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ABOUT THE EFFICIENCY OF UKRAINIAN WINERIES

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Abstract

This study highlights the dynamic, regional and structural aspects of winemaking in Ukraine. The authors identified the level of efficiency of the Ukrainian wineries using three-criteria approach. The study found that Crimean wineries are at the top of the ranking for all efficiency indicators. The study did not identify a single leader by efficiency, but it detected ineffectiveness of small business in the Ukrainian wine industry.

Key words**:** *efficiency, evaluation, ranking, Ukraine, winery*

INTRODUCTION

Winemaking is the production of wine, starting from the selection of the grapes or other produce and ending with bottling of finished wine. The science of wine and winemaking is known as oenology [12]. A person who makes wine is traditionally called a winemaker. Traditionally known as a vintner, a winemaker is a person engaged in making wine. They are generally employed by wineries or wine companies.

There are all necessary conditions for the development of wine-making in Ukraine: the land, the climate, human resources and technologies. Viticulture and winemaking here unite the various forms of ownership, organizational and legal statuses, sectoral and geographical origin in an integrated system of production of the final product – the wine. This system covers all stages of the value chain – from growing raw materials, development of innovations and training of relevant personnel to the production and sale of the final product, servicing its customers.

Today, in Ukraine annually more than 200 thousand tons of grapes process into wine materials (Fig. 1).

If in 2006-2013 the volume of grape processing was quite high and ranged from 300 to 450 thousand tons per year, in 2014, after the annexation of Crimea, they were down to 229 thousand tons.

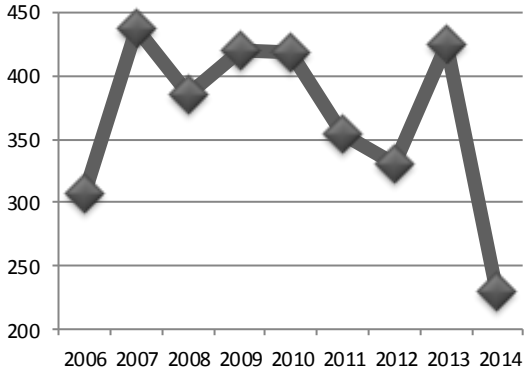

Fig.1. Grape processing in Ukraine in 2006-2014, thousand tons

The dynamics of wine production in Ukraine for the past nine years is presented on Fig. 2.

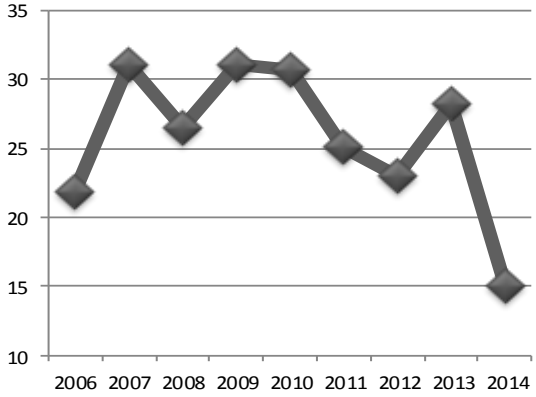

Fig.2. Wine production in Ukraine in 2006-2014, thousand tons

Like the volume of processing of grapes, wine production volumes in Ukraine in 2014

decreased significantly.

Odessa, Mykolaiv, Kherson regions and Crimea are traditionally the largest wine-producing regions in Ukraine. During the period 2010-2013 the shares of these regions in total grape processing have been relatively stable and changed between 3-7% per year. However, in 2014 with the loss of substantial refining capacity in the Crimea, the structure of grape processing has changed significantly: over 61% of grapes are now processed in the Odessa region, about 20% - in Mykolaiv, about 16% - in Kherson, and only 3.7% in other regions of the country.

Similar changes were in the structure of wine production in regions of Ukraine. If until 2014 there was not a sole region-leader in the production of wine, in 2014 more than 97% of wine industry is concentrated in three regions: the Odessa area - more than 60%, Nikolayev – 21.4% and Kherson - 15.6%.

Thus, we can assume that the wine industry of Ukraine in the part of grape processing and wine production is now concentrated in the three neighbouring southern regions of the country, among which Odessa region is the undisputed leader that accounts for almost two-thirds of the entire wine industry.

The largest shares in the total volume of grape processing in Ukraine are held by seven varieties: Aligote, Rkatsiteli, Cabernet Sauvignon, Muscat, Chardonnay, Sauvignon and Riesling. Their total share in the total volume of grape processing in 2011-2014 was 59-62%. Among the leading seven varieties for the whole period (2010-2014) the share of Chardonnay (from 5% to 11%), Cabernet Sauvignon (from 6% to more than 9%), Riesling (from 3.6% to nearly 6 %) and Sauvignon (from 4.2% to 7%) significantly increased due to reduction of Rkatsiteli share (from 11% to 5.5%) and other varieties. The traditional leader - Aligote remains the highest share (12-13%).

Despite of some difficulties of doing business and the impact of other negative factors that take place in the country, the wine industry in Ukraine is developing. This concerns primarily the production of wine materials for champagne and sparkling wines.

There are many studies of various aspects of winemaking in different countries. Some of them explore the consumer properties of wine, e.g. tastes and aromas [7, 15]. The others examine quantitative and qualitative changes in consumption and production of wine in different countries, e.g. Italy [2], Spain [4], Germany [9], Romania [10], Australia [14], Armenia [8] and Moldova [17]. However, only a few of them address issues associated to Ukrainian wine industry [13, 16]. Still none of them identifies the efficiency of wineries in Ukraine.

Therefore, to identify the level of efficiency of wine industry it is necessary to make the appropriate evaluation, the results of which are set out in this study.

MATERIALS AND METHODS

While wine industry enterprises (wineries) of Ukraine work in a competitive environment, to evaluate the efficiency of their work we used three-criteria methodical approach for evaluating the efficiency of the company that operates in a competitive environment, the essence of which is described in [11].

According to this methodical approach we calculated three key performance indicators for each company, including:

1) an indicator of structural efficiency;

2) annual productivity index as an indicator summarizing the dynamic efficiency of enterprises;

3) indicator of relative economic efficiency that is performed using the method of Data Envelopment Analysis (see [5]) and DEAFrontier software.

The sample includes the data on activity of 11 Ukrainian wine companies, which total volume of output in 2012-2013 has made over 50% of all wine production of Ukraine.

All companies of the sample are small and medium enterprises, which is proper for the Ukrainian wine business in general. Five of them are located in the Odessa region, two – in the Mykolaiv region and the Crimea and by one – in Kyiv and Donetsk regions.

Considering that results of DEA are sensitive to errors in initial data, the annual reports of wine companies for 2012 and 2013, reliability of which is confirmed by the auditor

conclusions, were used as a source of information.

RESULTS AND DISCUSSIONS

The results of three-criteria evaluating the efficiency of the wineries in Ukraine are shown at Figure 3.

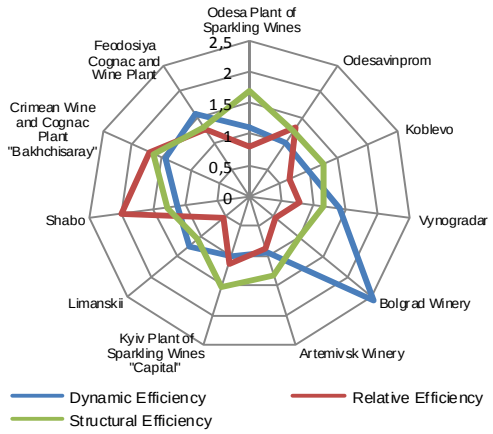

Fig.3. Evaluating an Efficiency of Ukrainian Wineries in 2012-2013

Comparing the wineries by three efficiency criteria, we can testify that none of them is a single leader. However, there are companies that are at the top of the ranking for all indicators, including:

Crimean W&C Plant "Bakhchisaray" is the second by structural and relative efficiencies and the third by dynamic efficiency;

Feodosiya C&W Plant is the second by dynamic efficiency and the fourth by relative efficiency and the fifth by a structural efficiency.

However, there are wine companies that by one criteria are the leaders, but by the other criteria still far behind its competitors, in particular:

Shabo is a leader by relative economic efficiency, but by dynamic and structural criteria it is only the sixth in a sample;

Odesavinprom has the best structural efficiency, but by relative efficiency it is the seventh and by dynamic efficiency it is only the eighth in a sample;

Bolgrad Winery is a leader by dynamic efficiency, but it is the looser by the other criteria.

Among the wineries Vynogradar and Limanskii are the most losers for all criteria. These wineries are the smallest in the sample by the number of employees (less than 100 people). This may indicate the ineffectiveness of small business in the Ukrainian wine industry.

The correlation coefficient between the evaluated relative economic efficiency scores and the size of wineries is about 0.5 that according to the Chaddock's scale [3] demonstrates significant, but negative relationship (correlation). This means that the larger wine companies often have a higher efficiency than small companies.

A deeper analysis of the factors of winery inefficiency found that a significant burden for small wineries like Vynogradar is too high amount of annual license fee that winemakers have to pay each year for wholesale trade of wine. Its amount is 500 thousand UAH (that in 2013 equals almost 50 thousand euros) for any wine company. So, while for the big wine companies these are relatively small funds, for a small winery they reach dozen percent of annual turnover.

Hence the reduction or cancellation this fee for small wineries could give boost to small business development in this prospective sector of food industry of Ukraine.

For identifying the key performance factors, the nature and magnitude of their impact on the efficiency of Ukrainian wineries it is necessary to analyse their efficiency. The results of such analysis should be made appropriate management decisions to address the weaknesses that hamper the growth of efficiency. Benchmarking [5] and other performance management methods [1] can be useful to reach efficiency growth.

CONCLUSIONS

Using three-criteria approach we identified the level of efficiency of the Ukrainian wineries. The results of study enable to conclude that:

(a) Crimean wineries are at the top of the ranking for all indicators;
(b) there is not a single leader by efficiency in wine industry of Ukraine;
(c) there is ineffectiveness of small business

in the Ukrainian wine industry.

The future research will be devoted to identifying the key performance factors for Ukrainian wineries and finding the appropriate management methods to reach their efficiency growth.

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