Typology and Financial Performance of Champagne Makers According to Distribution Channel

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Abstract

A typology of strategies related to the distribution channels used by Champagne makers is established. Champagne makers' operating profit depends on their distribution network, which affects selling prices. Based on a sample of 20 Champagne makers ("Maisons de Champagne"), economic and financial performance indicators for Champagne makers are analyzed with reference to the type of distribution channel.

Keywords: Champagne, distribution channel, strategy, performance

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Introduction

In 1992, during the economic recession in Western Europe and North America, consumers were unwilling to pay a high price for a bottle of Champagne, but the grapes used to produce that wine had been harvested 3 years earlier and purchased at a very high price. In 1991 and 1992, only 214 million bottles were sold compared to the 149 million bottles sold in 1989. Squeezed between high costs and low retail prices, Champagne makers had to sell Champagne in supermarkets at a lower price than usual. A few years later, after the boom in 1999 that saw sales reach 327 million bottles, economic stagnation returned. Sales dropped to 269 million bottles in 2001, 288 million bottles in 2002 and 293 million bottles in 2003, as shown in tables 1 and 2. The Champagne business was worth 3.4 billion euros in 2003. This paper shows how Champagne makers - called "Maisons de Champagne" - have learnt how to improve value creation over the decade through the use of different distribution channels.

Table 1: Sales of Champagne by volume from 1997 to 2003

Sales in million bottles (75cl)	1997	1998	1999	2000	2001	2002	2003
In France	165 (61%)	179 (61%)	190 (58%)	149 (59%)	165 (63%)	175 (61%)	174 (59%)
Outside France	103 (39%)	113 (39%)	137 (42%)	104 (41%)	98 (37%)	113 (39%)	119 (41%)
Total annual sales	**269**	**292**	**327**	**253**	**263**	**288**	**293**
Growth rate of sales by volume	**+ 5.2%**	**+ 8.5%**	**+ 12.0%**	**- 22.6%**	**+ 3.9%**	**+ 9.5%**	**+ 1.9%**

Table 2: Sales of Champagne by value from 1997 to 2003

Sales in billion euros	1997	1998	1999	2000	2001	2002	2003
In France	1.51 (59%)	1.64 (55%)	1.91 (52%)	1.52 (51%)	1.64 (55%)	1.75 (53%)	1.80 (53%)
Outside France	1.04 (41%)	1.31 (45%)	1.76 (48%)	1.45 (49%)	1.33 (45%)	1.54 (47%)	1.60 (47%)
Total annual sales	**2.55**	**2.95**	**3.67**	**2.97**	**2.97**	**3.29**	**3.4**
Growth rate of sales by value	**+ 7.0%**	**+ 15.7%**	**+ 24.4%**	**- 19.1%**	**0 %**	**+ 10.8%**	**+ 3.4%**

Objectives

The objectives of the paper are:

1. To identify the types of distribution strategy implemented by Champagne makers
2. To measure the economic and financial performance of Champagne makers from 1992 to 2001 for each type of distribution

3.   To relate performance indicators to strategic decisions with respect to distribution channels

The structure of the paper is as follows. First, a review of literature looks co-ordination and market power issues in food chains, it is mainly focused on producer-retailer relationships. Second, the methodology and data are discussed. Third, empirical findings about the Champagne industry are presented to shed light on the processor and retailer system. Finally, conclusions are drawn and the prospects for future development are examined.

Review of Literature

While Williams (1973) points out the generalized notion of a vertical coordination continuum, the literature about the industrial organization has evolved towards new institutional economics (Ménard & Shirley, 2005a), incorporating transaction costs and institutional environment as key elements in the organization of vertical systems. Looking at transaction inefficiency factors promoting vertical integration in food industries, Bhuyan (2005) finds that major reasons are diseconomies of scale and the fewness of sellers/buyers and finally demand uncertainty.

Robicheaux and Coleman (1994) adapted the structure-conduct-performance model and focused on a behavioral approach to investigate buyer-supplier relationships.

More focused on agri-food chain management, Trienekens and Zuurbier (1996) and Omta, Trienekens and Beers (1998) and the Dutch school observe increasing co-ordination – particularly about information exchange and logistics - in chains and networks. So, supply chains firms can work more efficiently to serve consumers.

On another side, Malassis (1973), creating the French school of "filières", emphasizes on power as a key driver of leadership and management of the agriculture and food business systems. Furthermore, Perez (2003), and Coelho and Rastoin (2004) highlight the changing role of corporate governance in public companies whose shareholders focus more on financial profitability than on industrial strategy..

Weiss (1989) stresses a market power hypothesis in food retailing since price is positively related to more concentrated market structure in many local market industries including food retailing due to local tight oligopolies. High profit may be due to lower costs or the offer of more expensive, higher quality, differentiated products (Demsetz, 1973). Following Cotteril (1986) and Nelson, Siegfried, and Howell (1992) observe that services, including breadth of product line and express

lane, are a major way for differentiation. But Cotteril (1999) finds that market share and concentration are not no significantly related to services and that most cost savings in large superstores are offset by pricing power liked to increased services levels. So, he rejects the Demsetz critique.

Further, Rogers (2001) observe that concentration has advanced in almost every US food manufacturing industry, including the wine and brandy industry, over the 1958-1997 period and farmers remain outspoken that something are injured by the reduced number of buyers Cotteril (2001) develops a structural model of price transmission in a channel that has differentiates product oligopolies at two stages: retailer oligopoly and manufacturer oligopsony power. According to different market power level, the distribution of welfare may vary a lot among farmers, marketers, and consumers. The rise in US and European retail buyer concentration induced the development of private labels. There exist also private labels in the Champagne business.

Champagne is produced in a restricted designated area of origin (*appellation d'origine contrôlée* - AOC, in French) to the east of Paris, France, but it is consumed around the world. About 65% of all Champagne bottled is drunk in France, the other 35% being consumed in other countries, mainly the UK, the USA, Germany, and Italy (CIVC, 2002).

As in every industry, the business carried out by "Maisons de Champagne" is constrained by consumer demand. But it also has to respect legal restrictions on production both in terms of quantity (grapes must come from a limited designated area of origin, and there is a maximum authorized yield) and quality (specified varieties of vines must be used, manual harvest only, etc). However, there is still an uncertainty factor because of weather fluctuations from year to year, which cause fluctuation in grape production levels. On the demand side, shipments of bottles from processors to retailers vary from year to year because of swings in economic growth in the developed countries (CIVC, 1992 - 2001).

Gaucher, Hovelaque and Soler (2000) have formulated the optimal procurement and inventory policies and calculated chain profits according to various levels of coordination between two producing firms. Gaucher, Soler and Tanguy (2002) studied quality incentives and supply contracts in the wine chains. Soler and Tanguy (2002) and Saulpic and Tanguy (2002) found that attracting equity capital from investors on stock exchanges is the Champagne makers' best financial strategy for expansion. Giraud-Héraud, Mathurin and Soler (2003) have analyzed the legitimacy of supply regulation mechanisms for products protected by a designation of origin. They argue that such mechanisms reduce uncertainty, thus encouraging investment in quality improvement.

Declerck & Pichot (1994) note that since it takes 3 years to turn grapes into Champagne, the adjustments of supply to demand lead to jumps in retail prices in

economic booms and drops in retail prices in periods of stagnation/recession. This phenomenon disconcerts consumers and seriously affects vine growers and wine makers. Declerck (1996) shows that high value added to sales and low financial leverage are good indicators to explain operational and financial performance in the Champagne industry. Declerck (2004) reports that vine growers and wine makers have learned from experience and are able to negotiate terms with retailers to limit price swings. A producer – retailer cycle is exhibited with 3 loops over the period 1978-2002.

Methodology, Data and Major Difficulties

Methodology

Porter's model (1985) is used for strategic purposes, leading to definition of a typology of Champagne makers according to their distribution channel:

- Supermarket operators
- Specialized distributors like wine stores, cafes, hotels, restaurants, etc.
- Global distribution networks, i.e. combining on-trade and off-trade outlets, worldwide. The characteristics of each distribution channel are studied, particularly barriers to entry - which may be quite considerable - and access to consumers.

According to their distribution channels, Champagne makers have different characteristics that can be observed through:

1. Measures of financial structure:
    - Equity capital to total assets
    - Equity capital to long-term capital
    - Financial leverage, measured as the financial debt to equity

2. Economic performance indicators:
    - Sales growth in 2001 compared to 2000
    - Value added, i.e. the wealth created by labor and capital, measured by the difference between production and consumption of raw materials and external services
    - Labor costs
    - Earnings before interest, taxation, depreciation & amortization (EBITDA)
    - Operating margin

3. Financial measures of performance:
    - Profit margin
    - Return on equity (ROE)

Data

Secondary data used to measure the economic and financial criteria of Champagne makers come from financial data banks and cover a ten-year-period (1992–2001). They are used to compute financial ratios in order to grasp the financial situation of corporations.

Data come from the Champagne wine interprofession committee - *Comité Interprofessionnel du Vin de Champagne* (CIVC), Nielsen and Banque de France, the websites of the Union of Champagne makers (*Union des Maisons de Champagne*) and the annual reports released by some "Maisons".

The paper also uses analysis of financial data available in the "DIANE" data bank from Bureau van Dijk Electronic Publishing for 20 Maisons de Champagne over the period 1992-2001. The 20 Champagne makers in the sample are Besserat de Bellefon, Bollinger, Canard-Duchêne, De Castellane, De Cazanove, Duval-Leroy, Krug, Lanson, Laurent-Perrier, Marne et Champagne, Mercier, Moët & Chandon, G.H. Mumm, Piper Heidsieck, Pommery, Louis-Roederer, Ruinart, Taittinger, Veuve Clicquot Ponsardin and Vranken. Data after 2001 were not available for all 20 companies, and in order to compare the Maisons de Champagne on the same basis, 2001 is therefore the last year analyzed.

Major Difficulties

The major difficulties for this financial analysis lay in the following:

- The presentation of accounting documents: the wording used in the accounts may be too vague to grasp the precise meaning, for instance in one case when "other assets" amounted to 30% of total assets
- Accounting years of different length
- Non-availability of data for some years
- Exceptional events like divestitures, mergers or acquisitions that may affect the interpretation of figures

In order to avoid misinterpretation in analysis, some checking of sources of these documents was required.

Empirical Findings

Structure of Champagne Brands on the French Market: Branded Products and Private Labels

The French market absorbs about two thirds of Champagne sales. In 2002 in French super and hypermarkets, 14 brands of Champagne held 19% of the

market. This concentration ratio is low with respect to the 40% threshold for a top-4-firm concentration ratio considered by most authors the limit for perfect competition in food industries (Declerck & Scherrick, 1993). The Champagne market is thus highly fragmented and competition is very fierce.

In French modern retailing in 2002, according to AC Nielsen data (Laboissière, 2003) about one out of four bottles of Champagne was sold under a private label. Tables 3 and 4 show that the market share of private labels in France increased by 23.6% in volume and 19% in value in 2002, and this penetration is slowly increasing. The market shares of private labels for other sparkling wines, rum, spirits and wine-based aperitifs are lower, but register more significant growth than private label Champagnes. Private label penetration is greater for red AOC Bordeaux and red AOC Côtes du Rhône wines. Over the 25 years from 1978 to 2003, vine growers and wine makers were able to expand and double sales from about 150 million to 300 million bottles.

Table 3: Volume Market Share of Branded Products and Private Labels for Selected Alcoholic Beverages at French Modern Retailers

Alcoholic beverages	Market share of branded products	Market share of private labels
Champagne*	76.6 % (+ 5 %)	23.6 % (+ 6.4 %)
Rum**	80% (+ 1.3 %)	20 % (+ 8.2 %)
Vodka**	87 % (+ 5%)	11 % (+ 10 %)
Gin**	84 % (- 3.1%)	16 % (+ 9.7 %)
Tequila**	86 % (- 7.7%)	14 % (+ 50.7 %)

* Source: Laboissière, 2003
** Source: Laboissière, 2004

Table 4: Value Market Share of Private Labels for Selected Alcoholic Beverages at French Modern Retailers

	Market share of private labels in 2002
Champagne	19%
Other sparkling wines	13%
Whisky	9%
Wine-based aperitifs	9%
Red Bordeaux (claret) AOC wine	37%
Red Côtes du Rhône AOC wine	23%

Source: Laboissière, 2004

Competitive Environment of Champagne Makers by Type of Distribution Channel

The principal features of the champagne market include barriers to entry, technological and storage constraints and the question of access to consumers (due to the product's alcohol content). All these must be taken into account in producers' and retailers' expectations of risks and price.

The Champagne industry has specific technological and storage constraints. The time necessary to produce Champagne is a crucial constraint: the process takes about 3 years, from the grape harvest to the sale of the bottle. Consequently, large stocks of bottles aging in cellars must be financed.

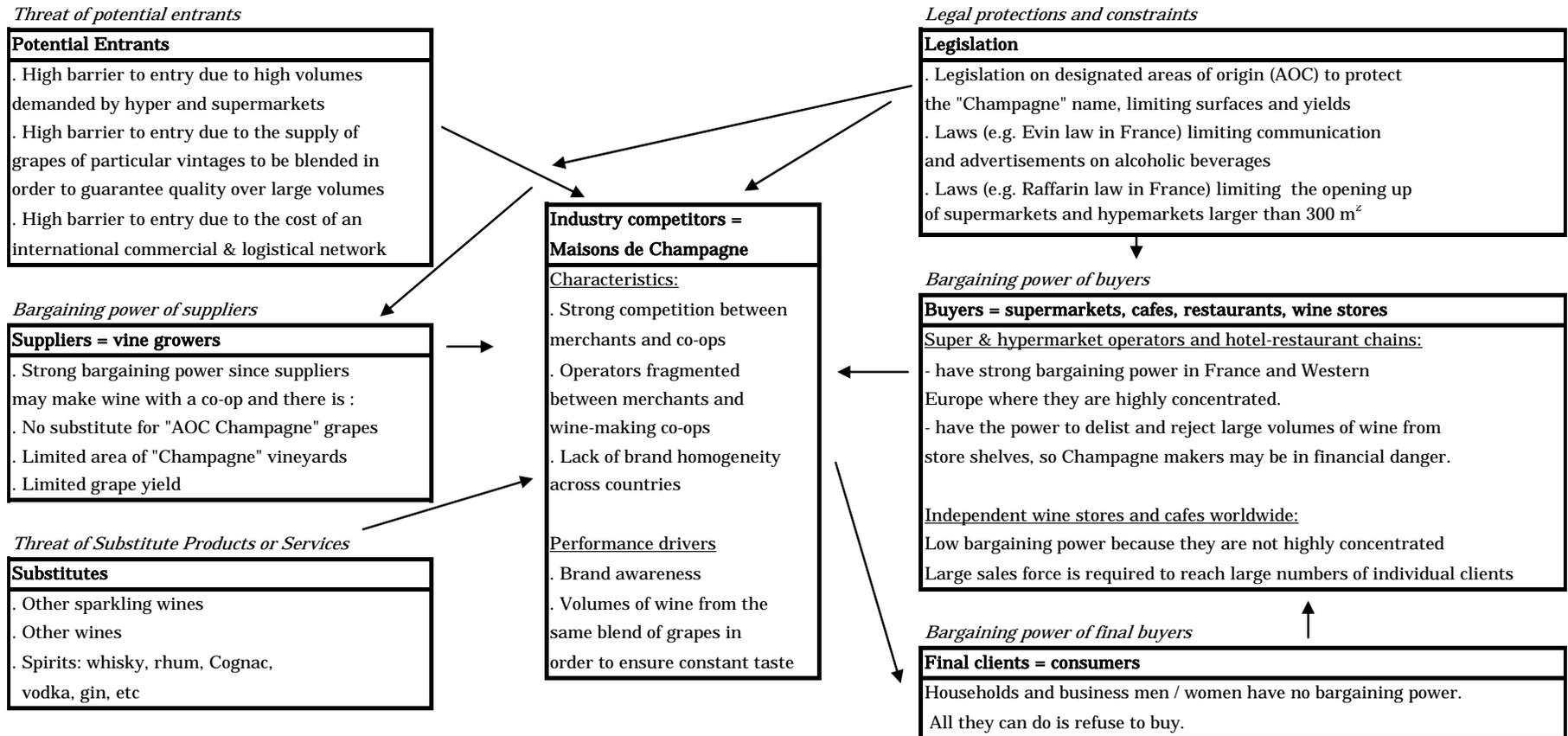The legal constraints affecting production are those applicable for a designated area of origin:

- Strictly defined production area, encompassing 35,155 hectares east of Paris
- Maximum yield limit on grapes
- Compliance with strictly applied rules (type and quantity of grapes, environmental conditions, specific processing requirements, etc)

Most of the designated area of origin is already planted with vines, and only a few hundred additional hectares are potentially available. If totally covered by vines, the vineyards of Champagne, which can currently produce about 320 million bottles, could reach production of 340 / 360 million bottles. But no further expansion would be possible.

On the sales side, legal constraints differ from one country to another. Many countries have restrictions on communication and advertising on wine. France does not easily grant authorization for supermarkets and hypermarkets larger than 300 m². Most countries outside Europe limit or prohibit the sales of wines and spirits in food stores. Most alcoholic beverages are sold at specialist wine merchants and liquor stores. Taxation of alcoholic beverages is also specific to each country.

Figure 1 shows the competitive forces that determine the Champagne industry's profitability. Champagne wine makers are under pressure from both:

- Their suppliers, i.e. vine growers and co-operatives of vine growers
- Their major clients: on the French market, which accounts for 2/3 of sales, 6 purchasing centers (belonging to supermarket and hypermarket operators) buy and distribute 46 million bottles of the total 93 millions bottles sold by "Maisons de Champagne" in France, i.e. about 50% of production

Threat of potential entrants

Potential Entrants

. High barrier to entry due to high volumes
demanded by hyper and supermarkets
. High barrier to entry due to the supply of
grapes of particular vintages to be blended in
order to guarantee quality over large volumes
. High barrier to entry due to the cost of an
international commercial & logistical network

Bargaining power of suppliers

Suppliers = vine growers

. Strong bargaining power since suppliers
may make wine with a co-op and there is :
. No substitute for "AOC Champagne" grapes
. Limited area of "Champagne" vineyards
. Limited grape yield

Threat of Substitute Products or Services

Substitutes

. Other sparkling wines
. Other wines
. Spirits: whisky, rhum, Cognac,
 vodka, gin, etc

**Industry competitors =
Maisons de Champagne**

Characteristics:
. Strong competition between
merchants and co-ops
. Operators fragmented
between merchants and
wine-making co-ops
. Lack of brand homogeneity
across countries

Performance drivers
. Brand awareness
. Volumes of wine from the
same blend of grapes in
order to ensure constant taste

Legal protections and constraints

Legislation

. Legislation on designated areas of origin (AOC) to protect
the "Champagne" name, limiting surfaces and yields
. Laws (e.g. Evin law in France) limiting communication
and advertisements on alcoholic beverages
. Laws (e.g. Raffarin law in France) limiting the opening up
of supermarkets and hypemarkets larger than 300 m^2

Bargaining power of buyers

Buyers = supermarkets, cafes, restaurants, wine stores

Super & hypermarket operators and hotel-restaurant chains:
- have strong bargaining power in France and Western
Europe where they are highly concentrated.
- have the power to delist and reject large volumes of wine from
store shelves, so Champagne makers may be in financial danger.

Independent wine stores and cafes worldwide:
Low bargaining power because they are not highly concentrated
Large sales force is required to reach large numbers of individual clients

Bargaining power of final buyers

Final clients = consumers

Households and business men / women have no bargaining power.
 All they can do is refuse to buy.

Figure 1: Competitive Forces that Determine the Champagne Industry's Profitability

The bargaining power depends on the type of distribution channel:

- There are specific barriers to entry for French modern retailers, in the form of :
  - The high volumes demanded by the six major hyper and supermarket operators: Auchan, Carrefour, Casino, Cora, Intermarché, Lucie (Leclerc–Système U)
  - The strict requirement for grapes of particular vintages to be blended in order to guarantee constant quality over large volumes

- Barriers to entry may be similar for distribution through international chains of hotels and restaurants. But most on-trade cafes, hotels, restaurants, liquor services and nightclubs are independent and have low bargaining power. Champagne makers may therefore attain a stronger position in selling through the on-trade channel of distribution, which is not highly concentrated. However, reaching such individual clients in niche markets requires an extensive network of commercial agents and a low-cost logistical network.

- In many countries outside Western Europe, wine cannot be sold in supermarkets. Consequently, Champagne makers with international sales operations mainly sell through the on–trade distribution channel.

Performance

Price by Type of Distribution Channel

The Maisons de Champagne sell bottles under their own brand of the same name. Some Champagne makers sell mainly to modern retailers in France or Europe, while others sell mainly to the on-trade distribution channel. Some of them have a worldwide distribution network.

A typology of 20 Champagne makers is drawn up according to the distribution network used in France (see table 5). The breakdown of the sample is as follows:

- Seven Champagne makers selling mainly to French modern retailers (Canard-Duchêne, De Castellane, De Cazanove, Duval-Leroy, Marne & Champagne, Mercier and Vranken)
- Six Champagne makers with mainly on-trade distribution selling through liquor services, cafes, hotels, restaurants and night-clubs (Besserat de Bellefon, Bollinger, Krug, Laurent-Perrier, Louis-Roederer and Ruinart)
- Seven Champagne makers with a global distribution network (Lanson, Moët & Chandon, Mumm, Piper Heidsieck, Pommery, Taittinger and Veuve Clicquot Ponsardin)

Observations show that:

- The lowest prices for branded products are observed for brands mainly sold in super and hypermarkets. Prices range from 15 € to 25 € (excluding VAT) in France. It should be noted that these Maisons also sell bottles to modern retailers under private labels at cheaper prices, between 10 and 15 € a bottle in general.
- Intermediate prices apply for Champagne makers selling mainly to liquor services, cafes, hotels, restaurants and nightclubs.
- The highest prices are achieved by the Maisons with a global international network of sales outlets.

Table 5: Typology of 20 Champagne Brands by Price and Distribution Network in France

Retail price of a 75 cl bottle	Prevailing distribution: super/hyper markets	Prevailing distribution: Liquor services, cafes, hotels, restaurants, night-clubs	Prevailing Distribution: *Global network*
> 25 €		Krug Bollinger Louis-Roederer Ruinart	Veuve Clicquot Ponsardin Moët & Chandon Taittinger
20 - 25 €		Laurent Perrier	Pommery Piper-Hiedsieck Lanson Mumm
15 - 20 €	Canard-Duchêne Mercier	Besserat de Bellefon	
< 15 €	De Castellane De Cazanove Duval-Leroy Vranken Marne & Champagne		

Figure 2 shows that prices outside France are higher than prices in France, where competition is tougher due to:

- Competition from co-operatives of vine growers which process Champagne for their members or for themselves and mainly serve the French market
- The high sales levels concentrated in the six purchasing centers owned by the big French modern retailers
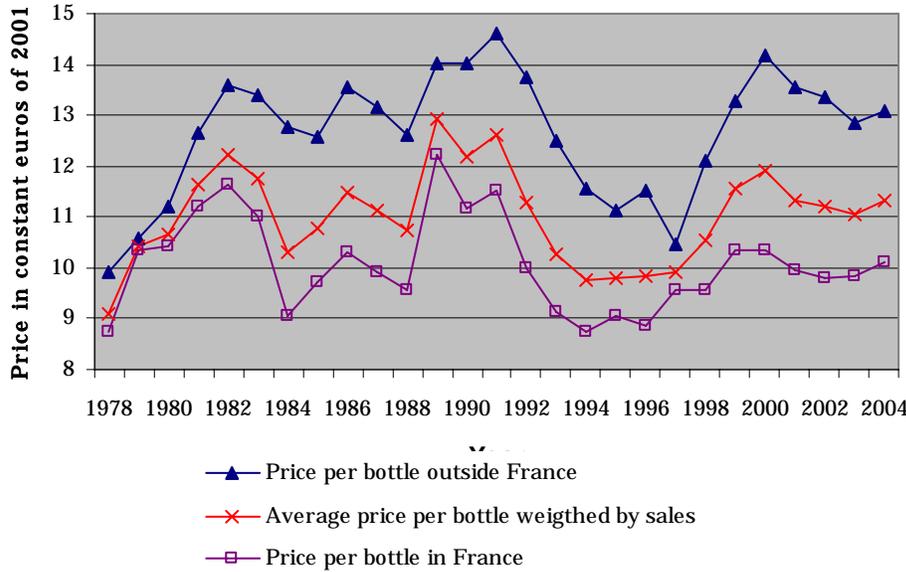
Figure 2: Price of a Bottle of Champagne from 1978 to 2004, in Constant Euros of 2001

Results

Table 6 relates the financial performance of Champagne makers to their main type of distribution channel used in 2001.

Tables 7, 8 and 9 show details of financial results for every Champagne maker in the sample. Table 7 presents the financial results of Champagne makers selling mainly to modern retailers. Table 8 documents the financial performance of Champagne makers selling mainly to wine specialists, cafes, hotels, and restaurants. Table 9 presents the financial comparison of Champagne makers with global distribution channels, i.e. selling both on-trade and off-trade worldwide.

The financial performance of Champagne makers is analyzed with reference to three complementary aspects:

- Equilibrium of the financial structure
- Economic and operating profitability
- Financial profitability

Mean and median values are provided.

Table 6: Financial Comparison of Champagne Makers per type of Distribution Channel in 2001

	MEAN VALUES			MEDIAN VALUES		
Major channel of distribution	French modern retailers	On-trade distribution	Global international distribution	French modern retailers	On-trade distribution	Global international distribution
Vineyard ownership in hectare	82	75	137	18	45	270
Key Results						
Total Sales in k€	67 056	48 180	179 478	55 690	38 896	94 300
Operating Income in k€	6 435	12 334	41 423	5 178	9 917	10 372
Net Income in k€	1 393	8 367	30 108	1 151	5 270	14 892
Financial Structure						
Equity Capital / Total Assets	29%	55%	50%	27%	50%	54%
Equity Capital / Long Term Capital	37%	62%	55%	28%	59%	64%
Financial Debt / Equity Shareholder's Funds	272%	62%	74%	218%	65%	42%
Economic Performance						
Sales Growth in 2001 w.r.t. 2000	17,4%	-1,3%	-7,9%	24,0%	2,2%	-9,0%
Value Added to Sales	16,3%	41,7%	37,3%	17,9%	44,8%	34,7%
Labor Costs to Value Added	31,8%	31,9%	41,9%	31,4%	33,2%	45,0%
Financial Expenses to Value Added	37,5%	23,9%	20,9%	38,3%	20,0%	20,0%
EBITDA to Total Assets	6,1%	10,9%	8,7%	4,6%	12,9%	6,5%
EBITDA to Sales	9,4%	27,3%	19,7%	9,4%	28,2%	16,8%
Operating margin = EBIT to Sales	9,6%	23,0%	23,1%	9,6%	19,6%	12,7%
Financial Profitability						
Profit margin on Sales	2,1%	17,7%	16,8%	2,1%	15,3%	17,8%
Return on equity (ROE)	1,7%	11,6%	11,0%	4,6%	13,2%	9,6%
Growth rate over the period 1997-2001						
Growth rate of sales	-2%	13%	9%	-2%	16%	19%
Growth rate of EBIT	-9%	82%	775%	-25%	28%	66%
Growth rate of Net Income	-76%	716%	246%	-78%	72%	90%

Table 7: Comparison of Champagne makers selling mainly to modern retailers in 2001

Champagne Makers = "Maisons de Champagne"	Canard Duchêne	De Castellane	De Cazanove	Duval Leroy	Marne & Champagne	Mercier	Vranken	Sub-sample average	Sub-sample median value
Vineyard ownership in hectare	18	0	0	150	0	231	175	82	18
Key Results									
Total Sales in k€	53 989	24 903	42 408	55 755	129 880	55 690	106 769	67 056	55690
Operating Income in k€	5 178	1 530	1 698	3 129	13 321	6 247	13 940	6 435	5178
Net Income in k€	3 295	-3 011	223	1 151	-829	5 868	3 054	1 393	1151
Financial Structure									
Equity Capital / Total Assets	30,1%	26,7%	27,9%	21,5%	10,7%	72,1%	11,7%	28,7%	26,7%
Equity Capital / Long Term Capital	55,0%	27,9%	34,4%	25,6%	10,9%	85,0%	17,2%	36,6%	27,9%
Financial Debt / Equity Shareholder's Funds	45,7%	217,9%	168,5%	263,2%	660,3%	1,6%	548,0%	272,2%	217,9%
Economic Performance									
Sales Growth in 2001 w.r.t. 2000	35%	-33%	58%	29%	24%	6%	3%	17,4%	24,0%
Value Added to Sales	12,4%	19,3%	10,1%	17,9%	20,0%	14,1%	20,2%	16,3%	17,9%
Labor Costs to Value Added	16%	56%	41%	48%	31%	9%	21%	31,8%	31,4%
Financial Expenses to Value Added	40%	31%	38%	33%	62%	8%	50%	37,5%	38,3%
EBITDA to Total Assets	12,3%	3,3%	4,6%	4,5%	4,0%	7,2%	6,9%	6,1%	4,6%
EBITDA to Sales	9,4%	6,3%	4,9%	7,8%	11,5%	11,9%	13,9%	9,4%	9,4%
Operating margin = EBIT to Sales	9,6%	6,1%	4,0%	6,2%	10,3%	11,2%	13,1%	9,6%	9,6%
Profitability									
Profit margin on Sales	6,1%	-12,1%	0,5%	2,1%	-0,6%	10,5%	2,9%	2,1%	2,1%
Return on equity (ROE)	14,6%	-22,5%	1,5%	4,6%	-2,0%	7,6%	8,3%	1,7%	4,6%
Growth rate over the period 1997-2001									
Growth rate of sales	12%	-45%	72%	-2%	-18%	-33%	3%	-2%	-2%
Growth rate of EBIT	-25%	-39%	86%	-51%	-14%	-44%	26%	-9%	-25%
Growth rate of Net Income	-40%	-221%	-85%	-78%	-126%	16%	5%	-76%	-78%

For Marne & Champagne, the accounting year 1997 lasts 14 months.

So, it is difficult to analyse the growth rate over the period 1997-2001 for Marne & Champagne.

Table 8: Comparison of Champagne Makers Selling Mostly to Wine Specialists, Cafes, Hotels and Restaurants in 2001

Champagne Makers = "Maisons de Champagne"	Besserat de Bellefon	Bollinger	Krug	Laurent-Perrier	Louis - Roederer	Ruinart	Sub-sample average	Sub-sample median value
Vineyard ownership in hectare	10	153	19	70	200	0	75	44,5
Key Results								
Total Sales in k€	14 844	38 138	15 892	112 965	67 586	39 654	48 180	38 896
Operating Income in k€	1 261	12 457	3 151	21 953	27 803	7 377	12 334	9 917
Net Income in k€	3 413	6 924	1 987	11 739	22 525	3 616	8 367	5 270
Financial Structure								
Equity Capital / Total Assets	40,6%	59,3%	68,1%	39,2%	88,0%	36,0%	55,2%	49,9%
Equity Capital / Long Term Capital	49,2%	67,3%	72,8%	43,2%	88,9%	50,0%	61,9%	58,7%
Financial Debt / Equity Shareholder's Funds	102,6%	41,8%	25,7%	108,8%	4,1%	88,0%	61,8%	64,9%
Economic Performance								
Sales Growth in 2001 w.r.t. 2000	8%	17%	-29%	-8%	5%	-1%	-1,3%	2,2%
Value Added to Sales	16,5%	55,4%	55,0%	34,6%	55,1%	33,7%	41,7%	44,8%
Labor Costs to Value Added	34%	32%	39%	25%	23%	38%	31,9%	33,2%
Financial Expenses to Value Added	55%	8%	36%	14%	5%	26%	23,9%	20,0%
EBITDA to Total Assets	2,8%	17,7%	5,9%	13,5%	12,7%	13,1%	10,9%	12,9%
EBITDA to Sales	8,8%	36,1%	31,6%	24,7%	42,4%	20,3%	27,3%	28,2%
Operating margin = EBIT to Sales	8,5%	32,7%	19,8%	19,4%	41,1%	16,6%	23,0%	19,6%
Profitability								
Profit margin on Sales	23,0%	18,2%	12,5%	10,4%	33,3%	9,1%	17,7%	15,3%
Return on equity (ROE)	15,1%	13,2%	3,2%	13,1%	11,2%	13,8%	11,6%	13,2%
Growth rate over the period 1997-2001								
Growth rate of sales	-22%	50%	-3%	15%	23%	16%	13%	15%
Growth rate of EBIT	94%	99%	10%	245%	28%	18%	82%	61%
Growth rate of Net Income	3997%	92%	82%	72%	58%	-3%	716%	77%

For Besserat de Bellefon, the accounting year 1997 lasts 14 months. So, its growth rate over the period 1997-2001 cannot be analysed

Table 9: Comparison of Champagne Makers Selling Both On-trade and Off-trade Worldwide in 2001

Champagne Makers = "Maisons de Champagne"	Lanson	Moët & Chandon	Mumm	Piper Heidsieck	Pommery	Taittinger	Veuve Clicquot Ponsardin	Sub-sample average	Sub-sample median value
Vineyard ownership in hectare	0	> 760	275	50	470 (*)	270	363	137	270
Key Results									
Total Sales in k€	81 465	551 526	86 905	127 739	94 300	77 997	236 412	179 478	94 300
Operating Income in k€	10 372	161 788	9 753	9 119	7 550	13 562	77 819	41 423	10 372
Net Income in k€	973	98 062	30 182	3 471	4 147	14 892	59 029	30 108	14 892
Financial Structure									
Equity Capital / Total Assets	26,0%	52,0%	54,0%	31,0%	66,0%	66,0%	55,0%	50,0%	54,0%
Equity Capital / Long Term Capital	33,0%	57,0%	66,0%	35,0%	64,0%	67,0%	64,0%	55,1%	64,0%
Financial Debt / Equity Shareholder's Funds	193,0%	46,0%	21,0%	161,0%	30,0%	26,0%	42,0%	74,1%	42,0%
Economic Performance									
Sales Growth in 2001 w.r.t. 2000	13%	-13%	-22%	-18%	-7%	1%	-9%	-7,9%	-9,0%
Value Added to Sales	31,3%	46,5%	30,5%	23,7%	34,7%	46,2%	48,5%	37,3%	34,7%
Labor Costs to Value Added	36%	28%	47%	45%	64%	49%	24%	41,9%	45,0%
Financial Expenses to Value Added	36%	23%	12%	20%	17%	6%	32%	20,9%	20,0%
EBITDA to Total Assets	6,3%	15,5%	6,5%	5,7%	3,1%	6,9%	16,8%	8,7%	6,5%
EBITDA to Sales	16,8%	31,4%	13,0%	11,3%	9,5%	20,6%	35,3%	19,7%	16,8%
Operating margin = EBIT to Sales	12,7%	29,3%	11,2%	7,1%	8,0%	17,4%	32,9%	23,1%	12,7%
Financial Profitability									
Profit margin on Sales	1,2%	17,8%	34,7%	2,7%	4,4%	19,1%	25,0%	16,8%	17,8%
Return on equity (ROE)	1,4%	15,5%	25,9%	3,9%	2,2%	9,6%	18,5%	11,0%	9,6%
Growth rate over the period 1997-2001									
Growth rate of sales	-35%	21%	-24%	45%	1%	19%	36%	9%	19%
Growth rate of EBIT	31%	26%	176%	2028%	3061%	37%	66%	775%	66%
Growth rate of Net Income	90%	7%	1316%	197%	-24%	103%	33%	246%	90%

(*) When Pommery was sold to Vraken group in April 2002, 450 ha out of 470 ha were kept by LVMH for Moët & Chandon mainly.

In terms of corporate sales, the total sales of Champagne makers with global distribution networks were the highest, with a median value of 94.3 million € for the sample in 2001. Sales of Champagne makers distributing mainly to French modern retailers follow, at 55.7 million €. Sales of Champagne makers selling mainly through on-trade distribution outlets are lower, at 38.9 million €.

The financial structure of Champagne makers selling mainly to French modern retailers is very weak. These companies have a very high level of financial debt, standing at about 201 to 270% of equity. Champagne makers with mainly on-trade distribution and Champagne makers with global distribution have good financial structure, with debt at about 65% and 42 to 74% respectively. The other financial structure ratios confirm these results.

Based on median value, Champagne makers selling mainly to French modern retailers have the lowest vineyard ownership (18 ha) compared to other Champagne makers (45 ha for Champagne makers with mainly on-trade distribution and 270 ha for Champagne makers with global distribution).

EBITDA is a measure of wealth created by the operational activity of the company, independently of the company's financing, depreciation, amortization and tax policy. The economic profitability, measured by EBITDA to sales, is about 27% to 28% for Champagne makers with mainly on-trade distribution, which register the best performance. Champagne makers with global distribution follow with about 17% to 19%, which is still a good result. But with EBITDA of about 9.6%, Champagne makers selling mainly to French modern retailers turn in a poor performance.

The results are similar for the value added to sales ratio. Value added is the wealth created by human and financial capital. It is the difference between total sales and external operating charges. Since labor costs are internal charges, they are not included in those external operating charges. Financial expenses as a percentage of value added are comparatively higher for Champagne makers selling mainly to French modern retailers. This result is consistent with the fact that their debt level is the highest. But the highest proportions of labor costs are found at Champagne makers with global distribution networks, possibly because big international firms have to pay more business executives.

The operating margin expressed as the ratio of EBIT to total sales, is about 19.6% on average with a median value of 23% for Champagne makers with mainly on-trade distribution. Champagne makers with global distribution networks have the same mean value but a lower median value, 12.7%. These results are excellent compared to financial results generally in the food and agribusiness sector. However, Champagne makers selling mainly to French modern retailers exhibit an average ratio lower than 10%.

The financial profitability ratios show that Champagne makers with mainly on-trade distribution and Champagne makers using global distribution are quite similar:

- Their profit margin on sales is about 15% to 17%
- Their return on equity is about 10% to 13%

These results are very good: two thirds of annual Champagne sales usually take place during the last four months of the year. This means that most sales took place during the economic stagnation/depression after the attacks in New York on September 11, 2001.

However, Champagne makers selling mainly to French modern retailers exhibit very low ratios:

- Their profit margin on sales is about 2%
- Their return on equity is lower than 5%

Clearly, the economic, operating and financial profits depend on the distribution network and the sales price. Champagne makers selling wine to supermarket and hypermarket chains showed very low profitability. Champagne makers selling through the on-trade distribution channel and worldwide networks were very profitable in 2001. Similar patterns are observed in analyzing financial reports from various years.

Furthermore, from 1997 to 2001, Champagne makers selling mainly to supermarkets registered negative growth rates for sales, EBITDA and net income. They were unable to keep up the momentum from the sales boom of 1999.

Champagne makers with mainly on-trade distribution, meanwhile, enjoyed very positive growth rates in business volumes and profitability, and Champagne makers with global distribution networks grew even faster. They were able to take advantage of the new millennium and also to maintain that advantage over the following years.

The financial details provided in tables 7, 8 and 9 show that the family-owned traditional Champagne makers Bollinger and Louis-Roederer, which only sell through the international on-trade channels of distribution, achieve the best results. They are just ahead of Champagne makers with global distribution like Veuve Clicquot Ponsardin (LVMH group), Moët & Chandon (LVMH group) and Taittinger, which also had excellent results.

Conclusions

The findings are not surprising. On one side, the largest Champagne makers are mass producers with economy of scale and cost leadership advantages. So, they can market successfully worldwide both in supermarkets. On another side, high quality Champagne producers rely on their brand equity and are able to sell at a higher price through a network of wine stores, i.e. specialized retailers. When they try to sell through supermarkets selling at discount prices, they are not powerful enough and must accept lower prices in order to be listed. And they fail. Champagne makers have poor financial results when they only face the market power of the six major French supermarket operators.

Champagne makers with mainly on-trade distribution and Champagne makers with global distribution worldwide have learnt how to improve value creation over the decade, and took full advantage of the new millennium. They also achieved excellent financial results. However, Champagne makers selling mainly to supermarkets registered poor financial results.

The results explain why most Champagne makers are trying to increase their non-supermarket sales, in order to achieve better prices and profitability. But such a strategy requires the financial means to develop brand awareness and an international distribution channel.

Most of the Champagne makers selling mainly to supermarket operators face high financial debt and cannot afford such an investment. They can only access international sales through partnership with other wine and spirits distributors, as Piper Heidsieck did when its parent wine and spirit company, Remy-Cointreau (France), decided to share its distribution network with Jeam Beam Brands Worldwide (USA), Highland Distillers Ltd (UK) and later Vins & Sprit A.B. (Sweden).

Processors take advantage of branding and economy of scale in production. They adjust their production strategy in taking distributors' marketing power into account.

The paper shows that Champagne makers need a second quality product, like good sparkling wine, that can be processed at lower cost and sold at large scale through supermarkets. They usually use a brand name related to their Champagne brand name. Such a strategy is already undertaken: Moët & Chandon produces sparkling wine under the brand "Domaine Chandon" in California and Australia. Champagne Mumm also produces sparkling wine in California, "Mumm Napa". Sparkling wines are sold at lower price.

Such a strategy is also implemented by other food processors. For example:

- French producers of goose liver (*foie gras*) also sell cheaper products like mousse of goose liver under their brand
- In the European cheese sector, processors sell "gourmet" cheese like "Roquefort" in shops specialized on delicatessen while they enjoy large economies of scale with "camembert" and "brie" sold in supermarkets

References

Bhuyan S., "An Empirical Evaluation of Factors Determining Vertical Integration in U.S. Food Manufacturing Industries, *Agribusiness: An International Journal*, 21 (3): 429-445, 2005.

Bureau van Dijk Electronic Publishing, "Diane" financial data bank of French companies, 1992-2001.

Comité interprofessionel du vin de Champagne (CIVC), economic data from 1978 to 2003.

Coelho A. & J.-L. Rastoin, "Restructuring of multinational enterprises and the globalization of the wine industry", *Conférence Oénométrie XI, VDQS*, Dijon, 21-22 Mai 2004.

Cotteril R.W., "Market Power in the Retail Food Industry. Evidence from Vermont", *Review of Economics and Statistics*, 68 (3): 379-386, 1986.

Cotteril R.W., "Market Power and the Demsetz Quality Critique: An Evaluation for Food Retailing", *Agribusiness: An International Journal*, 15 (1): 101-118, 1999.

Cotteril R.W., "Neoclassical Explanations of Vertical Organization and Performance of Food Industries", *Agribusiness: An International Journal*, 17 (1): 33-57, 2001.

Declerck F., "Evolution of Champagne wine makers' supply to retailers' pressure on price over 25 years: The management of a producer-retailer cycle", *Proceedings of the 88th Seminar of the European Association of Agricultural Economics (EAAE)* at Paris, France, 5-6 May 2004.

Declerck F., "Chain management and performance relationships in the Champagne wine sector", Proceedings from the 2nd International Conference on Chain Management, *Wageningen Agricultural University & the Foundation for Agri-Chain Competence*, pages 511-538, at Ede, the Netherlands, 30-31 May 1996.

Declerck, F. & O. Pichot, *Stratégies et performances dans le Champagne : marges de manoeuvre,* IGIA, December 1994.

Declerck, F. & B. Sherrick, "Profit structure relationships in US food industries", *Economie et Gestion Agro-Alimentaire*, n° 26: 12-17, janvier 1993.

Demsetz, H., "Industry Structure, Market Rivalry, and Public Policy", *The Journal of Law and Economics*, 16(April), 1-10, 1973.

Gaucher S., V. Hovelaque & L.-S. Soler "Coordination entre producxteurs et maîtrise des aléas de demande", *Cahiers d'économie et sociologie rurale*, 57:96-125, 2000.

Gaucher S., L.-S. Soler & H. Tanguy, "Incitation à la qualité dans la relation vignoble-négoce", *Cahiers d'économie et sociologie rurale*, 62:8-40, 2002.

Giraud-Héraud E., J. Mathurin & L.-G. Soler, "Quelle légitimité à des mécanismes de régulation de l'offre dans les Apellations d'origine protégée ?", *Economie Rurale* 217-218: 123-134, septembre-décembre 2003.

Laboissière J.L.,"Champagne en quête de stabilité", *Rayon Boissons*, 109: 179-188, juin 2003.

Laboissière J.L.,"Alcools blancs : Rhum-vodka, le duo gagnant", *Rayon Boissons*, 116:73-75, février 2004.

Malassis L., Economie agro-alimentaire, Ed. Cujas, Paris, 1973.

Ménard C. and M. Shirley (Eds), *Handbook of New Institutional Economics*. Kluwer Academic Press, Boston, 2005a.

Nelson P., Siegfried, J. & Howell J., "A simultaneous equations model of coffee brand pricing and advertising", *Review of Economics and Statistics*, 74 (1): 54-63, 1992.

Omta S.W.F. (Onno), Trienekens, J.H. & G. Beers, "A Framework for the KnowledgeDomain of Chain and Network Sciences", *Paradoxes in Food Chains and Networks*, Trienekens, J.H & S.W.F. Omta eds. Management Studies group. Wageningen Academic Publisher, The Netherlands, 2002.

Pérez R., *La gouvernance d'entreprise*, Ed. La Découverte, Paris, 2003.

Peterson H.C., Wysocki A.& S.B. Harsh, "Strategic choice along the vertical coordination continuum", *International Food and Agribusiness Management Review*, 4: 149-166, 2001.

Porter M.E., *Competitive Advantage: Creating and Sustaining Superior Performance*, The Free Presse, 1985.

Robicheaux R. & Coleman J., "The Structure of Marketing Channel Relationships", *Journal of the Academy of Marketing Science*, 22(1): 38-51, 1994.

Rogers, T.R., "Structural Chang in U.S. Food Manufacturing, 1958-1997", *Agribusiness: An International Journal*, 17 (1): 1-32, 2001.

Saulpic O. & H. Tanguy "Influence de la structure financière sur les choix stratégiques : étude de cas dans l'industrie du vin", *Cahier du LORIA* n°2002-05: 1-77, juin 2002.

Soler L.-G. & H. Tanguy, "Le fonctionnement des marchés entre vignoble et négoce dans le secteur des vins d'AOC: trois études régionales" *Cahier du LORIA* n°2002-03: 1-73, juin 2002.

Trienekens, J.H. & P.J. Zuurbier eds, *Second International Conference on Chain Management in Agri- and Food Business*. Department of Management Studies. Wageningen University, The Netherlands, 1996.

Weiss, L.W., *Concentration and Price*, Cambridge, MA: MIT Press, 1989.

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