

## FACTORS ANALYSIS REGARDING THE GROSS PROFITABILITY OF WINE MARKET - CASE STUDY

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### Summary

*Small vineyard holdings become profitable in a market increasingly globalized. However through a process of structural adjustment supported by external and internal funds, technical modernization is essential in conditions of appropriate training structures, so that it can be used to the full resources available. This provides the vine and wine products a high quality with minimum costs, tailored for the use of modern technologies, with a high labour productivity resulted in a positive economic environment as well as a stable economy which in the end will provide support for a profitable export through efficient sales just like the most vine productive countries.*

**Key words:** *cost, commodity production, price, marketing wine, market*

**JEL:** *Q12, D24*

### Introduction

The efficiency of a vineyard farm within the market economy is assessed through its structure and prices of the commodity output compared with other similar activity units. Their considerable demand of financial resources generates the necessity to achieve a competitive efficiency out of the commodity production as a “sine qua non” condition of survival on the market.

Therefore the factor analysis on the gross efficiency, of the overall commodity production, proves to be an important mean of identification and of capitalization of the internal resources aimed to increase the final economic efficiency due to the analytical possibilities of information.

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**Case Study**

Based on the data in the Table 1, regarding the production of S.C. Tohani vineyard holding in the years 2008 and 2009, profitability ratios shall be calculated below.

**Table 1.** Factor analysis on the gross profitability of the overall commodity production achieved by S.C. Tohani vineyard farm during 2009-2010

No.	Indicators	Symbols	Achievement in 2009	Achievement in 2010
1	Commodity production expressed in average selling prices without WATT (revenues on sold production)	$\Sigma Qmp$	2,463.232	2,945.767
2	Maximum production expressed in production unit costs (expenses afferent to the sold production)	$\Sigma Qmc$	2,208.614	2,568.471
3	Gross profit afferent to the overall commodity production (rd 1-2)	Pfb	254,618	377,296
4	Gross profitability ratio afferent to the overall commodity production (rd 3x100:2) – in %	Rrb	11.53	14.69
5	Commodity production achieved in 2010 expressed in average selling prices of the precedent year	$\Sigma Qm_1 p_0$ $\Sigma Qm_1 p_0$	x	2,583.507
6	Commodity production used in 2010 expressed in the production unit costs of the precedent year (without VAT)	$\Sigma Qm_1 c_0$ $\Sigma Qm_1 c_0$	x	2,316.456
7	Expenses at 1,000 ron revenues from the production selling (rd 2x1000:1) in ron	Ch 1000/ $\Sigma Qmc$	896.633	871.761
8	Gross profit at 1,000 ron revenues out of the sold production (1000 – rd7) – in ron	Pfb 1000/ $\Sigma Qmp$	103.367	128.239

Source: Accounting records of S.C.Tohani S.A.

The used template is based on the following formula:

$$\Delta Pfb = Pfb_1 - Pfb_0 \Delta Pfb = Pfb_1 - Pfb_0 = 377,296 - 254,618 = 122,678 \text{ ron}$$

Out of which due to:

(1) The action of the physical amount of commodity production per product:

$$\begin{aligned} \Delta P_{jb} &= \frac{P_{jb_0} \cdot i \cdot Q_m}{100} - P_{jb_0} = \frac{P_{jb_0} \cdot \sum Qm_1 p_0}{100} - P_{jb_0} = \frac{254,618 \cdot \frac{2,583.507}{2,463.232} \cdot 100}{100} - 254,618 \\ &= \frac{254,618 \cdot 104.88}{100} - 254,618 = 267,043.35 - 254.618 = +12,425.35 \text{ ron} \end{aligned}$$

(2) The actions of the structure of the overall commodity production:

$$\Delta P_{j(b)(s)} = \left( \sum Q_{m_1 p_0} - \sum Q_{m_1 c_0} \right) - \frac{P_{j b_0} \cdot i \cdot Q_m}{100} = 2,583.507 - 2,316.456 - \frac{254,618 \cdot 104.88}{100}$$

$$= 267,051 - 267,043 = 8$$

(3) The action of the cost on the unit of commodity product:

$$\Delta P_{fb}(c) = \left( \sum Q_{m_1 p_0} - \sum Q_{m_1 c_1} \right) - \left( \sum Q_{m_1 p_0} - \sum Q_{m_1 c_0} \right) = (2,583.507 - 2,568.471) - (2,583.507 - 2,316.456) = 15,036 - 267,051 = -252,015 \text{ ron}$$

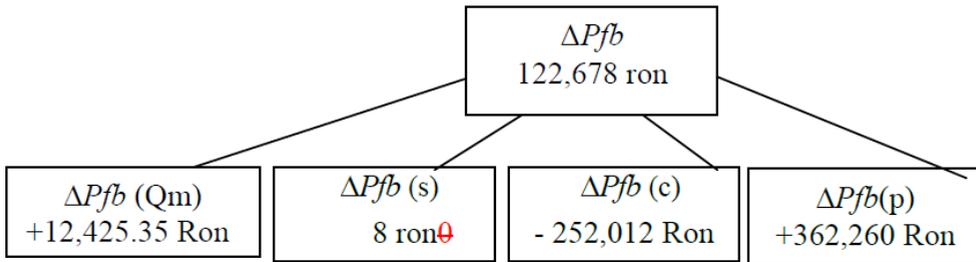
(4) The action of the average selling price (without VAT) per unit of commodity product:

$$\Delta P_{fb}(b) = \left( \sum Q_{m_1 p_1} - \sum Q_{m_1 c_1} \right) - \left( \sum Q_{m_1 p_0} - \sum Q_{m_1 c_1} \right) = (2,945.767) - (2,568.471) - (2,583.507) - (2,568.471) = 377,296 - 15,036 = 362,260 \text{ ron}$$

$$\Delta P_{fb} = \Delta P_{fb}(Qm) + \Delta P_{fb}(s) + \Delta P_{fb}(p):$$

$$122,678 = 12,425.35 + 8 - 252,015 + 362,260 \text{ Ron}$$

In terms of synoptic results the factors quantifications are the following:



For the calculation of the gross profitability the following formula is used:

$$\Delta R_{rb} = R_{rb_1} - R_{rb_0} = 14.69 - 11.53 = +3.16$$

Out of which due to:

The action of the structure of the overall commodity production:

$$\Delta R_{r(s)} = \frac{\sum Q_{m_1 p_0} - \sum Q_{m_1 c_0}}{\sum Q_{m_1 c_0}} \cdot 100 - \frac{\sum Q_{m_0 p_0} - \sum Q_{m_0 c_0}}{\sum Q_{m_0 c_0}} \cdot 100 =$$

$$\frac{2,583.507 - 2,316.456}{2,316.456} \cdot 100 - \frac{2,463.232 - 2,208.614}{2,208.614} \cdot 100 = 11,53 - 11,53 = 0$$

The action of the cost on the commodity product unit:

$$\Delta R_{r(b(c))} = \frac{\sum Q_{m_1 p_0} - \sum Q_{m_1 c_1}}{\sum Q_{m_1 c_1}} \cdot 100 - \frac{\sum Q_{m_1 p_0} - \sum Q_{m_1 c_0}}{\sum Q_{m_1 c_0}} \cdot 100 =$$

$$\frac{2,583.507 - 2,568.471}{2,568.471} \cdot 100 - \frac{2,583.507 - 2,316.456}{2,316.456} \cdot 100 = 0,59 - 11,53 = -10,94\%$$

The action of the average selling price, without VAT, on the commodity product unit:

$$\Delta R_{r(p)} = \frac{\sum Q_{m_1 p_0} - \sum Q_{m_1 c_1}}{\sum Q_{m_1 c_1}} \cdot 100 - \frac{\sum Q_{m_1 p_0} - \sum Q_{m_1 c_0}}{\sum Q_{m_1 c_0}} \cdot 100 =$$

$$\frac{2,945.767 - 2,568.471}{2,568.471} \cdot 100 - \frac{2,583.507 - 2,568.471}{2,568.471} \cdot 100 = 14,69 - 0,59 = +14,10\%$$

$$\Delta R_{rb} = \Delta R_{rb(s)} - \Delta R_{rb(c)} + \Delta R_{rb(p)}$$

$$+3.16\% = 0 - 10.94\% + 14.10$$

Considering the data in the Table 1 as well as the results of the factor quantifications the diagnosis regarding the efficiency trend can be assessed in both synthetic and analytic terms.

In synthetic terms the diagnosis has an overall character aiming the essence of the found situation. In this context the efficiency trend can be assessed as generally positive as a substantial increase of the gross profit was recorded resulted from the selling of the total commodity production, i.e. 41.18% which represent the basic component of the operation. Thus, the main financial resource for the increase of the development fund as well as for the making up of the legal reserves, the employees' share to the profit and the dividends paid to the shareholders were ensured.

At the same time a significant increase of the gross profitability afferent to the overall commodity production (i.e. 27.41%) which finally means an increase of the profit rate generated by the financial, material, land and human resources used within the vineyard farm in terms of commodity production.

### Conclusions

Among the quantified factors, the structure of the commodity production did not influence the profit level which indicates that the unit worked on “the old patterns”, and failed to increase the weight of the quality products so that to achieve some higher selling price for the traded production.

The influence of the unitary production cost was negative due to the general unfavourable context which led to the increase of the purchase prices for the production factors (i.e. fertilizers, fuel, raw materials, services, etc), which is known as the phenomenon of "prices' scissors".

The increase of the gross profit compared to the precedent year, with 122,678 Ron, was achieved mainly based on the increase of the average price of the commodity production, which revealed an increase of the products' quality which made possible finding of a certain category of buyers ready to accept higher prices for a better quality.

The increase of the gross profitability afferent to the total commodity production is considered a fully positive economical-financial outcome only when the profitability was at a competitive level in terms of internal and external market within the given period allowing to cumulate necessary funds to purchase new technology for achieving grapes for wine as well as for reaching a mass industrialized production. Only in this way S.C. Tohani S.A can deal with the harsh conditions of the internal and external market competition.

On the other hand, in analytic terms the diagnosis of the gross profitability afferent to the overall commodity production can gain, through a deep causal investigation at the level of each factor, a rigorously substantiated economical-financial character.

In this context, the correct assessment of the action of the physical amount of the commodity production per product over the gross profit should consider several management coordination as well as the demands on the market economy. In case of S.C. Tohani vineyard, the increase of the physical amount of the commodity production per product with 4.88% determined an increase of the gross profit with 12,425.35 Ron. Such a favourable action of the quantitative factor over the gross profit can be appreciated as fully positive in economical-financial terms only if the following conditions are fulfilled:

*The increase of the physical amount of the commodity production per product met the market's demands having consequently an ensured marketplace along with a convenient price. In the case of S.C. Tohani, the increase of the physical amount grounded on the increase of the market's demands while the high quality of the traded products ensured a profitable price for the unit;*

*The efforts of S.C. Tohani S.A. to increase the physical volume of the production aimed at the same time the increase of the quality in accordance with the international standards and the consumers' demands;*

*The increase of the physical volume of the commodity production on product took place in different rate depending on the financial resources of the unit as well as the internal and external market demands regarding the high quality red wines.*

Regarding the structure of the overall commodity production there was no influence on the amount of the gross profit due to some obsolete market strategies of the employees

working within the marketing department according to which the contracts were renewed without seeking new partners or new products to prospect the internal and external market. Thus, the management of the unit has to consider the allocation of substantial funds for a more rigorous market research in order to see the trends and to meet the consumers' demands.

Regarding the cost per unit of commodity product a negative influence was recorded in amount of 252,015 ron. Among the causes which contributed to the increase of the cost per unit of commodity product we mention **first of all** the unfavourable general context of the economic environment which generated the increase of the price of the production factors, i.e. fuel, fertilizers, pesticides, energy, services etc.

**Second**, the high cost of the bank credits which the unit has to pay to the banks to ensure the cash flows necessary to vineyard and wine production activities which have a long operation cycle.

**Third**, we should mention the high cost of the repairs on the tractors and agriculture equipment generated by both the high price of the spare parts and by the frequent need of repairs due to the obsolete condition of the vineyard equipment.

**Fourth**, an upgrade of both vineyard equipment and processing flow is necessary to improve de farms activity. This upgrade could eliminate the parasite process links which uselessly consume the unit's financial resources as well as saving on the expenses with the employees' wedges.

The diagnosis of the influence of the average selling price (without VAT) on the commodity product unit over the gross profitability should consider both the contribution of this factor on the improve of the profitability of the commodity production and the strategy of the vineyard unit regarding the using of the selling price as a specific factor in the context of the market economy.

Thus, in the case of S.C. Tohani S.A. the increase of the average price on commodity product unit lead to an increase of the gross profit with 362,260 Ron compared to the precedent year as well an increase of the gross profitability with 14.10 %. These data, however, reveal that the vineyard farm which is the subject of our case study recorded increase of the unitary average selling prices (without VAT) at all the commodity products, compared to the precedent year.

In the context of the efforts required by the actual market economy regarding the increase of the commodity production profitability such a favourable situation can be positively assessed only if this was the result of the farm's efforts namely if the increase of the average selling price (without VAT) was due to an efficient structure of the commodity production on sub-units structure (on farms), i.e. on business partners, periods of producing and delivery as well as on quality categories.

The strategy of setting up the selling prices (without VAT) should consider the prices' impact on the market so that the vineyard products to be accessible to the buyers. In this respect the ordinary wine should have a relatively low price to be accessible to the low

income consumers while other wines of high quality D.O.C should have higher prices due to their superior quality and addressed to high income buyers.

At the same time a marketing policy should be consider in terms of setting up some selling price relatively low for the new products aimed to segment of buyers as large as possible and followed by setting up of the best price strategy depending on evolution of the of the demand-offer ratio.

The above mentioned data show that the Romanian viticulture sector, through its natural special advantages, in terms of well trained labour force and enough good material resources, can become a competitive sector on the internal and international market. Therefore, efforts should be focused on setting up production structures enough viable to receive substantial financial support from the state in view of consolidating the private investments within the efficient vineyard farms.

However, given the high degree of fragmentation of the vineyard farms it is impossible to calculate efficiency indicators based on which to judge the extent to which their activity was profitable. Therefore, the government should engage more by introducing appropriate policies to create the necessary conditions, in order to encourage association, land lease and sale of this kind, the funds granted for wine growing through the European Union's and the World Bank's special programmes will be efficiently used, and wine growing will become an attractive and efficient activity.

Small wine farms can become profitable, in an increasingly globalized market, only through a process of structural adjustment supported by internal and external funds, which at this stage it is based on technical modernization under the optimal size structures, so that the available resources can be used to their maximum capacity. For, after all, what is a high productivity? It means studying the market needs in order to know what to produce and at what price to sell, it means optimal endowment with machineries, equipments, technologies, etc., which enables the procurement of high quality wine products with minimum costs; it means efficient use of well qualified workforce, adjusted to the requirements of modern technology use, with a high labour productivity; it means continuously increasing wine products quality so that the selling price to be accepted by buyers and to sell products as easily; it means a positive economic environment, characterized by a stable economy, in order to provide the population with sound gains to ensure they can consume greater quantities of wine products; it means supporting the sales in the export by appropriate economic leverage, as most wine growing countries do.

During 2000-2010 the dynamics of wine products profitability shows that the activity in the vine growing sector is still rewarding for the wine growing trade companies, as they have optimally sized production areas. As regards the technical endowments with machineries, equipments, modern installations, in the majority of the wine exploitations of the Dealu-Mare vineyards, there is an obvious lagging behind, in that they are worn out physically, through an overtime service, and morally by the emergence of more efficient machineries, both as regards the efficiency, and its capability of ensuring a high

quality. As regards the work force, steps towards a higher qualification are necessary, enabling efficient use of new machines and technologies and increase in the labour productivity as the main factor to production cost minimization.

In terms of efficient marketing, it should be noted that most wine growing trade companies still work after old methods, which allowed them, to a lesser extent, the exploitation of the market opportunities. Therefore, for this vital sector of modern enterprise, decisive steps towards changing the outdated mentalities are required, in order to introduce appropriate marketing strategies in compliance with the requirements of the Romanian viticulture integration in the EU structures.

Thus, it is possible to adapt, in the course of action, to the changing requirements of the buyers, emerging both on the domestic market and at export. This will allow keeping the old markets and their adaptation to new requirements, as well as conquering new markets, thus, providing positive influence on the sales volume, in the sense of increasing them, and on the business partners' structure, in order to obtain favourable prices for the company.

Small wine holdings, which currently fail to use the wine-farming areas, the related production and the work force efficiently, should be encouraged and supported, by appropriate measures, in view of ensuring their association in order to create viable units that can meet the demands of fierce competition. In the integration of the Romanian viticulture in the EU, it is impossible to believe that we would be able to compete and be competitive with wine holdings of countries like France, Italy, Spain, etc., which received significant aid from their countries and from the EU.

The experience of these countries shows that it is possible to establish viable vine holdings provided we pull together all the efforts - both the owners' and state's - so that the funds received from the European Union, the World Bank, etc. be fully and efficiently used. Only in this way, will Romania be able to keep a top ten position as regards its surface and wine production. It would be an error to lose so easily the result of several generations work, as none of the wine growing countries, with similar conditions to ours, missed the opportunity to adapt their viticulture to the requirements of era in which we live.

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