated by agriculture, is still poorly integrated into the market economy.

REFERENCES

- 1. ISFANESCU A.**, 1999, Ghid practic de analiză economico-financiară, Ed.Tribuna Economică, București
- 2. PETRESCU SILVIA**, 2008, Analiză și diagnostic financiar-contabil, Editura CECCAR, București,
- 3. VOICU R., DOBRE IULIANA**, 2003, Organizarea și startegia dezvoltării unităților agricole, Editura ASE, București,
- 4. ZAHIU LETITIA, DACHIU ANCA**, 2009, Politici agroalimentare comparate, Ed. Economică, București