# Characteristics of Vertical Coordination in the Hungarian Wine Sector

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**ABSTRACT**

In our paper, we analyse the vertical coordination forms between vine grape producers and wine producer-merchants; and examine the characteristics of the contractual relationships and contract design in the Hungarian wine sector on the basis of the New Institution Economics theory. In this theoretical framework, we analyse the determinant factors in development of different coordination forms concerning the transactions on vine varieties for wine production. We have carried out interviews with the actors and we examine the contracts of the greatest Hungarian quality wine producer and merchant societies, which represent the majority of the production and wine export. We make statistical analysis of data base of 40 vine and wine enterprises in order to form a general picture from the actors of the Hungarian wine industry. We present the size, the ownership and the financial situation (revenue, Cash Flow, P/L etc.) We also describe the state and market regulations in relation with the wine industry and their role in the development of the different vertical co-ordination forms.
We underline that the wine production in Hungary can be described with a relatively low profitability and slow return. This phenomenon arises not only from the costly production system, but from high transaction costs and inefficient existing governing structures. We show that the uncertainty is extremely high in the sector, especially in the field of price fluctuation, quality of row materials, commercialisation and respect of obligations assumed in the contracts. The motivation system of analysed contracts in most cases is not based on the price mechanism and we find a slight price differentiation in relation with quality of wine-grape. In most cases the assurance of wine-grape purchase means sufficient motivation to vine-growers. We show as well that vine-growers are not well organised at the level of negotiations with wine-producers and merchants. Their power to enforce interests is rather weak. The lack of confidence, asymmetrical information and the existence of opportunistic behaviour result in a very low level of investments and in an inefficient structure, although an efficient one would be indispensable for the quality wine production.

## INTRODUCTION

The Hungarian wine sector including the structure of the production as well as the vertical relationship among the actors has changed radically over the last 15 years mainly caused by the political and economical transformation (the so-called “the Economics of transition”). Ownership and production structure have suffered from complete change due to privatisation, compensation, liquidation and reorganisation of firms and set-up of new enterprises. In consequence, a fragmented wine-grape production structure has developed, because the major part of wine-growing surface felt into the property of small-scale producers. Actually, the average size of vine-growing exploitations is 0.3 ha and 130 000 wine-growers are registered. One part of wine producing firms has been bought up by foreign or Hungarian investors, while the other part has failed or has been divided. While before transition 30 great state societies and 50 cooperatives assured the Hungarian wine production, now 13 000 enterprises deal with wine-growing. Today, for this reason, wine-grape and wine suppliers are rather fragmented.

The EU accession indicates several challenges to the actors. The recent period has demonstrated that the wine market balance is extremely fragile, and the concurrence on the European producers’ traditional markets is more and more intensive with headway of the New World’s wines and therefore it is more and more difficult to manage the wine excess. In case of Hungarian wines, increasing competition appears as loss of export wine market and market share.

Wine markets, in the EU and in Hungary as well, are organised ones, where production limitation, interventions and price subvention do exist in the system of market mechanisms. The subvention and the competitiveness on the international wine markets postulate a well working supply chain, it means sharing equally added value, which is based on the long term relationships between the producers and wine merchants. It is a more important requirement in the case of the quality wine production, which is a priority in the European and in the Hungarian wine production strategy as well. That is why in our paper, in this general context, we analyse the vertical coordination forms between vine grape producers and wine producer-merchants; and examine the characteristics of the contractual relationships and contract design in the Hungarian wine sector on the basis of the New Institution Economics theory.

## PROBLEM STATEMENT

The ownership-structure of Hungarian wine production changed very rapidly during rather short period (*Lakner, Hajdu 2002):* considering the registered capital of companies in 1995 42% of capital was still in state propriety and 58% were in private ownership[1], however, for 2000, the state propriety represented 8%[2]. One part of wine making firms has been bought up by foreign (12% of registered capital of companies in 2000) or Hungarian investors (80%), while the other part has failed or has been divided. While before transition, 30 state companies and 50 cooperatives assured the Hungarian wine production, which represented a very integrated system, because these entities assured every stage of technical itinerary of wine production, actually, 13 000 enterprises deal with grape-vine transformation, wine-making and wine-trade. *(Table 1)* As a result of the Hungarian wine sector privatisation, grape-vine production and transformation have been completely separated and fragmented. The majority of lands and vineyards are in ownership of natural persons and in use of wine-growers. Companies have no right to buy lands and there are only a few wineries that possess their own vineyards. So this institutional constraint contributed to define a particular track of production structure development of wine sector. Conversely, in case of wine production, wine growers possess only 20% of grape-vine transformation and vinification capacity, while companies dispose 80% of wine-making capacity. Consequently, the two sides of wine production itinerary are rather interdependent. In this situation, logically, the cooperative cellar system should be well-developed, but because of bad memories of collective propriety of socialism cooperatives, Hungarian wine growers are unwilling to cooperate. In the wine sector, actually there are only 29 cooperatives. For this reason, grape-vine and wine suppliers are rather weakly concentrated in the Hungarian wine sector in comparison with the other European traditional wine producer countries, like France, or New World producers.

| Size of enterprises in the Hungarian wine industry | Number |
|---|---|
| < 80 hl | 10 462 |
| 80-500 hl | 2 111 |
| 500-1 000 hl | 156 |
| 1 000 -10 000 hl | 199 |
| 10 000 – 20 000 hl | 18 |
| 20 000 hl < | 17 |

[1] Source: Ministry of Agriculture, 1995 cit in Lakner, Z., Hajdu, I. (2002) : The Competitiveness of Hungarian Food Industry – a System Based Approach, Mezőgazda Kiadó, Budapest, 2002 – p. 49
[2] Source: Hungarian Association of Food Processors, 2000 cit in Lakner, Z., Hajdu, I. (2002) : The Competitiveness of Hungarian Food Industry – a System Based Approach, Mezőgazda Kiadó, Budapest, 2002 – p. 50

| | |
|---|---|
| **Total** | **12 962** |

*Table 1. Ventilation of Hungarian wineries on the basis of their grape-vine transformation and wine production volumes in 2002 (Source: VPOP – Hungarian Custom Office, 2002)*

During last 18 years, the operators of wine sector had to face not only to the consequences of property right changes but they had to take in consideration opening "prices agricultural scissors", increasing level of rates and taxes, and the modification occurred on wine markets and in relation with export partners. For the period of transition, Hungary lost a large part of export markets in the Eastern Bloc and the operators had to look for other destinations and emerged the partnership with European countries. Furthermore, they had to calculate with the increasing quality requirements and the growing demands for quality wines. Consumer behaviors changed on the domestic market as well, rising demand of quality wines has been registered during last period. That is why the actors had to adapt to the new requirements and emphasized the wine quality, which requires large investments in vineyard and wine making and implies an efficient reorganization of supply chain.

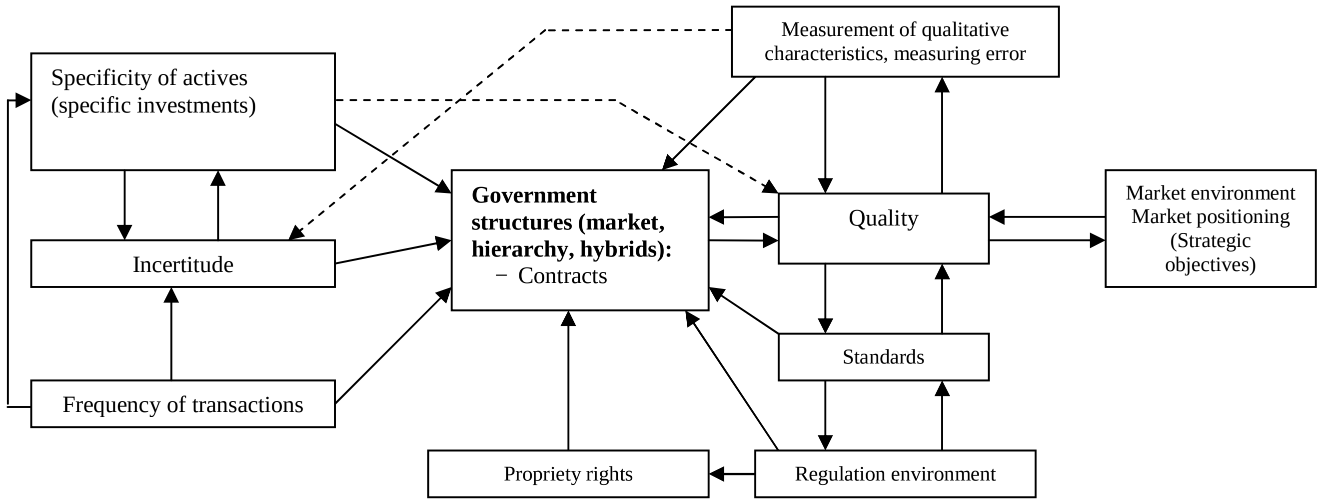
Since 1st of May 2004, the Hungarian wine industry takes part of common marketing organisation. The EU accession indicates several new challenges to the actors. The recent period has demonstrated that the wine market balance is extremely fragile, and the concurrence on the European producers' traditional markets is more and more intensive with headway of the New World's wines and therefore it is more and more difficult to manage the wine excess *(Anderson, 2004; Thach, Matz, 2004)*. Wine markets, in the EU and in Hungary as well, are organised on same basis, where production limitation, interventions and price subsidy do exist in the system of market mechanisms. The subsidy postulates a well working supply chain, it means sharing equally added value, which is based on the long term relationships between the producers and wine merchants. It is a more important requirement in the case of the quality wine production, which is a priority in the European and in the Hungarian wine production strategy as well. Furthermore, a well-organised supply chain contributes to improve the competitiveness of wine sector.

For the explanation of problematic of wineries supply chain management in case of quality wines, the transaction cost theory (TCT) can be mobilized *(Williamson, 1985)* where the level of assets specificity, like ownership of geographical names of appellations, vineyard propriety, brand name propriety, marketing investments, the frequency of transaction between producers and merchants, and the uncertainty attached to quality of grape-vine and to transactions are the crucial points of analysis of relationship between Producer and Merchant *(Godhue & al, 2000; Martin, 2002).* With mobilization of this theory we try to find explanation to the vertical coordination in the Hungarian wine sector.

The great separation of vineyards ownership (raw material production) and wineries (wine-making and merchandising) in case of quality wine production underlines the coordination problems in the Hungarian wine industry. The high level of transaction costs can be resulted by the lack of confidence of the actors for each other. For this reason, the long term contractual relationships are relatively rare in the upstream part of the wine sector. The problem is more stressed regarding that the operators of wine market do not trust in the state institutions that should enforce the contractual engagements of partners. The international researches show that the efficient enforcement of contracts is an essential element of market. It is a more interesting question in the countries suffered from transition, like Hungary, where several elements of the market institutions are still developing. The EU accession and deriving benefit from subsidies enforce several regulations, which mean advantage for the Hungarian producers only with well-working vertical coordination systems.

**OBJECTIVES**

We propose to analyse the determinant factors in development of different coordination forms concerning the transactions on vine varieties for wine production with utilisation of the New Institution Economics theory. The next graphic shows the relevant elements that influence the vertical co-ordinations:




**METHODS**

(1) We analyse the general market context of Hungarian wines and the specific investments: the Hungarian models of organization, and positioning of Hungarian wines in the export and the domestic market; technological and marketing investments in the wine industry,

(2) We study the regulation environment of the Hungarian wine production

(3) We describe and evaluate hybrid forms and contracting relationships in the Hungarian wine industry on the basis of interviews with the most important wine producer and merchant companies who represent a great part of the Hungarian quality wine production and wine export. These enterprises play essential roles in the co-ordination of wine production regions and assure the marketing of grape-vines.

(4) We make statistical analysis of a data base of 41 vine and wine firms in order to get a general picture from the actors of the Hungarian wine industry. We make a comparison of the financial performance of Hungarian enterprises with French ones. We would like to regard that the financial results of wineries render investments possible in the quality improvement and in the marketing.

## 1. GENERAL MARKET CONTEXT OF HUNGARIAN WINES

In the wine sector, we can distinguish two forms of organization where the logic of quality improvement is completely different. (i) The "New World" model: characterized with the brands of enterprises and the promotional investments realized by the firms. Their supply policy is marked with integration forms or the selected suppliers. (ii) The French AOC or more generally European protected geographical indication model is based on the "terroir" references and characterized with the promotional investments assumed collectively at the regional or national inter-professional level. *(Saulpic, Tanguy, 2002 ; Aigrain, Hannin, 2005)* This distinction has become extremely important regarding that the expansion of the first model is higher than the second one, which contributes to the reformulation of world wine market: the market share of traditional European producers is decreasing on international markets. With increasing competition for table and premium wines, the obtainable margins by the actors become more and more reduced. Consequently, the wine merchants are trying to market higher quality wines and differentiate more and more their products with brand names, which require assuring of constant quality. In this circumstance, Producers and Merchants are revising their strategy. Some of them propose to fight against the concurrent of "New World" with the same instruments: variety wines, reputation associated with brands, great promotional investments. In actors' opinion, the development of durable partnership should be an efficient strategy without loosing the advantages of their autonomy and this organization form can contribute to recover the competitiveness, to correspond to the demand on quality, traceability, environment protection and to assure the purchasers in the hyper- and supermarkets.

The Hungarian wine industry, as part of Common Market, and traditional wine producer and exporter one, can not escape from general market tendencies. The quality of wine is guarantee by regulation system defining the conditions of production for quality wine produced in specifies region (quality wine psr.) of delimited appellations. Legally, qualitative mention on label is not possible without origin designation, but the Hungarian Wine Act – contrary to the French legislation, – according to traditions, allows the variety designation for quality wines. In Hungary, like in the other European wine producer countries, we can observe the separation of roles, which is accentuated by the results of privatisation and property rights changes. Wine-growers produce raw materials (grape-vines) and wine merchants deal with vinification and marketing. In this case, the quality development widely depends upon the individual strategy of wineries and the collective strategy of professionals in the appellations. Therefore, the promotional budget is quite limited and shared by different actors of wine industry. However, in the New World, the companies and marketing funds finance the branding and wine promotion policy, and they mobilize an immense budget to conquer the markets. In Hungary, the collective wine promotional budget is much more restricted than in the other European member states. For example, while a French inter-professional that covers same volume of production as the totality of the Hungarian wines (4 million hl), manages about 12,5 million € of promotional budget in 2004, the Hungarian wine sector can profit a more restraint budget with 1,2 million € taken altogether wine specific and non-specific but attached actions.

For the wine quality improvement, the actors require large investments: often it means complementary or mixed investments of winegrowers and merchants. In one hand, in vineyards, winegrowers have to plant new varieties for better vines and for adaptation to demand, to improve viticultural practices and eventually to buy winemaking equipment. In the other hand, merchant companies have to develop the wine making practices or create new labels, to innovative merchandising and branding, and to modernize wine processing chains. However a confidence and opportunism problem, in relationship with the specificity of "wine assets", appears and restricts the induction of the decisions for favouring the quality of wines: The producers are not sure that the merchant will pay a higher price as compared to the spot market. The merchant hesitates to develop marketing investment, in the fear of being deprived of the product, bought by an other merchant at a higher price. The spot market cannot throw long-term progress and results under-investments at both levels, but still it is the most important and widespread governance method of transactions between winegrowers and merchants.

### 1.1. Investments in the Hungarian wine sector

In Hungary, during transition and privatisation period, we can register large investments in wine sector in order to wine quality development, since the professionals set a target of wine quality improvement and motivation of quality wine production. Between 1990 and 1997, there were no available subsidies for this development. Furthermore, it was difficult to obtain credits to the investments, because the viticulture and wine production were considered as a risky activity with very slow refund. During this period, in practice, there was a low rate of vineyard reconversion: only 2000 ha, and at the same time vineyard abandonment accelerated over 7 years. To preserve the vine potential and to develop the wine quality, the Hungarian government elaborated a subsidy system for new vineyard plantation, machine purchasing and wine making equipment modernization. Special credit was assured for the producers (40-50% state-subsidy for investments), which contributed to the modernization of Hungarian wine industry. As a result of this subsidy system, 9000 ha new plantation have been realized, which moderated slightly the general state of vineyards, but it was not enough to stop the vine surface decreasing (-37% during 1990-2006 period).

After EU accession, the subsidy system of wine sector was reformulated, and mainly subsidized from European funds. Since 2004/2005 wine year, for vineyard restructuring Hungary receives every year 10 million € for 1200-1300 ha. This is the most important subvention of the wine CMO, while it aims vineyard modernization, variety changes and qualitative adaptation of wine production to the wine demand. The cellar and wine-making equipment modernization, integrated viticulture system, marketing actions and regional development are financed by the agricultural development operative programs, but we have to mention that the level of subsidy is 30% of the EU-15 members' budget.

In the 1990's, the second important arrangement was the creation of the Agro-food Marketing Centre by the Ministry of Agriculture with aim of collective promotion of the Hungarian agro-food products including wines. The objective of the wine promotion programs financed by state budget was to make Hungarian high quality wines acquainted with occidental and Far Eastern consumers (German, British, Scandinavian, American, Canadian, Japanese, etc.), which was extremely important, because Hungary had to, and has to actually as well, cope with the negative image of Eastern wines and to ease the consumers' bias. It is true that during 40 years of socialism, the quality of Hungarian wines and their image have degraded, but after the privatisation, the results of investments are obvious on the field of quality development, which have to sustain with promotion on the most important markets of Hungary. The efficiency of these actions and the activity of AMC were not satisfying, that is why in 2005 producers took in hand the collective wine promotion like the French inter-professional organizations and in collaboration with Alsace and Rhone region, the Hungarian wine producers try to obtain support from the European Union for wine promotion in third countries and on the EU markets. Until now three wine marketing projects were accepted by the Commission, that concern Tokaj, Villány and Szekszárd regions.

We have to mention as well the promotion investments realized by companies in relation with individual strategy of enterprises. In general, it is higher and more efficient than the collective programs in point of view of enterprises. On the world wine market, the New World producers spend the highest proportion for marketing from their turnover that reaches 10%, in Europe this proportion is much more lower (2%)[3] and Hungary is even more behind in marketing investments (0,5%), which generates a great handicap on the world wine market. In order to solve this problem, with the

[3] ONIVINS

consensus of the professional organisations, the marketing charges or "cotisation" (8 Ft/liter) that serves to the financement of collective promotional or marketing actions (60%) and to the reinforcement of quality control of the released wines (40%).

### 1.2. Wine quality improvement and supply of enterprises

On the world wine market according to the two different schemes of organization, the question of qualitative production, and the production complying with different market segments is organized diversely *(Saulpic, Tanguy, 2002)*.

In case of the New World, the supply policy of enterprises is based on the integration or suppliers' selection in function of the specificity of products. The quality of wine is represented by brand name according to the market segment. Brand name is owned by enterprise, which makes wine blending, ageing and marketing. The grape-vine production and the quality of raw material are entirely controlled by enterprises without leaving rent for wine-growers: in case of appellations they try to obtain the propriety of vineyard and assure in this manner their supply of qualitative raw material. The enterprises develop a large product scale and position their wines in every segment of market especially in case of export supported by important marketing investments. This strategy appears efficient: the most important brand names are owned by New World companies and it means challenge to the traditional operators of world wine market (on the British market among the first ten brand 8 belong to the New World enterprises *(César, 2002)*.

In case of European geographical indication system, the interdependence of individual strategy of Producers and Merchants/Enterprises with the collective brand name of appellations causes some troubles, where the vineyard of geographical zones belongs to Producers. This organization form generates several problems *(Giraud-Héraud et al, 1998):*

- Free-riding in relation with collective reputation of appellation, while Producers have no responsibility in marketing of final products, they can try to limit their effort in qualitative production deriving benefit from reputation of appellation. Consequence: supply limitation of qualitative raw material available in the appellation and endangering of reputation of collective brand (geographical indication - GI).
- Under-investment by Merchants in the promotion, distribution and commercial relations of the quality sign (GI), where Merchants are not owners. Consequence: direct sale development by Producers on the basis of commercial effort of Merchants, concurrence between direct sale and Merchants marketing.
- Under-investment in qualitative production in the vineyard. Consequence: failure of contractual relationship, substitution of bilateral contract with spot market of quality wines or grape-vines. Producers lose the initiative to engage to the more expensive strategy (e.g. vintage limitation) while they do not deal with marketing of final products.

To avoid the quality and opportunism problem in the relationship of Producers and Merchants, and to assure the quality improvement, the hybrid organization – contracts on a medium and long term – could represent an efficient solution based on the theoretical framework proposed by new institutional economics. Several recent papers deal with the questions of contractual relationship in the agro-food and especially in the wine sector. They confirm (*Atkin, Affonso, 2004).* that the percentage of long-term contracts continues to increase in the wine industry. Wineries combine supply base reduction efforts with the use of longer agreements to reduce transaction costs and gain the benefit of closer relationships, such as improved quality and design assistance. Contracts between wineries and wine-growers are typically multiyear contracts that stipulate certain activities to assure quality and consistency. Price changes can depend on the county crush report. In case of the appellations, *(Gaucher, Soler, Tanguy, 2001, Giraud-Héraud, Sauler, Tanguy 2002)* several studies deal with the problems and particular features of incentive the wine quality in framework of long term contractual relationship between wine producers and merchants. In their model, they show the efficiency and the interest of contractual organization in the incentive of investments realized by Merchants in marketing and Producers in the vineyard. Furthermore, different papers are oriented to the quality development in the vertical relationships of the food-industry sector *(Hollander et al., 1999; Goodhue et al., 2000)*, and treat the questions of quality wines production *(Giraud-Héraud et al., 1999, Montaigne, Sidlovits, 2003, Martin, 2003, Rousset, 2004)*. Generally, they ask the question in terms of the transaction costs theory reasoning the alternative and the choices between the market and the vertical integration. The solution proposed to solve this problem in this paper resides in the medium or long term contracts, where purchasing prices of raw materials (bulk wine, must or grape) are on one hand indexed on the spot wine market prices and on the other hand indexed to the final price of the bottle of wine, thereby sharing the risks and rewards with winery partners (*Thomas et al, 2004)*. Therefore, the prices defined in the contracts are higher than the market price but they follow the price variation of spot market where the difference covers over-costs associated to quality improvement.

This question is more sensitive in Central and Eastern Europe (CEE) *(Zacharieva et al, 2001)*, where the opportunism problem is more accentuated because of the property situation, lack of investments, lack of confidence and speculation on the spot market.

### 1.3. Typology of the vertical coordination in the Hungarian wine industry

In Hungary, the appellation system is relatively developed regarding the other CEE countries, but with accession to the EU, the actors have to take consideration the strategy of geographical indication regarding of its problems mentioned to above.

In Hungary, we can find several models of organisation considering supply system and distribution policy of enterprises.

#### *1st scheme: owners and development of signature (brand names)*

In this group we find the companies, which could obtain vineyard and cellars as well, during the privatisation (like Hungarovin-Törley, Danubiana, Disznókő, Hétszőlő, Orémus, Csányi Pince, Varga Kft etc.) or some vineyard owners formed a group to make wine producer-merchants enterprises like Hilltop. These are the greatest Hungarian wine producer and merchant enterprises. Mostly, they function with foreign capital (German, French, Spain FDI) or with investments of Hungarian investor groups. They produce their large part of grape-vines (50-90%) that they transform and bottle, thus they assure their supply of raw material and control entirely the quality. In some cases, the companies outsource viticulture. These enterprises create their own signature (brand name) beside the indication of appellations.

These companies hold vineyards (20-900 ha) in several appellations that cover a large part of their supply; the rest is bought from the producers of appellations with medium or long-term contracts or purchased on the spot market depending on the requested quality. Seeing that, there is a surplus on the grape-vines market, the companies can choose the better offer and supplier regarding the price and quality ratio. That is why, in several appellations, they are the most important merchants, and generally they determine one-sidedly the purchasing prices of grape-vines.

With the exception of the enterprises of Tokaj Region (they are rather specialised), the companies produce a large scale of wine, from table wines to high quality wines. In their case the large and regular investments in quality development, in technological modernization and in distribution permit to elaborate the high quality wines and to adapt their product system to the market demand. The investments are several sources: in case of the foreign investors it takes part of their direct foreign investments; producer's own investment, before EU accession SAPARD (50% producer investment – 12,5% financed by Hungarian State – 37,5% financed by EU), after EU accession Agricultural Development Operative Programs with 50% of EU finance.

These merchants are present in every type of distribution channels, where the hyper- and supermarkets take up the first place, while they have become the most important distribution form with their prosperity since the end of '90 in Hungary. This distribution channel has become essential, considering that it represents 65-70% of retail wine trade on Hungarian market. Some of the large companies market their wines under retailers' private label beside their own brand names. 10-15% of the totality of their wine are distributed with own label of retailers. For these enterprises the presence in the other channels of distribution is very important: bistros, pubs, inns, restaurants, wine-boutiques.

Wine export represents an essential circuit for them; they are among the most important Hungarian wine exporters who target the German, Britain, Scandinavian, other CEE and Russian market. In general they possess a relatively well-organised distribution network in domestic and foreign market.

***2nd scheme: coordinators and cooperatives***

This group recovers the enterprises that have not enough own vineyard to cover the majority of their raw material supply, but they own cellars obtained during the privatisation, transformation, vinification and bottling equipments. It is not allowed for companies to buy land, it is limited by Hungarian Land Act since 1994, for this reason, they are obliged to purchase grape-vines from the wine growers of appellations who possess vineyards. These are large companies (Egervin, Szőlőskert Co, Weinhause, Sopvin, Tokaj Kereskedőház Co, Ker-Coop, Kecel-Borker etc.) that play an important role in the coordination of wine growers in several production regions. The coordination is realised by medium or long-term contracts or annual contracts with a stable group of suppliers. These enterprises function with foreign or Hungarian capital.

We have to separate this group to 3 sub-groups in function of their organization and strategy:

1. sub-group: These companies produce a large scale of wine as well, from table wines to high quality wines like the 1st group of merchants. In this case as well considerable and continuous investments have been realised in quality development, technological modernization and wine marketing. They create their own mark, which is mentioned beside the geographical name of appellation. They are among the most important quality wine producers and merchants on the domestic and export market. Their commercial relations and distribution are organised in the same way as the merchants of 1st group.

2. sub-group: These enterprises are the reorganised cellar of former cooperatives with management buy-out or employee privatisation programs. They have not enough capital for the development, therefore their technology is relatively obsolete. Their financial situation is quite weak and they risk bankruptcy, but they have an essential role in the coordination of wine-growers in several regions, but particularly in the Kunság Region of Great Plain. They produce mainly table and country wines.

3. sub-group: Cooperative cellars: in certain regions (Kunság, Eger, Szekszárd), they play fundamental role in the organization of wine production. Regarding the atomized system of wine-

growing in Hungary, the cooperative cellars should represent a wide range of the Hungarian wine production, but because of the unpleasant memories of collective property in socialism, the wine-growers are reticent to form new type cooperatives. After EU accession, with price fall of grape-vines and decreasing grape-vines demand of merchants, the producers recognize the necessity of collaboration and they form cooperatives or union of cooperatives. In this case, the investments in grape-vine transformation, technological equipment, wine distribution and marketing require large investments where the lack of financial resource, in spite of European development programs, can block the success of organisation.

***3rd sheme: independents***

In this group we can find the independent small and medium sized enterprises and family cellars which have been developing step by step since the beginning of 1990's. They founded wine production on their own vineyard obtained during the land redistribution and privatisation or they (the members of family) bought up land adapted for wine-growing and created new plantations. The size of these enterprises varies between some hectares and 120 ha. They strive for independence in raw material supply and to control entirely the quality of grape-vine. Therefore, they buy less and less grape-vine from the little wine-growers and withdraw from the coordination in order to solve the quality problems of raw material.

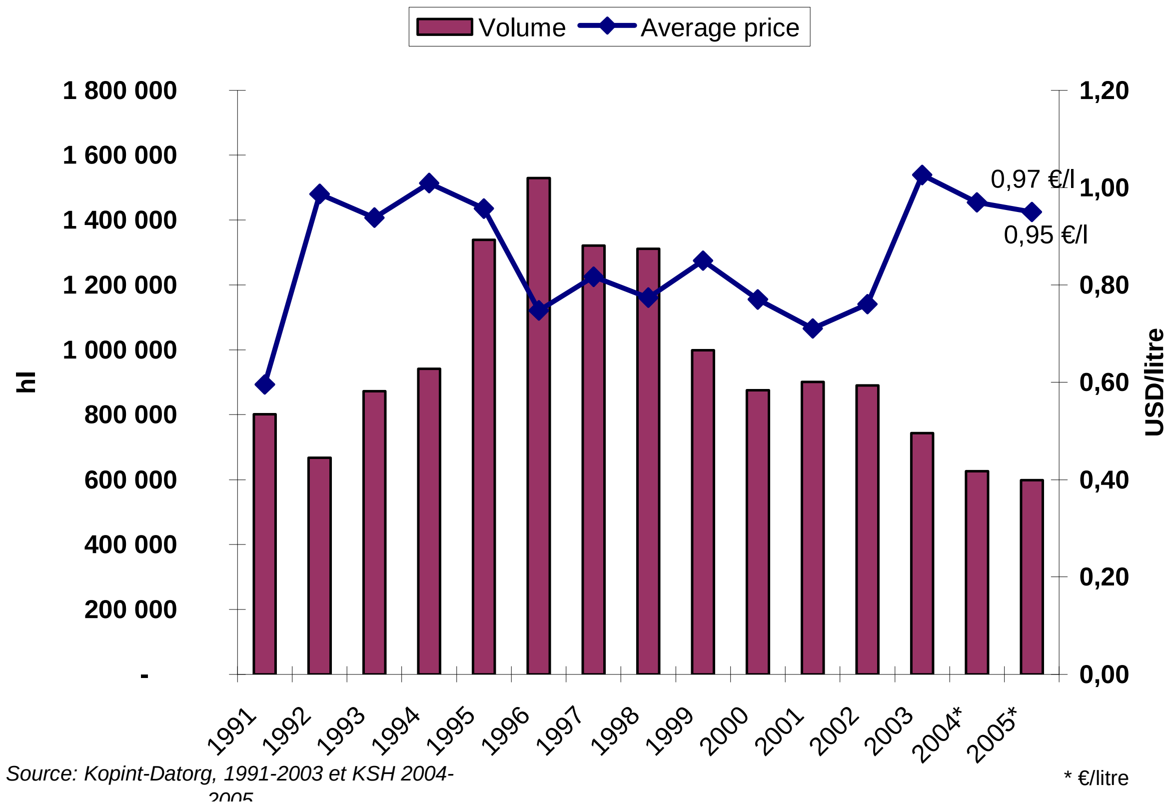
The capacity of their wine production is rather variable, it ranges from 50 hl to 10 000 hl of wine. They work with modern wine making technology and invest regularly in the quality wine production. Since their sources of investments are very limited, they realise the modernization and technological development step by step: p.ex. one year they buy the new pneumatic wine press, next year the change the stainless steel tanks, then they install the bottling machine, etc. Often these investments are realised with help of state or European subsidies (SAPARD, agricultural and rural development programs).

They are specialised in quality and high quality wine production, they aim at "niche" and luxury products where the name of the owner of cellar is utilized as brand name (Tiffán, Thummerer, Frittmann, Figula, Gere, Bock, Polgár, Jásdi etc.) Their products are positioned firstly in the gastronomic distribution channels and wine boutiques, but we can find these products in the hyper- and supermarkets as well, while this distribution circuit has become the most important in the wine commercialisation. There are some enterprises that export but because of the little volume the main market still remains the domestic market where the direct marketing of wine becomes very important. We have to mention the direct wine sale at cellars, which represents an essential distribution form. These cellars take part of wine rout and open cellars programs; they deal with reception of visitors, tourists, wine tasting and entertaining. Often next to the cellar we can find a tasting room, guest-house and restaurant. The reception is a complementary activity besides wine production (Vandecandelaere, 2005).

As a result of quality wine policy of Hungarian wine-making enterprises, we propose to analyse the market performance of Hungarian wines in the next unit.

### 1.4. Hungarian export markets

During last 18 years, the operators of Hungarian wine sector had to face not only to the consequences of property right changes but to the modification occurred on wine markets and in relation with export partners. For the period of transition, Hungary lost a large part of export markets in the Eastern Bloc. Thus, wine export fell from 2.2 million hectolitres to 660 000 hectolitres. Over a short period, between 1989 and 1992, Hungary lost 70% of its wine-market volumes. Therefore, the actors had to find new markets to sell off the surplus generated on the domestic wine market. Considering the pre-existent commercial relations, Hungary oriented to the European Union and particularly to Germany.



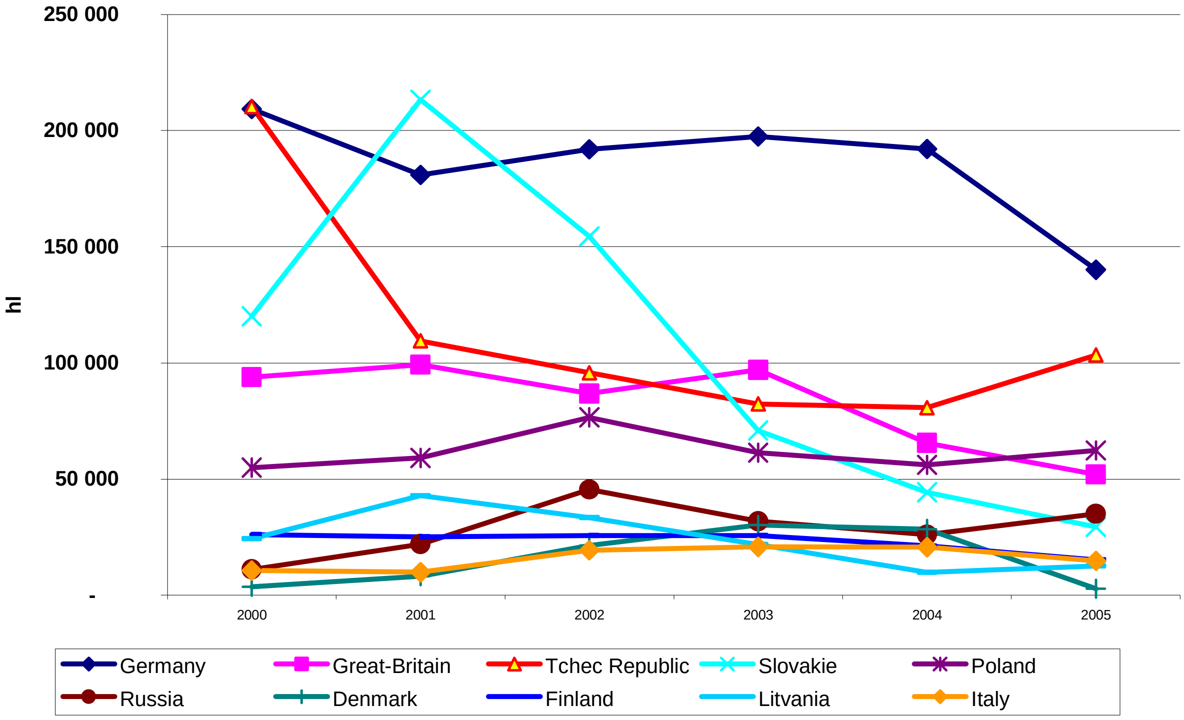

*Graph. 1. Volume and average price of Hungarian wine export*

With reorganization of the wine sector at the same time, with privatisation, with the foreign and domestic capital investments, the actors emphasized their contacts with the European countries. For adaptation to the new markets, the Hungarian wine producers had to modify their strategy from the mass table wine to the higher quality wine production. The Ex-Soviet countries remained the most important buyers of Hungarian wines, even though the collapse of the Eastern market.

After 1992, the Hungarian wine export increased again, this rise kept on a period of 4 years. In 1996, volume of wine export passed at 1.5 million hectolitres, but this tendency has returned with a considerable decline over the 10 last years. *(Graph. 1.)* The volume of wine export has fallen with 61% (the value has decreased with 51% from 130 million $ to 56 million $) and it represents 598 000 hectolitres in 2005. Mainly the Russian (-50%), Ukrainian (-60%), Austrian (-60%), German (-34%) Czech (-20%), British (-40%) and Baltic (-50%) markets have restrained during 5 last years (*Graph. 2*).

Over the last period, the structure of Hungarian wine export has changed as well. Hungary has lost again its export market, especially in the ex-Soviet countries. Actually, Germany, Great-Britain, the Czech Republic, Slovakia and Poland are the most important destinations of the Hungarian wine export. It means that 80% of wine export is realized in the enlarged EU (27).

In spite of the quality development in the Hungarian wine production and marketing investments of promotion, the majority, 76% of Hungarian wines are positioned under 1 €/litre, which means the basic wine category, 19% can be found between 1-3 €/litre (popular premium) and only 5% of export wines are positioned over 3 €/litre average price (premium). Of course, it means the average; the price position is a rather variable one according to the market, distribution chain and wine specialties. The most valuable markets are the American, Canadian and Japanese market, where e.g. Hungarian quality wines are positioned in the HORECA between 13$ and 90$/bottle, Tokaji wine specialties 60-200$/bottle (ikon category). We have to underline that this price category represents a limited volume (1%) of Hungarian wine export.




*Graph. 2: Evolution of the Hungarian wine export in case of the most important destinations*

### 1.5. Domestic market

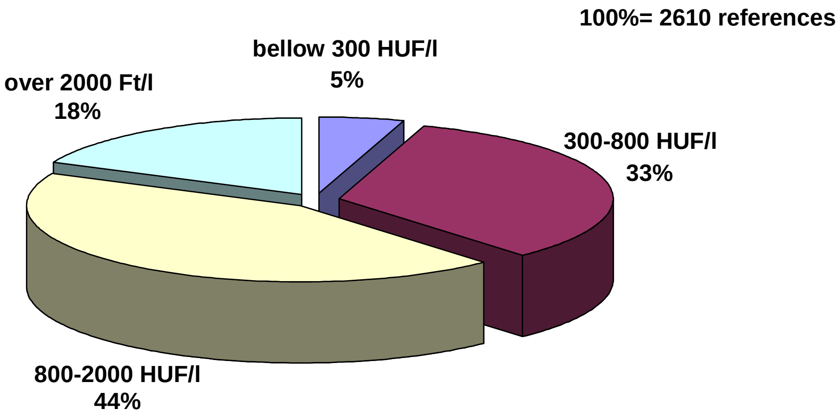
The domestic market remains the main market of Hungarian wines. 75% of Hungarian wine production is distributed on the domestic market (3 million hl/year) while Hungary is a traditional wine consumer country where the individual average wine consumption is relatively high, it attains 33 litres /capita/year. The Hungarian wine consumption level is very close to the European average (34 litres/capita/year).

Considering the quality of wine, we can conclude from the statistics of wine sales that the table and country wine dominate on the domestic market with 60%, quality wines (including Tokaji and Egri specialities) represent 40%. These ratios are relatively stable during last 5 years.

Among the distribution channels, hyper- and supermarkets are the most important in the Hungarian wine retail system. It has become the principal circuit with installation and dynamic development of international retail chains on the Hungarian market, which has changed radically purchasing behaviour, wine supply in the stores and special requirements facing producers and suppliers in case of wines as well. Actually, this circuit represents around 65-70% of retail wine sales. Unfortunately, the statistics concerning volume of wine sold in the retail chains are not available; therefore we can base our analysis on the expert opinion. However, some recent papers *(Kisari, Sidlovits, 2004)* deal with the analysis of wine supply and price positioning of Hungarian wines in the hyper- and super markets on the domestic market. According to this study, quality wines psr. constitute the majority of wine supply, 86 % of references, country wines (9%) and table wines (5%) compose the rest but in volume of wine sales probably the table wines take first place.

Concerning the price of Hungarian wines in the hypermarkets, the cheapest category, bellow 300 HUF/litre (1,2 €/litre) represents 5% of wine supply, where we can find mainly the wines of Kunság Region. This is the most price-sensitive category, where consumers look for the cheapest wines. The next price category, 300-800 HUF/litre (1,2-3,2 €/litre) is relatively large, we can find in this category 33% of wine supply. The largest is the price category of 800-2000 HUF/litre (3,2-8 €/litre) with 44%, and finally the highest price category, over 2000 HUF/litre (8 €/litre) gives 18% of wine supply. In the higher categories we can find the quality wines of Eger, Szekszárd, Tokaj and Villány appellations, the prestige products of large companies and independent cellars. We have to underline that the wine supply is very wide in the Hungarian super- and hypermarkets, but the price/quality ratio is not well defined in certain price category, which can result confusion in the mind of consumer. Therefore, the professional should make effort to clarify better and create a more transparent wine supply on the domestic market.

We have to mention that with high competitiveness among the suppliers and development of retailers' private labels, the margins become more restrained and it results strong pressure on supplying prices and consequently on the raw material prices as well at the level of grape-vine production. Furthermore, the retail chains demand several types of contribution and fees (store opening contribution, listing and shelf charges, marketing fee, fix bonus, progressive bonus and retail chain development contribution) that appear as withdrawal of about 50% of listing price of wines and it means high costs and enormous charge for wine suppliers and producers.




*Graph.3. Wine supply by price categories in the Hungarian super and hypermarkets.* *Source: Kuti Bt. Cit in Kisari-Sidlovits (2004): A magyar élelmiszer kereskedelem bor- és pezsgőválasztéka*

The analysis of general market context of Hungarian wines shows that, in spite of the quality development and large investments in wine sector accompanied by the regulation and subsidy system, that the actors have difficulties to well valorise their products particularly on the export markets. The situation is slightly better on the home market after a period of overproduction (2004-2005), from 3 years we register low harvest volume, but the predominance of retail chains in the wine distribution puts pressure on price of wines, which influence all over the wine production sector. Therefore, it seems interesting to examine in the Hungarian wine sector how wine producer enterprises organise their grape-vine supply, with which conditions, and how they motivate the wine-growers to produce qualitative raw materials through contracting relationships.

It general, the price positioning of wines determines directly the vertical coordination forms of vine provision of merchants. In case of basic wines (on the basis of their price and not on the basis of the EU regulation category), the market becomes the most important organisation form of vine supply (less transaction costs), while in case of higher positioning (super, ultra premium or ikon), the more integrated organisation forms are more frequent, like the total integration (hierarchy or enterprise) or the hybrid organisations with long term contracts (designed with well defined, calculable price definition that give a motivation for vine producers to the quality improvement). Therefore we can postulate that in spite of the reinforcement of the quality wine production (as regulation category) and the rather separated vine production and wine making, the hybrid organisations are closer to the market organisation than to the real long term relationships.

## 2. CONTRACTING RELATIONSHIP AND CONTRACT DESIGN IN THE HUNGARIAN WINE SECTOR

In the Hungarian wine market we analysed the contracting relationship and the attributes of contracts of 12 enterprises that play essential role in the coordination of wine-growers in one or several Hungarian wine production regions. Among the analysed enterprises, there are 8 large companies and 4 small and medium size enterprises that introduce the contracts on long or medium term with wine-growers in order to assure their grape-vine supply.

The contracts on medium and long term consist of several clauses specifying the transaction conditions. In the point of view of the incentive issues, the most important characteristics of the contract analyzed can be classified in 5 categories *(Ménard, 2002).*

1. The first important question is **the number of parties** included in an arrangement. Because of the fragmentation of grape-vine production and supply of raw materials, the great corporations and the small enterprises as well make multilateral agreements. In case of the companies, the number of supply partners can be as many as several thousands (e.g. Tokaj Kereskedőház with 2800 producers in Tokaj region) who are, in general, the little wine-growers or sometimes the cooperatives. The small or medium sized enterprises coordinate 30-100 producers.

These relationships are more complex (in comparison with a bilateral relationship) and characterized by a relatively high dependency of the partners. Theoretically, this is the result of the mutually dependent specialized investments: on one hand, realized by the merchants in the grape-vine transformation and wine making equipment for the wine quality development, in the commercial relationship with the hyper – supermarkets and in the creation of brand name; in the other hand realized by the producers in the vineyard (qualitative varieties, plantation design, pruning, canopy management system) and in the cultivation (machines, plant protection, vintage limitation, integrated viticulture practices etc.).

The complexity of relationship is the result of the fact that the large number of little wine-growers is not well-organized and their negotiation force is very weak face to the merchants (enterprises). Therefore they are very defenceless in the renegotiation of contracts with merchants, particularly in case of price definition which should be the heart of the contracts and the motivation of qualitative raw material production.

2. The second essential point of the contracts is the **duration of agreements** because there is a close relationship between duration and intensity of coordination *(Dyer 1996, 1997 cit. in Ménard, 2002).* The duration of inter-enterprise relationship depends on the development of specific assets linking to the transaction, because these investments realized by the partners can be profitable with the continuous relationship (*Saussier, 1999)*.

In Hungary, the general duration of contracts is one year or 3 years. There were some attempts to make longer agreements (Szőlőskert Rt.- Mátra Region and Egervin Rt), but they ended in failure because of the large fluctuation of grape-vine volume, their quality and their prices. We have to mention that the majority of great companies of wine regions are the reorganised form (with foreign or domestic capital) of former state firms or co-operatives of socialism period and in spite of their privatisation they maintained their former role of coordination of wine-growers in one or several appellations. So their relationship with the wine-growers has a great tradition and a relatively stable supplier circle for several decades where a fluctuation was registered in the transition period with the creation of independent cellars, but for 10 years, the suppliers of wineries have become relatively stable (with a little fluctuation of 5%) and the market and legal circumstances have changed that induced new qualitative requirements.

3. The third chief elements are the **detailed requirements** that form the contracts in hybrid arrangements. The first remarkable characteristic is that there are some generalities in the contracts and there are no many details, so it rests a framework. In fact these agreements are not real contracts like the medium or long term contracts that we can find for example in France (in Champagne, Bourgogne or Languedoc regions) or in the New World wine producer countries. The agreements are rather the declarations of collaboration intention between producers and merchant but it reflect some elements of coordination. *Table 2.* shows some typical organisation forms in the Hungarian wine sector, where we detailed the characteristics of the relationships and the attributes of contracts.

In case of medium term contracts, the agreements are completed with an annual grape-vine supply contract, which defines the volumes, quality and price of delivered grape-vines. The medium term contracts define only the general requirement in relation with state of health and purity of vintage and the respect of Hungarian Wine Act concerning the quality, which contains only the minimum requirements concerning the quality wines. The agreements do not contain stricter requests than the general Hungarian regulations; there are no specific technological charges or special harvest limitation (according to the Wine Act, maximum yield for quality wines: 14t/ha) except in case of specialities such as late harvest, "bikavér" or "aszú" wines. However, the large companies give technological assistance or they make the plant protection works as a service for the wine-growers in order to assure the needed state of health, purity and quality of raw material.
While the wineries define every year the most important elements of agreement: volume, quality and price, these factors are not predictable, therefore this relation carries lot of incertitude. The delivered volume depends on the wine year; it is largely influenced by weather changes and overproduction problems. Therefore the wine growers can not be sure that they can sell the all of their grape-vines to the merchant. The quality categories of receiving wine-grape are defined every year several weeks before vintage in function of the characteristics of wine year (harvest prevision concerning volume and quality). In case of selected parcels (in the contracts of Szőlőskert Co. or Egervin Co.), the quality control is realised by the agricultural engineer specialised in plant protection and there are controls

with test harvest at the moment of vintage and delivering, concerning purity, state of health, and sugar contents of wine-grape. In this case the wineries agree to purchase the produced grapes.

The crucial factor of medium contracts is the price definition of raw material seeing that this is the first element to motivate wine-growers to respect the partnership and to carry out the contract. Normally, in a medium term relationship the price of raw material is fixed or well-defined for 3-5 years with price index formula, the price changes are relatively predictable, the major price fluctuation is limited and the special or high quality products are paid at a price higher (with min. 20-30%) than the spot market price. The difference between market price and contract price covers the higher costs of the qualitative raw material production. We can find several examples in European (Champagne, Bourgogne, Languedoc region) and New World examples for this type of purchasing price definition for medium or long term.

In Hungary the price indexation does not exist. The purchasing price, in spite of medium term agreement, is defined every year in function of variety, colour and quality (based on sugar contents) of wine grape, harvest previsions and market conditions, so volume of stock, overproduction or lack of raw material, price of final products influence the price announced by merchants. While in the wine regions there are only some large companies which deal with coordination, in general, the merchants wait for the price announcement of the largest enterprise and they adjust their prices to this level. In order to “motivate” wine growers, the merchants propose slightly higher prices – by 10% - than spot market prices in case of grape-vine for quality wines. The specialities such as late harvest, shrivel grape-vines, “aszú” berry – grape with noble rot, basis varieties of “bikavér” or international red varieties are much better remunerated – from 50% to tenfold price- than generic quality. It exists a slight price differentiation by variety, colour or sugar content of grape-vine, but the wine-growers can not calculate every year with this differentiation because a large variation can be found in this field as well: for instance during 3 years the red varieties had higher price with 30-100% than white varieties, in 2004, this differentiation disappeared because of the overproduction crisis. Thanks to the low harvest volume of the recent period (3-3 million hl in 2005 and 2006), the vine prices begin to climb: in 2006 they approach the price level of 2003.

During price definition there is no real negotiation with wine-growers of appellation. The merchants announce their prices and the wine-growers can decide that they would like to sell their products to the merchants or not. While there is a great competitiveness among the suppliers of merchants and there is an oversupply on the grape-vine market, the wine-growers have no other choice. We have to mention as well, the psychological effect in the price definition: merchants try to push down the purchasing price, while their margins are rather restrained, and try to minimize the raw material price. They overestimate the volume of the harvest prevision in case of average volume of harvest as well to support their announced low purchasing prices. It happens that the prices offered by merchants do not cover the viticultural costs. On the other hand, the wine-growers, while their negotiation position and their collaboration willingness are rather weak, are not able to safeguard their interest and elaborate an agreement winner-winner for both sides of relationship. The problem is that with this purchasing price system, no certainty on price and quality of grape-vine is settled and the wine-growers are rather exposed and under-motivated in this relationship. In this relationship the market possibility means the motivation for wine-growers.

The small and medium size wineries specialised in high quality products, working in coordination with wine-growers, are excepted of above-mentioned general rules. Some of them do not utilise written contract, they work with oral agreement where the confidence and the notoriety of private cellar or the name of owner mean the basis of relationship. They make parcel selection to find the best *terroir* and buy the highest quality of raw material. They introduce special technical charges and strict harvest limitation. They propose higher price with min. 30% than the spot market, remunerate better their suppliers and give premium subsequently if the wine-growers deliver their grape-vine with high quality the year after as well. Consequently, in this relationship the purchasing price stays relatively stable.

4. The forth, principal characteristics of the hybrid organization, are the **adaptation clauses**. It assures a possibility for the mutual adjustments with the renegotiations of the agreement. In Hungary the renegotiation of contracts rest unilateral; the merchants declare one-sidedly the purchasing conditions (almost every year). So without negotiation, merchants can reduce purchasing prices, until 50%, from one year to another and, with lack of collaboration and negotiation force of wine-growers, the merchant exploit this situation. From this generality we can find some exceptional cases (Eger or Mátra Region), where the merchant makes negotiations with a wine-grower group (new type of cooperation for grape-vine sale). In Hungary it is not general that the wine-growers demand a detailed study to support their negotiation point of view as in France *(Montaigne, Sidlovits, 2003).* Therefore the asymmetrical information problem is very present.

5. Fifth crucial characteristic of medium and long term contract is the **incompleteness**, but there are some clauses dealing with safeguard in case of the denunciation of the agreement such as indemnity of breaking for the generally unexpected or unforeseen events. In Hungary we can find these clauses in case of three-year contracts (Szőlőskert Co. and Egervin Co.), but in the annual contracts the partners do not introduce safeguard clauses, which contributes to increase of incertitude in the contractual relationship.

In summary, the Hungarian short and medium term agreements are very different from the usual contracting relationships that are typical in the European wine sector[4]. In case of Hungarian hybrid forms, the problem of transaction costs are not solved, the agreements do not reduce the incertitude in relation with execution of contracts and do not give enough motivation to the wine-growers to develop the quality and realise investments in qualitative production. Their only motivation is that they can deliver their products to merchants, but the price, the execution of payment stay very-very uncertain. This policy of supply can be influenced on the one hand, by the market performance of merchants, in which segment of market and for what price they positioned their final products on the export and the domestic market and on the other hand, by their financial structure and results.

[4] However in France, the upstream contract relationship between grape grower and winemaker, does exist only for a reduced part of the production, excepted in few regions as Champagne, Sables area and some private wineries in Languedoc. In fact the general model of coordination is integration, i.e. wine making in the wine estate or in the cooperative cellar, considered by the law as a part of the wine estate.

*Table. 2.*

**CARACTERISTICS OF RELATIONSHIPS**
**BETWEEN WINE-GROWERS AND WINE-PRODUCER-MERCHANT ENTERPRISES**

| Relationship between Vineyard and Merchants | | | | | | | |
|---|---|---|---|---|---|---|---|
| | **Etyek, BB, Tokaj, Szekszárd, Villány, Sopron, Eger, B-füred Region** | **Mátra Region** | | | **Eger Region** | | **Balatonfüred -Csopak Region** |
| **Characteristics** | **Henkell&Söchlein (HUNGAROVIN-Törley et BB SA)** | **Szőlőskert SA - Nagyréde** | **Danubiana SA.** | **Agro-Vitál SARL** | **EGERVIN SA** | **GIA SARL** | **Winery FEIND** |
| **Type of relationship** | Total integration (70%) – outsourcing of grape production and purchasing in spot market (30%) | Contractual | Contractual and integration | Oral/written agreement and integration | Contractual | Oral agreement and integration | Integration |
| **Controlled surface** | 3600 ha (960 ha Etyek, 56 ha Tokaj + 2500 ha BB + others) | 1000 ha | 283 ha | 30 ha | 600 ha | 90 ha (where 50 ha own) | 110 ha |
| **Land and vineyard ownership** | • State propriety<br>• Used by contract of lease (contract for 20 years)<br>• Vineyard owned by HUNGAROVIN-Törley | • private propriety of natural persons<br>• owned or used (with lease) by wine-growers (grape-vine producers) | 1.) State propriety – contract of lease<br>– vineyard owned by company<br>2.) private propriety of natural persons:<br>– owned or used (with contract of lease) by wine-growers | • private propriety of owners of enterprise<br>• owned or used (with lease) by wine-growers (grape-vine producers) | • private propriety of natural persons<br>• owned or used (with lease) by wine-growers (grape-vine producers) | • private propriety of natural persons<br>• vineyard owned or used (with lease) by wine-growers (grape-vine producers) | • private propriety of owners of enterprise |

| Characteristics | H&S | Szőlőskert SA - Nagyréde | Danubiana SA. | Agro-Vitál SARL | EGERVIN SA | GIA SARL | Winery FEIND |
|---|---|---|---|---|---|---|---|
| **Subject of contract** | • Out-souring of viticulture<br>• Purchase of grape and bulk wine | Supply of raw material and agro technical services | Supply of raw material | Supply of raw material | Supply of raw material and agro technical services | Supply of raw material | |
| **Type of contract** | Annual contract of grape or bulk wine purchasing in order to complete its production (30%) | Declaration of coordination for medium-term + annual contract of grape purchasing | Annual contract of grape purchasing | Annual contract of grape purchasing | Declaration of coordination for medium-term + annual contract of grape purchasing | Oral agreement | |
| **Products** | Fresh grape and bulk wine | Fresh grape | Fresh grape and bulk wine | Fresh grape | Fresh grape | Fresh grape | |
| **Volume** | Defined in the contract | Defined in the contract | Defined in the contract | Defined in the contract | Defined in the contract | Oral agreement | |
| **Quality** | • state of health<br>• purity<br>• sugar degree (alcohol)<br>• yield<br>• variety | • state of health<br>• purity<br>• sugar degree (alcohol)<br>• yield<br>• variety<br>• parcel for late harvest | • state of health<br>• purity<br>• sugar degree (alcohol)<br>• yield<br>• variety | • state of health<br>• purity<br>• sugar degree (alcohol)<br>• yield<br>• variety | • state of health<br>• purity<br>• sugar degree (alcohol)<br>• yield<br>• variety<br>• origin(wine community) | • state of health<br>• purity<br>• sugar degree (alcohol)<br>• yield<br>• variety<br>• limited yield<br>• parcels (terroir) | |
| **Quality control** | • following the parcels realised by company<br>• technical works and plant protection realised by company | • following the parcels realised by company<br>• technical works and plant protection realised by company | • following the parcels realised by company<br>• technical works and plant protection realised by company | • suivi les parcelles réalisé par la société | • following the parcels realised by company<br>• technical works and plant protection realised by company | • suivi les parcelles réalisé par la société | • following the parcels, technical works and plant protection realised by company |

| Characteristics | H&S | Szőlőskert SA - Nagyréde | Danubiana SA. | Agro-Vitál SARL | EGERVIN SA. | GIA SARL | Domaine FEIND |
|---|---|---|---|---|---|---|---|
| **Price** | • Defined by wine year, by variety and quality | • Defined by wine year, by variety and quality<br>• Guaranteed price (purchasing price of previous wine year)<br>• Prime for late harvest | • Defined by wine year, by variety and quality | • Defined by wine year, by variety and quality | • Defined by wine year, by variety and quality | • Defined by wine year, by variety and quality<br>• Higher (+30%) than the regional average price<br>• Prime (40-50 HUF) for the continuous suppliers | |
| **Duration** | annual | 3 years + annual | annual | annual | 3-5 years + annual | indefinite (annual) | |
| **Renewal** | With offer of company | With intention of partners and offer of company | With intention of partners and offer of company | With intention of partners and offer of company | With intention of partners and offer of company | With intention of partners | |
| **Safeguard** | - | • sanction of non-execution (indemnity of 20% of total value)<br>• sanction of payment in default | - | - | - | - | |
| **Arbitration** | - | without accord amiable, submetted to Commercial Tribunal | - | - | - | - | |
| **Degree of coordination** | ++++ total integration | +++ quasi-integration | ++(++) coordination and integration | ++(++) coordination and integration | +++ quasi-integration | ++(++) coordination and integration | ++++ total integration |

## 3. FINANCIAL PERFORMANCE OF HUNGARIAN WINE MERCHANTS

We analysed financial performance of 41 Hungarian wineries in order to find explanation for their coordination policy. Among the studied enterprises we can find 10 from the interviewed wineries as well. The source of data is the AMADEUS database (Enterprises Database of the EU). Seeing that we had no possibility to create our samples, because the Hungarian enterprises are rather reticent to declare their financial information, therefore we utilised the information existing in AMADEUS. With analysis of this database according to the essential index, we present the value creation of Hungarian wine industry and we clarify the general situation of Hungarian wineries.

In our database we can find the most important 40 enterprises and 1 cooperative, where 12 wineries work wholly or partly with foreign capital. We study the period of 1997-2002/2003 and we make a comparison with French enterprises and cooperatives for the period of 1999-2001, because a recent study *(Couderc, Remaud, 2004)* realised by Agro-Montpellier and ONIVINS, present in detail the financial typology of French wineries. (Annex I)

The representativity of the analysed sample is estimated reliable: the sample of enterprises gives 70% of the turnover of Hungarian vine and wine sector with 52,5 billion HUF (209 million €). Among the enterprises we can find the essential wine and sparkling wine exporter wineries (Henkell&Söchnlein, Szőlőskert, Hilltop, Danubiana, Varga Ltd etc.). Our sample concerns the wineries whom turnover is superior to 75 million HUF (300 000 €).

The average turnover of Hungarian enterprises (2,29 billion HUF equivalent to 9,1 million € in 2003) doubled between 1997-2003, at the same time the average export turnover decreased but in 2002 rose again; it rested around 653 million HUF (2,6 million €). In general, 30% of revenue issue from the wine export which tendency is relatively stable, but in case of great exporter companies (such as Danubiana, Hilltop, Szőlőskert, Öregbaglas, Eszes Ltd, Boranal) this proportion attains 60%. In comparison with French cooperatives and enterprises (in 1999 and 2000), the Hungarian wineries' average operating revenue are far from the French one with 45-53% regarding cooperatives and 72-75% in case of merchants enterprises. We find the same results in case of average wine export revenue.

The average added value reduced with a large fluctuation (9-33% of turnover) until 2001, actually it attains 534 million HUF (2,13 million €) after increase of two years. This level is slightly higher (with 10%) than French cooperatives but much lower than the added value creation of French merchant enterprises (with 30-64%). The level of total assets doubled between 1997 and 2003, but it needs permanently 120 € to realise 100 € of operating revenue due to the investment needs in wine production and this need to capitalisation seems to continue. This level is much inferior of the total assets of French cooperatives (49-55%) and French enterprises (67-71%). The average working capital raised 30% during the studied period and it represents high level 50-75% of turnover, due to the high level of stocks (40-56% of turnover) and debtors. It shows as well the high claim of capital and financing of wine production. In case of French enterprises, this level is around 30% of enterprises revenue *(Couderc, Remaud, 2004)*. It shows as well that the Hungarian wineries are more indebted and they need more working capital to finance their activity.

The average profit of wineries was diminishing until 2000 and it shows a large fluctuation. The profit margin has been deteriorating since 1998. The profitability on turnover is degrading as well since 1998. The return on shareholders funds has been decreasing since 1998. During 4 years the return reduced to one half. Actually it is around 3% due to the high level of indebtedness. In comparison with French actors, the results of Hungarian wineries are slightly better than the French cooperatives, but they are far from the French merchant enterprises.

The ratio of shareholders fund is relatively high and shows reinforcement, it continues to represent 50% of resources of wineries. The financial liabilities are very high, particularly the short term debts, which represents 30-40% of resources. Its tendency increased until 2001, and then it is slightly diminishing. In comparison to the French actors, the Hungarian wineries are more indebted.

In summary, the average situation of Hungarian wineries is taken in rather fragile, they have a relatively low and deteriorating profitability. Their profitability and turnover index are far from the French enterprises. The added value levels are lower at Hungarian wineries, the indebtedness and the need of working capital are relatively high, therefore the financing of activities turn into difficulties and the structure becomes extremely fragile. Consequently, it is not surprising that the wineries strive to minimize the costs of grape-vine purchasing or its production, push down the purchasing prices and obtain more margins on the final products in order to finance their debts and working. It can be a solution for short term, but it generates under-investments in the raw material production and degradation of raw material quality, which has negative effect in the final products and in the long term the development can be broken.

## Conclusion

Our analysis of market situation (price position on export and domestic market) of Hungarian wines and the analysis of organisation forms, particularly the hybrid organizations and contractual relationships shows that the organisation of wine production do not give an efficient solution for the transaction costs problem in spite of the remarkable investments and development in the qualitative raw material and wine production.

In our paper we underline that the wine production in Hungary can be described with a relatively low profitability and slow return. This phenomenon arises not only from the costly production system, but from high transaction costs and inefficient existing governing structures.

In case of the long term relationships, we show that the uncertainty is extremely high in the sector, especially in the field of price fluctuation, quality of raw materials, commercialisation and respect of obligations assumed in the contracts. The motivation system of analysed contracts in most cases is not based on the price mechanism; prices are not fixed or not defined for medium-term period and we find a slight price differentiation in relation with quality of wine-grape. In most cases the assurance of grape-vine purchase means sufficient motivation to vine-growers. We show as well that wine-growers are not well organised at the level of negotiations with wine-producers and merchants. Their power to enforce interests is rather weak. The lack of confidence, asymmetrical information and the existence of opportunistic behaviour result in a very low level of investments and in an inefficient structure, although an efficient one would be indispensable for the quality wine production. Consequently the vertical relationships do not work or work inefficiently in the Hungarian wine industry. The so called long contracts in Hungary do not work the same way than in the old EU member states or in the New World, they are rather the declarations of cooperation intention than the real contracts. The grape-vine market regulation practically does not exist except some examples and appellations. In spite of contracts, the regulation remains close at the spot market. After the financial analysis, the economic results of enterprises do not confirm any economic advantages drawing from this situation. It can be attributed to the saturation of wine markets, to the difficulties of wine marketing on the international markets and to the increasing power of super- and hypermarkets.

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ANNEX I.

| Hungarian wineries | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2003 | 2002 | 2001 | 2000 | 1999 | 1998 | 1997 | 1996 |
| **Average operating revenue (1000 HUF)** | 2 289 060 | 1 312 253 | 2 011 388 | 1 391 929 | 1 200 486 | 1 133 361 | 1 727 540 | 1 033 896 |
| **1 000 €** | 9 156 | 5 249 | 8 046 | 5 568 | 4 802 | 4 533 | 6 910 | 4 136 |
| **Average export revenue (1000 HUF)** | 147 078* | 652 697 | 489 072 | 617 289 | 653 933 | n.d. | n.d. | n.d. |
| **1 000 €** | 588 | 2 611 | 1 956 | 2 469 | 2 616 | n.d. | n.d. | n.d. |
| *Export/Operating revenue (%)* | *1,13* | *30,02* | *17,80* | *28,02* | *32,78* | *n.d.* | *n.d.* | *n.d.* |
| **Average added value (1000 HUF)** | 534 321 | 438 999 | 188 608* | 382 437 | 395 433 | 239 242 | 501 555 | n.d. |
| **1 000 €** | 2 137 | 1 756 | 754 | 1 530 | 1 582 | 957 | 2 006 | n.d. |
| *Added value/Operating revenue (%)* | *23,34* | *33,45* | *9,38* | *27,48* | *32,94* | *21,11* | *29,03* | *n.d.* |
| **Average total assets (1000 HUF)** | 2 782 565 | 2 288 137 | 2 430 292 | 1 617 258 | 1 362 729 | 1 432 303 | 1 283 243 | 3 468 958 |
| **1 000 €** | 11 130 | 9 153 | 9 721 | 6 469 | 5 451 | 5 729 | 5 133 | 13 876 |
| *Total assets/Operating revenue (%)* | *121,56* | *174,37* | *120,83* | *116,19* | *113,51* | *126,38* | *74,28* | *335,52* |
| **Average profit befor tax (1000 HUF)** | 30 347 | 47 239 | 84 150 | 61 670 | 63 372 | 142 248 | 153 294 | 38 998 |
| **1 000 €** | 121 | 189 | 337 | 247 | 253 | 569 | 613 | 156 |
| *Profit margin: Profit befor tax/Operating turnover (%)* | *1,33* | *3,60* | *4,18* | *4,43* | *5,28* | *12,55* | *8,87* | *3,77* |
| **P/L (1000 HUF)** | 20 301 | 38 624 | 70 852 | 51 726 | 53 630 | 55 141 | 60 548 | 26 248 |
| **1 000 €** | 81 | 154 | 283 | 207 | 215 | 221 | 242 | 105 |
| *Profitability on turnover (%)* | *0,89* | *2,94* | *3,52* | *3,72* | *4,47* | *4,87* | *3,50* | *2,54* |
| *Rentability on Shareholders funds* | *1,19* | *3,15* | *5,50* | *5,78* | *7,18* | *6,79* | *7,64* | *2,40* |
| **Average Shareholders funds (1000 HUF)** | 1 708 232 | 1 226 776 | 1 287 515 | 894 893 | 747 144 | 811 531 | 792 031 | 1 093 363 |
| **1 000 €** | 6 833 | 4 907 | 5 150 | 3 580 | 2 989 | 3 246 | 3 168 | 4 373 |
| *Solvency ratio (%)* | *61,39* | *53,61* | *52,98* | *55,33* | *54,83* | *56,66* | *61,72* | *31,52* |
| **Working capital (1000 HUF)** | 1 714 156 | 946 797 | 1 256 471 | 682 227 | 599 243 | 727 738 | 738 781 | 2 092 797 |
| **1 000 €** | 6 857 | 3 787 | 5 026 | 2 729 | 2 397 | 2 911 | 2 955 | 8 371 |
| *Working capital/Operating revenue (%)* | *74,88* | *72,15* | *62,47* | *49,01* | *49,92* | *64,21* | *42,76* | *202,42* |
| *Working capital/Total assets (%)* | *61,60* | *41,38* | *51,70* | *42,18* | *43,97* | *50,81* | *57,57* | *60,33* |
| **Average Stock (1000 HUF)** | 954 009 | 738 104 | 957 262 | 586 986 | 443 897 | 456 908 | 459 997 | 820 537 |
| **1 000 €** | 3 816 | 2 952 | 3 829 | 2 348 | 1 776 | 1 828 | 1 840 | 3 282 |
| | *41,68* | *56,25* | *47,59* | *42,17* | *36,98* | *40,31* | *26,63* | *79,36* |
| | *34,29* | *32,26* | *39,39* | *36,30* | *32,57* | *31,90* | *35,85* | *23,65* |

| Hungarian wineries | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | **2003** | **2002** | **2001** | **2000** | **1999** | **1998** | **1997** | **1996** |
| **Non current liabilities (1000 HUF)** | 126 423 | 96 366 | 152 514 | 130 159 | 105 613 | 156 118 | 56 747 | 1 605 205 |
| **1 000 €** | 506 | 385 | 610 | 521 | 422 | 624 | 227 | 6 421 |
| **Laverage** | *7,40* | *7,86* | *11,85* | *14,54* | *14,14* | *19,24* | *7,16* | *146,81* |
| | *4,54* | *4,21* | *6,28* | *8,05* | *7,75* | *10,90* | *4,42* | *46,27* |
| **Courrent liabilities (1000 HUF)** | 927 391 | 976 652 | 1 069 271 | 538 790 | 507 835 | 462 581 | 98 194 | 674 091 |
| **1 000 €** | 3 710 | 3 907 | 4 277 | 2 155 | 2 031 | 1 850 | 393 | 2 696 |
| | *54,29* | *79,61* | *83,05* | *60,21* | *67,97* | *57,00* | *12,40* | *61,65* |

*Source: AMADEUS*
**a few number of elements*

| | French cooperatives | | | | | | French merchant enterprises | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2001 | d%* | 2000 | d%* | 1999 | d%* | 2000 | d%* | 1999 | d%* |
| **Average operating revenue 1000 €** | 10 302 | 22 | 10 078 | 45 | 10 303 | 53 | 20 181 | 72 | 19 389 | 75 |
| **Average export revenue 1000 €** | 3 078 | 36 | 2 670 | 8 | 3 423 | 24 | 6 763 | 63 | 6 662 | 61 |
| *Export/Operating revenue (%)* | 12,9 | - 38 | 12,5 | - 124 | 11,3 | - 190 | 33,5 | 16 | 34,3 | 4 |
| **Average added value 1000 €** | 1 496 | 50 | 1 403 | - 9 | 1 441 | - 10 | 3 239 | 53 | 3 034 | 48 |
| *Added value/Operating revenue (%)* | *14,2* | *34* | *13,8* | *- 99* | *13,8* | *- 139* | *21,2* | *- 30* | *20,1* | *- 64* |
| **Average total assets 1000 €** | 13 036 | 25 | 12 626 | 49 | 11 996 | 55 | 19 417 | 67 | 18 536 | 71 |
| *Total assets/Operating revenue (%)* | 126 | 4 | 124 | 6 | 113 | - 0 | 111 | - 5 | 105 | - 8 |
| **Average profit befor tax 1000 €** | 106 | - 218 | 114 | - 116 | 158 | - 60 | 780 | 68 | 808 | 69 |
| *Profit margin: Profit befor tax/Operating turnover (%)* | 1,0 | - 318 | 1,2 | - 269 | 1,6 | - 230 | 6,2 | 29 | 6,1 | 13 |
| **P/L 1000 €** | 104 | - 173 | 123 | - 68 | 164 | - 31 | 495 | 58 | 436 | 51 |
| *Profitability on turnover (%)* | 1,0 | - 252 | 1,2 | - 210 | 1,6 | - 179 | 4,0 | 7 | 3,6 | - 24 |
| *Rentability on Shareholders funds* | 2,6 | - 112 | 3,3 | - 75 | 4,6 | - 56 | 8,8 | 34 | 8,5 | 16 |
| **Average Shareholders funds 1000 €** | 4 049 | - 27 | 3 766 | 5 | 3 567 | 16 | 5 631 | 36 | 5 153 | 42 |
| *Solvency ratio (%)* | 31,1 | - 70 | 30,0 | - 84 | 30,2 | - 82 | 29,0 | - 91 | 27,8 | - 97 |
| **Working capital 1000 €** | 2 566 | - 96 | 1 961 | - 39 | 1 485 | - 61 | 4 447 | 39 | 3 933 | 39 |
| *Working capital/Operating revenue (%)* | 24,3 | - 157 | 19,5 | - 151 | 12,3 | - 306 | 30,2 | - 62 | 26,2 | - 91 |
| *Working capital/Total assets (%)* | *19,68* | - 163 | *15,53* | - 172 | *12,38* | - 255 | *22,90* | - 84 | *21,22* | - 107 |
| **Courrent liabilities 1000 €** | 2 016 | - 112 | 1 788 | - 21 | 1 413 | - 44 | 4 095 | 47 | 3 820 | 47 |

*Source: Couderc, J-P., Remaud, H. (2004): Typologie des entreprises de l'aval, ONIVINS, Conseil de Direction, Séance du 18 février 2004 – 13 p.*