

XXII International Scientific Conference "Enometrics", May 27–29,
2015, Brno, Czech Republic

Examination of the areas of the cellar cooperatives in Hungary in particular their production technology

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Abstract

Cooperation can be justified based on its economic and social benefits. Lower input costs make the production more economical, since cooperative cellars are able to obtain inputs and tools necessary for production in a greater volume for a lower price. The cooperation can provide such benefits for the grape growers which they otherwise could not enjoy.

In my survey, I examined the geographical location and operation of cooperative cellars in Hungary, in particular the production technology. In my study, I intended to find an answer to the question whether geographical locations and production technologies are related. I consider another important objective of my research to determine the regions and wine-districts in Hungary where the most effective collective cellars can be found.

The geographical locations of the cooperative cellars, the numbers of the operating vineyards and their various sizes are indicative of the planning of tasks to which we have to pay greater attention in the future; as the Hungarian grape and wine industry can not fall behind in the competition the pace of which is set by the European Union and the world. Increasing competitiveness and farm sizes, integrations, the establishment of cooperative cellars are all essential for the success.

One of the most important findings of my research is that the cooperative cellars of the Southern Great Plain region are operating in the most effective way today, so these cooperative cellars are able to lay the foundations of new, successful integrations in the future. It is important to create a legal framework in Hungary that recognizes the usefulness of cooperatives for the society. After all, the cooperatives can reduce the extent of the black economy, contribute to the expansion of legal employment and improve economic transparency and tax morale.

Enometrics XXII, May 27-29, 2015

Keywords: cellar cooperatives, production technology, grape, wine, grape varieties, geographical locations, wine region

1. Introduction

In Hungary, grape growing and wine industry is highly fragmented. While there are 10 wine-districts on 890,000 hectares in France and 13 wine-districts on 102,000 hectares in Germany, we can find 22 wine-districts on 83,000 hectares in Hungary (Krautstoffl-Thurner, 2006). Cooperative cellars can be a great way to overcome the difficulties of the fragmented production and processing capacity of the grape and wine industry and small-sized wine regions.

In recent years, weather has had an ever greater impact on the performance of the grape and wine industry than usual. After the tragic harvest results of 2010, the amount of wine produced was below the normal 3-3.5 million hectolitres in 2011 as well. As a result of the frost damage and the lack of rainfall in 2012 and 2013, yields fell behind the average of the previous years. Owing to the European Union subsidies, 11,000 hectares of plantations were cut over the past half decade, the area of the grape growing plantations was reduced to 65,000 hectares. Wine-grape production – despite higher selling prices – was at a loss, as the crop failure and the loss of sales revenue could not be compensated by higher prices.

It is important to mention that they continue to import large quantities of table wines to Hungary, which – in addition to the declining demands – further reduces the sales prospects of domestically produced wines.

Today, it is essential for the successful operation of wineries to ensure the continuous, regular production and supply of high quality wines with special registered trademarks and brand names. This goal can only be achieved through the production of suitable grape varieties in appropriate volumes and modern production technologies, as well as available modern storing and bottling capacity within the framework of the same entities. In this respect, the division of producers, the negative connotations in relation to co-operatives, the fragmentation of wine-areas, the uncoordinated wine production and sales are characteristic of Hungary, which is a major obstacle for the success of the Hungarian wine sector.

When making vital decisions, the producers still need a form of organization which can create a better and safer future for them. The only organizational structure that is intended to promote the above mentioned goals is the cooperative, which is the firmest pillar of agriculture on the "happier side" of Europe even today, it is the "jealously" guarded advocacy institution of independent producers (Mohácsi, 2000).

1.1. The Benefits of Cooperation

Cooperation can be justified based on its economic and social benefits. Lower input costs make the production more economical, since cooperative cellars are able to obtain inputs and tools necessary for production in a greater volume for a lower price.

Table 1: The Benefits of Cooperation

More efficient production	Democratic decision-making
Lower input costs	Adequate representation of the interests of producers
Bulk purchasing for more economical production	The principle of open membership
Role in pricing while selling products	Organization
Exact payment dates	Human-centered, non-profit organization
Some benefits are partly due to geographical locations.	

1.2. Services to Be Provided by the Cooperative

First of all, it is important to note that for the proper work of cooperative cellars we need producers who are willing to cooperate with each other in purchase, processing and sales. The cooperation can provide such benefits for the grape growers which they otherwise could not enjoy.

Cooperative cellars can help the producers with a number of activities in the field of input, grape growing and wine making. The producers have to decide what are those activities that they can carry out effectively on an individual basis and what are those tasks that they are able to achieve together more easily (Becz, 2000).

Table 2: Services to Be Provided by the Cooperative (Own editing based on Becz, 2000)

Input sector	Grape growing	Wine making, marketing
equipment, tools	soil cultivation	transportation
manure	pruning	processing
chemicals	plant protection	storing
loans	manuring	bottling
insurances	harvesting	marketing in the domestic market
quality grape grafts		marketing in international markets
agronomic advisory services		

Based on the above, we can conclude that all the activities of the three areas reduce the production costs to a large extent, since the inputs and tools needed for production can be obtained in a greater volume for a lower price. It is also important to point out that cooperative cellars are able to apply modern technologies the use of which individual producers could not afford. Often the cooperative cellars have expert teams which can help farmers through advisory services in a large way. Most of the producers would not afford the latter either on their own.

2. Methodology and materials

In the first part of my survey, I examined the geographical location and operation of cooperative cellars in Hungary, in particular the production technology. I carried out the examination of the geographical locations based on the NTCA (National Tax and Customs Administration) database of excise license holders and the database of the National Council of Wine Communities and the National Association of Grape and Wine Producer Groups. I worked out the analysis concerning production technologies through telephone interviews and online questionnaires, in both cases, I was talking to the presidents of the organizations.

I carried out the research on the economic activities (year of foundation, sales revenue) of cooperative cellars based on the "Céginfó" database. On the basis of these data, I made a statement on the age and sales revenue of active cooperative cellars, then I calculated their average and edited a chart.

In my study, I intended to find an answer to the question whether geographical locations and production technologies are related.

I consider another important objective of my research to determine the regions and wine-districts in Hungary where the most effective collective cellars can be found.

3. Results

3.1. The Geographical Locations of Cooperative Cellars in Hungary

Examining the geographical locations of the cooperative cellars in Hungary, we can conclude that most of these organizations can be found in Northern Hungary (ten associations) and in the Southern Great Plain (ten associations). The cooperative cellars in the Transdanubian regions are also significant: there are seven cooperative cellars in Southern Transdanubia and six in Western Transdanubia. The importance of cooperative cellars in Central Transdanubia is not significant, while there is only one association in Central Hungary and another one in the Northern Great Plain.

It is important to draw the attention to the densely developed cooperative cellars in the Southern Great Plain: ten collective vineyards produce wine in the Kunság Wine District within the Duna Wine Region. A similar phenomenon can be observed near lake Balaton. There are ten cooperative cellars within the Balaton Wine Region, although three regions – the Central Transdanubian, the Southern Transdanubian and the Western Transdanubian – and six wine districts – the districts of Badacsony, Balatonboglár, the Balaton Uplands, Balatonfüred-Csopak, Zala and Somló – share the area.

A number of settlements have two collective cellars: Orgovány and Kecel in the Southern Great Plain region, Balatonlelle in the Southern Transdanubian region, Erdőberény in Northern Hungary and Sopron in the Western Transdanubian region.

It is also important to note that we can find active cooperative cellars in all the seven wine regions of Hungary. As regards to the wine districts: from the 22 districts only 15 have operating cooperative cellars, these are the following: the districts of Tokajhegyalja, Bükkalja, Eger, Mátraalja, Kiskunság, Villány, Mecsek-alja, Ászár-Neszemly, Balatonfüred-Csopak, Badacsony, Balatonmellék, Zala, Somló, Sopron, South-

Balaton. I did not find such associations in the wine districts of Szekszárd, Tolna, Pannonhalma, Mór, Etyek-Buda, Csongrád and Hajós-Baja.

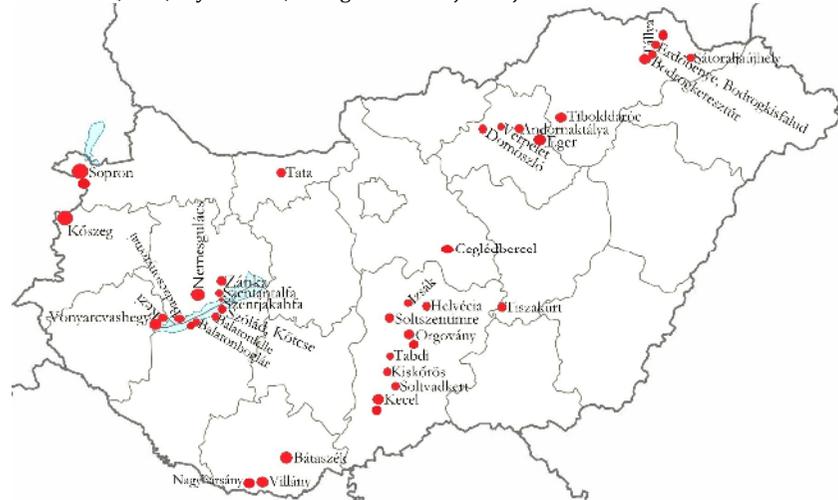


Figure 1: The geographic locations of active cooperative cellars in Hungary

Table 3: The number of cooperative cellars per region in Hungary

Region	Numbers of cellar cooperatives
Northern Hungary	10
Southern Great Plain	10
Southern Transdanubia	7
Western Transdanubia	6
Central Transdanubia	4
Northern Great Plain	1
Central Hungary	1

3.2. Analysis of the Production Technologies of Cooperative Cellars in Hungary

In the second part of my research on cooperative cellars in Hungary, I studied the operation of the organizations, in particular their production technologies. I carried out the survey through telephone interviews and online questionnaires, contacting the presidents of the organizations in both cases. My research has covered the cooperative cellars of four key regions – in terms of the numbers of cooperative cellars – Northern Hungary, the Southern Great Plain, Southern Transdanubia and Western Transdanubia. I examined three main issues in relation to production technology:

- a) the proportions of the ages of vineyards cultivated by the members of Hungarian cooperative cellars in the Southern Great Plain, Southern Transdanubia, Northern Hungary and Western Transdanubia;
- b) the vine training methods of the cooperative cellars in the four regions;

c) the most important varieties of white and red wine produced by the cooperative cellars in these four regions.

3.2.1. The age of the vineyards

With regard to Table 4 it was found that Northern Hungary has the highest proportion of vineyards aged 30 or more years (12%) from the four regions examined, while the same indicator is the lowest (3%) in the Southern Transdanubian region. The value is average in the Southern Great Plain and in the Western Transdanubian region (6-6%). Southern Transdanubia has the highest proportion of 0-5-year-old vineyards (15%), while it is the lowest in the Southern Great Plain. To sum up, the proportion of older vineyards cultivated by the members of the Hungarian cooperative cellars is the highest in Northern Hungary, while the proportion of new vineyards or vineyards planted within the last five years is the highest in the Southern Transdanubian region.

Table 4: The proportions of the ages of vineyards cultivated by the members of Hungarian cooperative cellars in the four regions examined (Southern Great Plain, Southern Transdanubia, Northern Hungary, Western Transdanubia)

Region	the proportion of vineyards aged 30 or more years	the proportion of 0-5-year-old vineyards
Southern Great Plain	6%	7%
Southern Transdanubia	3%	15%
Northern Hungary	12%	9%
Western Transdanubia	6%	10%

3.2.2. Vine training methods

Table 5 shows the vine training methods characteristic of the Hungarian cooperative cellars in the four regions – Southern Great Plain, Southern Transdanubia, Northern Hungary, Western Transdanubia.

Based on the questionnaires and the interviews, we can say that in the Southern Great Plain head- and high training as well as single curtain training are typical. According to the answers provided by the cooperative cellars in Northern Hungary, we can state that guyot training is characteristic of the region, while in Western Transdanubia guyot training and medium high cordon training are typical.

Table 5: Vine training methods characteristic of the cooperative cellars in the four examined regions (Southern Great Plain, Southern Transdanubia, Northern Hungary, Western Transdanubia)

Region	Vine training methods characteristic of the region
Southern Great Plain	head- and high training single curtain training
Southern Transdanubia	medium high cordon training guyot training
Northern Hungary	guyot training
Western Transdanubia	guyot training medium high cordon training

3.2.3. The most characteristic white and red wine varieties

In the last part of my research on production technologies, I tried to find out about the production of the most characteristic wine varieties at the cooperative cellars in the four examined NUTS-2 regions.

Table 6 shows that the most common white wine variety is Bianca, while the most common red wine variety is Kékfrankos in the Southern Great Plain. As for the cooperative cellars in Southern Transdanubia, we can say that they produce the biggest quantities of Chardonnay and Olaszrizling white wine grape varieties, while the most frequent red wine types include Merlot, Kékfrankos and Cabernet sauvignon. In the region of Northern Hungary, the most significant white wine varieties are Leányka, Rizlingszilváni and Furmint, while in case of red wine varieties Kékfrankos and Pinot Noir. In Western Transdanubia, Olaszrizling was mentioned as the most frequent white wine grape variety, while in the category of red wines Kékfrankos and Cabernet sauvignon.

Table 6: The most characteristic white and red wine varieties produced by cooperative cellars in the four examined regions

Region	Most important white wine varieties	Most important red wine varieties
Southern Great Plain	Bianca	Kékfrankos
Southern Transdanubia	Chardonnay, Olaszrizling	Merlot, Kékfrankos, Cabernet sauvignon
Northern Hungary	Leányka, Rizlingszilváni, Furmint	Kékfrankos, Pinot Noir
Western Transdanubia	Olaszrizling	Kékfrankos, Cabernet sauvignon

3.3. The operation of cooperative cellars in Hungary

Following the findings on production technologies, I also found it necessary to examine the foundation year of each cooperative engaged in grape growing and wine making and whether their "age" is related to their operation and production technologies.

Based on "Céginfó" data, I made a statement about the age of active cooperative cellars. I edited a chart of the data (Table 7) and concluded that from the four regions examined, the cooperative cellars in Western Transdanubia have the highest average age (26 years), while those operating in Southern Transdanubia the lowest (13 years).

Table 7: The average age of cooperative cellars operating in Hungary per region

Region	Average age
Southern Great Plain	22 years
Southern Transdanubia	13 years
Northern Hungary	23 years
Western Transdanubia	26 years

In the last part of my research I intended to find out which cooperative cellars and regions produce the greatest sales revenue. We are able to infer the effective operation of cooperative cellars from the sales revenue results as well.

Based on "Céginfó" data, I made a statement about the 2013 annual sales revenue of operating cooperative cellars. I calculated the averages of associations in different regions, then I edited a chart of the data per region (Table 8). We can see that the cooperative cellars in the Southern Great Plain were able to achieve the highest average sales revenue (119 million HUF), but the Southern Transdanubian region is also significant with its average sales revenue of 106 million HUF.

It is surprising that the average sales revenue of the cooperative cellars in Northern Hungary was only 70 million HUF, from which the Cooperative Cellar of Eger stands out the most with its sales revenue of 292 million HUF.

Table 8: The average sales revenue of the cooperative cellars in the four regions examined (2013, million HUF)

Region	Average sales revenue (2013, million HUF)
Southern Great Plain	119
Southern Transdanubia	106
Northern Hungary	70
Central Hungary	122
Western Transdanubia	48

4. Conclusions

Regarding the geographical locations of cooperative cellars, we can say that most of them can be found in the region of Northern Hungary (10 cellars), and the Southern Great Plain (10 cellars). The cooperative cellars in the Transdanubian regions are also significant: there are seven of them in Southern Transdanubia and six in Western Transdanubia. In Central Transdanubia, the importance of cooperative cellars is not significant, while we can find only one cooperative cellar in Central Hungary and another one in the Northern Great Plain.

Based on my research, it can be concluded that most of the cooperative cellars can be found in the region of the Southern Great Plain and the best sales results are also achieved by the associations in this region. It is important to draw the attention to the Southern Transdanubian region which – in this regard – can also be considered successful. It is surprising that the economic performance of the cooperative cellars in Northern Hungary is not so good, but it is resulted from the out-of-date production technology they use.

From the above results we can also conclude that the cooperative cellars that were established later use more modern production technologies, and by so doing they are able to produce higher sales revenues as well.

Today, it is essential for the successful operation of wineries to ensure the continuous, regular production and supply of high quality wines with special registered trademarks and brand names. This goal can only be achieved through the production of suitable grape varieties in appropriate volumes and modern production technologies, as well as available modern storing and bottling capacity within the framework of the same

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