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**THE WINE SECTOR IN FRANCE:
A TENTATIVE ECONOMIC SYSTEM DESCRIPTION**

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A financial analysis of the wine firms in France leading to a tentative economic system description of the wine sector

Abstract

The contribution of the wine firms to the French economy is not very well known, and due to broad differences in methodology, it is very difficult to measure the added value they produce. This can explain why, to our knowledge, a classic systemic approach of the wealth created by the various subsets making up the wine industry in France has previously never been undertaken.

Most of the results presented here are issued from applied research undertaken in 2000, and updated in 2002, which exhaustively lists and then analyzes (from a financial viewpoint) the French wine firms. This exploratory article will first describe the context and methodology of this research and explain why the analysis has been split between Still Wine Firms (SWF), mainly commercializing table and fortified wines, and Effervescent Wine Firms (EWF) mainly commercializing sparkling and Champagne wines. In a second part, it will present these French wine firms various values contribution to the system, along with some of their most striking typologies. In a third part, it will attempt to better define the economic weights of different subsets within the 'wine sector' system in France.

One of the main findings emerging from this research contrasts the widely accepted view in similar economic industrial sectors that 'bigger is better'. In France, the 'hectomaniac' businesses significantly under perform medium-sized firms with important vineyard properties... The fact that 'viticulture' is producing 50% more added value than the 'wine firms' is another revealing figure issued from this tentative system description: it tends to confirm the primacy of the 'origin' over the 'private brands' in France.

Introduction

As strange as it may sound, the contribution of the wine firms to the French wine industry is not very well known. Although it is the first agricultural production sector in value terms (8 900 millions Euros - MM €), and also the first industrial sector for its net contribution to the French commercial external balance (4 900 MM €), the total value produced by the wine industry in France is still unclear, and the shares of the added value it creates at production, distribution or consumption stages have never been thoroughly evaluated.

The **production** level (viticulture and cooperatives) and the **consumption** level have benefited from in depth research, contrary to the intermediate levels: the '**wine-firms**' (independent marketing entities, wineries, merchants or 'negociants' and commercial unions of cooperatives) and the wine **distribution** channels. Both of them are still considered as 'black boxes' in most of the economic literature aiming at a description of the wine sector. Methodological difficulties to measure the added value they produce are quite numerous. This can explain why there has been, to our knowledge, no classic systemic approach measuring the wealth created by each of these different subsets making up the 'French wine economic sector'.

Thanks to the results of an applied research run for the Onivins (National Office of the Wine Inter-professions) in 2000, and actualized in 2002, which exhaustively lists and then analyzes (from a financial viewpoint) the French wine firms, this tentative article will first discuss the context and methodology of this exploratory research. In a second part, the analysis has been split between 'Still Wine Firms' (SWF), mainly commercializing table and fortified wines, and 'Effervescent Wine Firms' (EWF) mainly commercializing sparkling and Champagne wines, and presents some of the SWF most striking typologies. A third part will be aiming at an original description of the 'wine firms' various values contribution to the system in an attempt to better define the economic weights at different stages of the 'wine sector system' in France. Once the 'wine firms' weight has been estimated, then the distribution level can be inferred (by subtraction) from available consumer data¹, and the whole system can then be reconstituted.

Part 1: Context and methodology of the research

2.1 The French wine sector: a simplistic view of the context

Broadly speaking, world wine competition today can be seen as a confrontation between the 'Old World' (Italy, France, Spain and Germany) and the 'New World' (California, Australia, South Africa and some South American producing countries):

- The 'Old World' has historically given a primacy to the origin of the grapes, and for centuries, has mainly promoted its 'appellations' through regional, family-owned businesses.
- The 'New World' supports the grape variety choice, and in the past decades, its large integrated wine firms have been seeking to develop strong private brands².

Regarding firms involved in the industrial sector, these phenomena should be reflected in the 'configurations' of strategy and structure, per D. Miller (1996), as well as in their financial structure and performance.

¹ Most of the estimations of economic aggregates used in this article come from publications obtained from the Economic Services (Division of Studies and Markets) of ONIVINS (National Office of the Wine Inter-professions), which is financing and centralizing most of the research and available statistics describing the wine sector in France.

² On the subject of 'branding' and the consequent firms search for economies of scales we refer the reader to D. Aaker (1996), J.N Kapferer and J.C. Thoenig (1989) or P. Aurier (1998).

We have always been surprised by the curious and unique metonymy in the food and drink sectors, which confounds the ‘grape’ into the ‘wine’ sector, from the vineyard to the consumer, in France³. This can be explained by the historic necessity for wine-making on the premises, whereas the careful choice and balance between natural and human factors when establishing a vineyard with its cellar were critical. Today technology development allows one to separate these ‘agricultural’ and ‘industrial’ activities.

Could this metonymy help explain the organization of the French wine sector and spark the continuous internal squabbling about the division of added value between ‘producers’ and ‘merchants’?

This opens the debate about the definitions of ‘agricultural’ sectors of the economy as well as the question of their “meso-analysis” (between micro and macro economy), as discussed by L. Malassis (1992) or J.C. Montigaud (1992).

Although we do not pretend to develop such a detailed analysis of the French wine sector in this paper, it might be worth mentioning that the results of the financial analysis of the French wine firms presented in part 2, lead us to propose an original systemic view about the French wine sector organization and the economic weight of its various subsets or stages from vineyard to the consumer’s glass.

2.2 Wine firms panel construction and weight estimation

1. A ‘large’ selection of wine related firms has been extracted from the data available through the SCRL-Diane financial database grouping French businesses by their mandatory fiscal declarations.
2. Within this first list, the following have been eliminated from the final selection if they had no direct wine activity or if they only had a ‘pure’ commercial role:
 - Brokers and wholesalers or distributors
 - All-purpose bottlers
 - Holdings and non-trading investment firms
 - Alcohol producers

This first selection was realized through a double-checking system:

- Cross-checking of firms selected from ‘private’ data bases such as French ‘Negociant’ Syndicates and the viticulture office of the Crédit Agricole bank
 - Verification of the basic data: Firm national identification number (Siret), address, number of employees, legal status, ...) by the Regional Offices of Onivins (occasionally using the data base of the regional winemakers syndicates).
3. A second selection was made in order to eliminate the wine businesses with less than 2.3 million € total sales in year 2000, and was complemented by ‘qualitative’ and ownership data extracted from the Financial Links (FIBEN) obtained from the French National Institute of Statistics (INSEE).
 4. Finally, this panel was completed by the complete financial data extracted from Diane-SCRL for the period 1992-2000, and split into a ‘Still (and fortified) wine firms panel’ (SWF) and a ‘effervescent (and sparkling) wine firms panel’ (EWF). Thanks to previous research, we had evidence of production and financial discrepancies in between these two groups (EWF require a re-fermentation of still wines, special handling, storage and bottling capacities, three years mandatory stocks in Champagne, etc.)

Due to the lack of economic measures of the wine firms activities, export sales statistics are the only strong reference we can compare our panel to. In this respect, the final selection of SWF with more

³ Economists and agricultural institutions define a ‘milk’ sector, not ‘cheese’ ; or a ‘wheat’ sector, and not ‘pasta’.

than 2.3 MM € of sales represents about 70 % of the French table wine export sales and 90 % of the French sparkling wine export sales.

Exhaustiveness of the Still Wine Firm (SWF) and Effervescent Wine Firm (EWF) panels

The sum of the total sales of the entire panel, which represents 75 % of the 18 000 MM € estimated for the wine sector at wholesale level, does not include some 200 cooperatives which do not make their accounts public (special research has thus been undertaken to determine this information).

On the other hand, the sum of declared exports by the firms of our panel is somewhat under-evaluated against the figures produced by the French foreign exchanges statistics, as they are supplied on an ‘ex-cellar’ basis in the financial declarations, when the Customs declarations are based on a ‘FOB’ basis.

Year 2000 MM€	No. of wine firms	Sales turnover	Export turnover (a)	Export share of turnover	Workforce	Total French exports (b)	a / b
TOTAL wine firms	691	13 241	4 109	31.0%	19 896	5 450	75.4%

For the SWF panel, we are only able to evaluate 70 % of the total French exports (described in exhibit 1) due to the following factors: some firms do not declare their export sales in their accounts, and the export sales of firms with less than 2.3 MM € sales can be very significant (especially from renowned Domains or Chateaux in Bordeaux or Burgundy).

The data in exhibit 2 is highly representative as it includes 90% of all EWFs, and direct export sales of small Champagne properties or cooperatives is quite limited.

When looking at these exhibits retracing the exhaustiveness of our panels, one can notice that the selection coverage has improved over the years, thanks to the cumulated efforts of the experts interviewed and the Onivins regional services. On the other hand, the decline observed in the year 2000 is simply due to a late deposit of the official accounts by some firms.

Part 2: SWF and EWF financial contributions and typologies

2.1 Financial analysis of the Table wines firms (SWF)

This representative panel of still and fortified wine firms with sales above 2,3 millions € accounts for 55 to 70 % (depending upon the year) of the total still wines exports of France. A characteristic of these firms is that they are quite small⁴. In fact, the average SWF size represents only 0.2 % of the total estimated market, and has decreased in relative weight since 1992. We will explain this further when measuring the concentration level of the industry.

⁴ This research is therefore positioned in the field of the ‘small businesses’ (SBE). The SBE financial specificities which have been useful to conduct this analysis can be found in A. Marion (1982), R.R. Pettit and R.F Singer (1985), J.S. Ang (1992), B. Belletante et N. Levratto (1995) or V. Colot et P.A. Michel (1996).

STILL WINE FIRMS (non cylindrical population sample)	2000	1999	1998	1995	1992
Number of still wine firms	566	569	553	373	344
Total Sales Turnover (total in MM€)	9 989.7	9 907.8	9 364.5	6 884.5	4 939.5
Average Sales Turnover (average in MM€)	20.1	19.3	18.7	18.5	14.3
French sales average turnover (MM€)	13.4	12.7	11.8	12.6	10.4
Workforce (average number of employees)	44.6	45.5	46.2	50.0	44.4
Export sales turnover (average in MM€)	6.7	6.6	6.9	5.8	3.9
Added value (average in MM€)	3.2	3.0	3.1	2.8	2.5
Total assets (average in MM€)	16.9	16.3	15.1	14.8	11.9

Recapitulating table of the still wine firm's activity

At first glimpse, average sales have grown by 40 % between 1992 and 2000, reaching a plateau in 1995 and showing a slight rebound in year 2000. Average export sales have grown (+ 72 % since 1992) with the economic boom following the early 90's crisis. Since 1998 there has been a slight regression.

The average number of employees does not correlate to performance. This demonstrates that some firms need to improve productivity, following the consumption crisis that began in 1991.

STILL WINE FIRMS	2000	1999	1998	1995	1992
Export share of turnover (%)	33.5	34.3	37.0	31.4	27.2
Added value / turnover (%)	21.2	20.7	20.7	19.6	17.9
Added value / workforce (K€)	99.6	92.9	87.8	70.1	58.1
Average total asset / Average turnover (%)	111.1	104.5	100.1	96.1	83.0

Recapitulating table of the still wine firm's activity

The total wealth created in the still wine sector in France, if we consider the added value as an estimator, has improved. This confirms that productivity per employee is growing, both in terms of sales and value created, although it is still relatively low compared to other food and drinks sectors in France.

The highly capital intensive nature of the wine business is confirmed, as more than 100 Euros of assets are needed in order to sell 100 Euros of wine (as of 1998). This is especially relevant considering that our panel excludes most of the vineyards and part of the cellars investments.

STILL WINE FIRMS	2000	1999	1998	1995	1992
Current income before corporate tax (average in MM€)	0.78	0.80	0.86	0.29	0.28
Net profit (average in MM€)	0.49	0.43	0.42	0.21	0.19
Current Income before tax / Turnover (%)	6.2	6.1	6.5	2.4	2.0
Net profit / Sales turnover (%)	4.0	3.6	4.0	1.4	1.3
Net Profit / Owners Equity (%)	8.8	8.5	9.0	4.5	5.1

Recapitulating table of the still wine firm's performance

An important finding of this financial analysis is the strong improvement of current profits (x 3), and the average net profit (x 2.5) from 1992 to 2000, both in absolute and relative value. Nonetheless, this can still be judged insufficient from an outside investor viewpoint and is even more significant when evaluating their Return on Investment (ROI) for which wine firms are relatively handicapped by their need for constantly acquiring tangible and intangible investments. It is only because they are relatively under-capitalized, and use high debt leverage, that the SWF in our panel reach a ‘satisfactory’ level of Return on Equity (ROE) as of 1998.

STILL WINE FIRMS	2000	1999	1998	1995	1992
Stocks (average in MM€)	5.5	5.1	4.9	4.6	1.9
Working capital requirement (average in MM€)	4.4	3.9	3.5	3.5	3.0
Working capital requirement / Sales turnover (%)	30.2	26.2	20.9	28.3	21.1

Working capital requirement table

Although there was a strong increase of inventories, a likely result of the economic crisis from 1992 to 1995, the need for working capital relative to sales has decreased up until 1998, due to increased credit obtained from grape producers or cooperatives. However, it has been growing rapidly ever since then, most likely as a result of an increase in customer credit.

STILL WINE FIRMS	2000	1999	1998	1995	1992
Owners Equity (average in MM€)	5.6	5.1	4.6	4.6	3.7
Owners Equity / Total asset (%)	29.0	27.8	27.0	26.5	31.3
Financial debts (average in MM€)	4.1	3.8	3.6	3.8	3.3
Current financial debts (average in MM€)	1.4	1.3	1.1	1.1	0.6
Short term debt / Total financial debts (%)	34.1	34.0	31.5	29.7	20.0
Financial interest and costs (average in MM€)	0.25	0.19	0.21	0.36	0.41
Interest costs / total debts (%)	6.1	5.1	5.9	9.6	12.3
Interest costs / added value (%)	7.8	6.4	6.7	12.9	15.9

Recapitulating table of the financial structure

The ‘satisfactory’ results obtained during the past few years (1996-2000) have lead to a reinforcement of owners’ equity, following a restriction of the debt level during the crisis (1991-1995). Some SWF have recently increased their leverage, however, in order to finance new investments and working capital requirements necessary for expanding sales.

The good news come from the decrease of bank interest charges following the drop in financial market rates, which represents a smaller share of the added value. The bad news come from the further increase of short term debt, weakening some ‘small’ firms facing a new wine crisis in 2001.

In brief, after difficulties during the 1991-1995 economic slump, the average SWF is in a favorable situation to overcome the emerging new depression. Nonetheless, some are fragile, as their equities and cash flows are insufficient to face new investments in quality improvements and sales promotion required by consumers. In particular, the recent trend to carry heavier stocks and the consequent need for working capital has mostly been financed by short-term loans, which will cause some re-financing troubles in the near future.

2.2 Financial analysis of the Effervescent wines firms (EWF)

This analysis should confirm the differences of financial structure and performance between ‘still’ and ‘effervescent’ wine firms as mentioned above.

This panel of sparkling and Champagne producers with sales above 2.3 MM € represents 70% to 85% of all French effervescent export sales.

EFFERVESCENT WINE FIRMS (non cylindrical population sample)	2000	1999	1998	1995	1992
Number of sparkling wine firms	129	133	122	95	80
Total Sales Turnover (total in MM€)	3 218.2	3 946.0	3 384.7	2 395.2	1 779.6
Average Sales Turnover (average in MM€)	29.2	32.0	29.7	25.2	22.2
French sales average turnover (MM€)	13.4	15.6	17.2	15.3	12.7
Workforce (average number of employees)	70.8	70.7	71.0	63.4	102.0
Export sales turnover (average in MM€)	15.7	16.4	12.4	9.8	9.4
Added value (average in MM€)	9.7	9.5	7.7	6.3	6.5
Total assets (average in MM€)	57.1	50.7	58.2	60.8	69.3

Recapitulating table of the sparkling wine firm’s activity

As compared to the SWF, we confirm that these businesses have quite different characteristics: larger average size (workforce and sales) and extremely important total assets in line with a high capital intensity. The EWF are also more dependent on international markets and produce greater added value than their still wine counterparts, as it could be expected.

The average firm represents 0.9 % (relative drop since 1992) of the estimated total effervescent wine sales.

The volatility of sales is more important: after a strong international growth following the 1991-1995 crisis, the EWF turnover fell after the peak of the millenium. The export rate is quite high in year 2000, as well as the added value, but this last ratio still does not match the high levels registered prior to 1992. The French market for Champagnes is still growing. But Champagne wines suffer from the competition of less expensive high quality sparkling wines, in particular during economic crises.

EFFERVESCENT WINE FIRMS	2000	1999	1998	1995	1992
Export share of turnover (%)	53.9	51.3	41.8	39.1	42.6
Added value / turnover (%)	28.7	28.1	24.8	23.2	29.4
Added value / workforce (K€)	146.2	188.8	147.0	106.4	64.0
Average total asset / Average turnover (%)	178.5	144.2	187.8	185.5	311.0

Recapitulating table of the sparkling wine firm’s activity

The improvement in productivity between 1992 and 1995 is quite high with a steep drop in the average number of employees; and the very slow rotation of the total assets to sales turnover slowly improved up until the year 2000. The added value created per employee can be compared to the best ratios obtained in other food or drink sectors. In fact, the effervescent wine sector looks much more ‘industrial’ when compared to the still wine sector.

EFFERVESCENT WINE FIRMS	2000	1999	1998	1995	1992
Current income before corporate tax (average in MM€)	5.2	5.1	3.4	0.49	1.2
Net profit (average in MM€)	3.5	2.9	1.9	0.4	1.7
Current Income before tax / Turnover (%)	9.8	12.0	7.1	0.03	5.7
Net profit / Sales turnover (%)	6.0	6.5	5.0	0.2	7.8
Net Profit / Owners Equity (%)	14.2	13.7	8.8	1.8	6.4

Recapitulating table of the still wine firm's performance

The 1991-1995 crisis has been quite detrimental in terms of profitability, which traditionally appeared to be two to three times higher than the still wine performance. The return on equity, a sensitive ratio for this sector highly dependent on financial markets, dropped to less than 2 % in 1995, only returning 'back to normal' by 1999.

EFFERVESCENT WINE FIRMS	2000	1999	1998	1995	1992
Stocks (average in MM€)	30.3	27.0	27.2	28.7	34.6
Working capital requirement (average in MM€)	31.6	27.0	27.5	29.6	37.0
Working capital requirement / Sales turnover (%)	93.6	70.4	84.5	88.6	166.0

Working capital requirement table

The stocks, which should represent 3 years of sales in Champagne, have dropped since 1992 up until 1999. The aging has certainly been 'externalized' to the small producers or cooperatives, the value of the bottles in stock has decreased, and the sparkling wine firms have eventually been more resistant to the slump of the early nineties.

The working capital requirement still represents about a full year of sales turnover, confirming the specificities of this 'capital intensive' sector in France.

EFFERVESCENT WINE FIRMS	2000	1999	1998	1995	1992
Owners Equity (average in MM€)	24.7	21.5	22.2	23.9	27.2
Owners Equity / Total asset (%)	34.6	31.3	28.3	27.9	39.4
Financial debts (average in MM€)	19.0	16.3	22.8	26.2	30.8
Current financial debts (average in MM€)	1.2	4.2	4.2	5.3	16.0
Short term debt / Total financial debts (%)	6.6	25.9	18.7	20.2	52.0
Financial interest and costs (average in MM€)	0.98	0.80	0.98	1.88	2.63
Interest costs / total debts (%)	5.2	4.9	4.2	7.2	8.5
Interest costs / added value (%)	10.2	8.5	12.4	29.6	40.6

Recapitulating table of the financial structure

Clearly, the crisis has been harmful for the effervescent wine firms, with net losses registered in the average owners equity in 1995. Since then, the average level of debt has been dropping, but the recourse to short-term loans becomes relatively more important as interest rates become more

attractive. The new crisis of 2000 leads to a global deterioration of these firms' financial structures, almost certainly linked to inferior sales performance and more inventories.

In short, after a calamitous period during the early nineties, the EWF of our panel have recovered to a sound position with 'satisfying' financial performances at the end of the last decade. However, the current crisis threatens to cause damage due to increased leverage following the reduction of equity in the capital structure of some of these French EWF.

2.3 Some SWF selected typologies

2.3.1 Still Wine Firms size impact (based on the number of employees)

The size classification used for the year 2000 follows a classic repartition:

- Very small firms of 10 employees or less,
- Small firms of 11 to 20 and 21 to 50 employees,
- Medium size firms of 51 to 200 and 201 to 500 employees,
- Large firms of more than 500 employees.

Only three of these businesses have more than 500 employees. Therefore, this research is dependant upon the 'small business' (SBE) concepts and theories, as SBEs do not share the same management problems as large companies. The differences are generally related to governance and financial issues (see footnote n°4).

439 STILL WINE FIRMS (* = average in MM€)	Workforce category					
	Less than 10	From 11 to 20	From 21 to 50	From 51 to 200	From 201 to 500	More than 500
Number of still wine firms	127	92	142	64	11	3
Workforce (average)	6	15	35	99	299	763
Sales turnover (*)	6.6	11.2	11.9	46.4	150.5	377.8
- Including export turnover (*)	2.4	3.2	5.0	15.9	44.5	43.1
- Export share of turnover (%)	36.3	29.2	42.7	34.4	29.6	11.4
Added value (*)	0.6	1.5	2.5	6.8	30.3	49.3
- Added value /Sales turnover (%)	9.8	13.6	21.3	14.7	20.2	13.1
Current income before corp. tax (*)	0.2	0.6	0.7	1.5	3.1	7.3
Net profit (*)	0.2	0.5	0.4	1.0	1.2	2.5
- Net profit / sales turnover (%)	3.3	5.2	3.8	2.2	0.8	0.7
- Net Profit / Owners equity (%)	14.5	13.1	9.1	8.4	4.5	3.6
Total assets (*)	4.6	11.0	12.1	39.6	115.6	238.2
- Average total asset / Sales turnover (%)	70.1	98.0	102.1	85.4	76.8	63.1
Total net fixed asset (*)	0.9	3.8	2.8	9.0	32.2	73.9
- Including land and vines (*)	0.08	0.1	0.6	0.9	2.3	1.7
- Land / net fixed asset (%)	8.3	3.3	23.3	10.2	7.4	2.4
Stocks (*)	1.2	3.2	4.6	14.9	31.1	50.2
- Stocks / Sales turnover (%)	19.4	28.6	39.3	32.2	20.7	13.3

Owners equity (*)	1.4	4.4	4.9	12.4	27.2	69.8
- <i>Owners equity /Total balance sheet (%)</i>	32.1	40.7	40.9	31.3	23.5	29.3
Total debts (*)	3.1	6.4	7.1	26.9	85.7	157.6
Current financial debts (*)	0.3	0.5	0.7	4.4	6.7	33.3
- <i>Short term debts. /Total balance sheet (%)</i>	7.9	4.6	6.0	11.3	5.8	14.0

Recapitulating table by workforce categories, year 2000.

Means differences in this table are validated by statistical tests (Student t), with the obvious exception of the few 'Large Businesses'. For most of the variables, however, their standard deviation is quite high, confirming that the results shown in each class are, in fact, quite heterogeneous.

The size criterion seems to have a role to play with the increase in export sales level and capital intensity (land, vines, buildings and equipment) up to 50 employees, but this link does not hold for the larger SWF.

Counter intuitively, the net profitability of sales of these wine firms decreases with the increase of the activity (from 3.25 % for the smallest category to 0.6 % for the largest), and the situation is similar for the ROE, dropping from 14.4 % to 3.5 % for the firms with more than 500 employees. In short, the larger the wine firm, the lower the profit and financial return for its owners...

Surprisingly, small businesses of 21 to 50 employees produce the highest level of added value, but are not the most profitable for their owners, as they are relatively more capital intensive, with large working capital requirements.

This seems to contradict expert reports recommending the concentration of offering in the Old World in order to successfully compete with the oligopolies dominating the New World wine industry...

2.3.2 Still Wine Firms export rate impact

Only firms that export and have sales above 2.3 MM € have been analyzed. They roughly represent 75% of all French SWF, and have cumulated export sales of 2.600 MM € or 68% of total French exports for this product category.

417 STILL WINE FIRMS (* = average in MM€)	Export share of turnover category				
	Less than 10%	From 10 to 25%	From 26 to 50%	From 51 to 75%	More than 75%
Number of still wine firms	106	79	84	88	60
Workforce (average)	40	58	39	48	33
Sales turnover (*)	19.2	30.8	14.2	18.7	15.1
- <i>Including export turnover (*)</i>	0.5	5.1	5.5	11.3	13.0
- <i>Export share of turnover (%)</i>	2.9	16.7	38.8	60.8	86.0
Added value (*)	2.2	4.3	2.2	3.9	3.4
- <i>Added value /Sales turnover (%)</i>	11.7	14.1	15.5	21.0	22.5
Current income before corp. tax (*)	0.3	0.8	0.4	1.4	0.9
Net profit (*)	0.2	0.5	0.3	0.8	0.6
- <i>Net profit / sales turnover (%)</i>	1.3	1.7	2.5	4.7	4.0
- <i>Net Profit / Owners equity (%)</i>	7.4	7.8	7.9	9.0	10.8
Total assets (*)	9.2	23.1	14.2	25.6	15.4
- <i>Average total asset / Sales turnover (%)</i>	48.0	75.0	100.0	137.3	101.7

Total net fixed asset (*)	2.3	8.1	3.1	6.5	3.2
- Including land and vines (*)	0.1	0.4	0.2	1.1	0.7
- Land / net fixed asset (%)	2.7	5.4	6.1	10.2	5.7
Stocks (*)	3.2	6.8	4.5	9.8	5.6
- Stocks / Sales turnover (%)	35.3	29.6	31.9	38.3	36.8
Owners equity (*)	5.8	15.8	9.5	15.6	9.8
- Owners equity /Total balance sheet (%)	0.4	2.1	2.2	2.3	0.7

Recapitulating table by export share of turnover category, year 2000.

About 35% of the SWF export more than 50% of their total turnover, and 26% of this firms export between 26% and 50%.

Their rates of profitability and return are very similar to the non-exporting firms. There is no general profit premium on the international markets, although the firms with the highest export rate (more than 75 %) offer the best return to their owners (ROE greater than 11 %) , even if they are not the most profitable (4 %). We remind the reader that the French wine market is, by far, the largest and possibly most chauvinistic market in the world.

It is not surprising to find a large number of exporting SWF situated in Bordeaux (31%) and Burgundy (16%), with high levels of export rates (most of them in the 51% to 75% bracket). The Languedoc-Roussillon is third with 14%.

In short, there seems to be a regional concentration of exporting SWF in France, linked to the reputation of the wine region or its relative size. There is a negative correlation between size of the firm and export rate: volume based strategies lead to lower profit rates and higher leverage. Likewise, there is a positive correlation between export rates above 50% and financial performance. Quite in the same way as the size comparison, a small number of ‘configurations’ appear among the exporting SWF: for example, firms with the best performance in owner’s equity exhibit heavy capital intensity above a rate of 25 % of exports (i.e. the better elaborated, the more these wines are exported?).

2.3.3 Still Wine Firms degree of concentration

Theories that tend to demonstrate the efficiency of a critical size⁵ have found applications in most sectors of the food and drink industrial sectors. A handful of oligopolies dominate most of the consumer markets in developed countries, with cumulated shares of 60 to 80 % of total sales. The remaining ‘niches’ on the ‘fringes’ are occupied by a myriad of small businesses as shown by J.L. Rastoin (1997).

For reasons of symmetry, if a merchant firm in France must have a larger market share in order to successfully face fierce market competition, then we should observe a comparable and growing concentration among the SWF and EWF surveyed. This hypothesis can easily be verified when calculating the weight of the 4 and 8 largest SWF and EWF, using their consolidated financial data (cumulated sales of all firms within the same financial group), during the past ten years.

➤ SWF (table and fortified wines)

Still wine firms (SWF) (Turnover > 2.3 MM€)	2000	1998	1995	1992
Panel number of still wine firms	545	515	462	344
Turnover from the first SWF	657.7	689.2	466.0	315.7

⁵ We remind the reader that there are almost no economies of scale in agriculture above a slowly increasing but given level. On the other hand, economies can be quite significant both in the industrial production and the marketing of a brand.

Turnover from the second SWF	474.6	419.5	368.6	294.6
Turnover from the third SWF	378.7	331.9	270.2	174.6
Turnover from the fourth SWF	308.8	215.6	183.4	160.3
Cumulated turnover: first to the fourth SWF	1 819.9	1 656.3	1 288.4	945.3
Total SWF turnover	9 975.2	9 374.5	7 016.1	4 939.5
<i>Weight of 4 (%)</i>	<i>18.24</i>	<i>17.67</i>	<i>18.36</i>	<i>19.14</i>
Turnover from the fifth SWF	261.4	202.2	172.0	136.5
Turnover from the sixth SWF	199.0	180.9	117.3	135.6
Turnover from the seventh SWF	162.0	160.0	102.9	116.5
Turnover from the eighth SWF	155.6	112.7	99.9	85.0
Cumulated turnover: first to the eighth SWF	2 598.1	2 312.2	1 780.7	1 419.1
Total SWF turnover	9 975.2	9 374.5	7 016.1	4 939.5
<i>Weight of 8 (%)</i>	<i>26.05</i>	<i>24.67</i>	<i>25.38</i>	<i>28.73</i>

Cumulated weight of the largest SWF in France

After a tendency to a net de-concentration (- 1.5 points for the 4 largest and - 4 points for the 8 largest) in the still wine sector between 1992 and 1998, the concentration increases in year 2000 for both the 4 and 8 largest firms of our panel. Some changes appear for the second and third places over time.

It is worth pointing out that the largest SWF (in fact a few regional SWF, within a common financial group, which have been consolidated) only represents 6.6 % of the total panel sales turnover.

- **EWF (sparkling and Champagne)**

Effervescent Wine Firms (EWF) (Turnover > 2.3 MM€)	2000	1998	1995	1992
Panel number of effervescent wine firms	129	122	95	80
Turnover of the first EWF	1 152.8	1 005.4	756.5	350.3
Turnover of the second EWF	232.8	250.4	175.8	161.7
Turnover of the third EWF	196.5	230.6	157.3	112.2
Turnover of the fourth EWF	182.5	176.8	156.3	100.9
Cumulated turnover: first to the fourth EWF	1 764.7	1 663.4	1 246.0	725.1
Total EWF turnover	3 229.1	3 414.9	2 429.3	1 779.6
<i>Weight of 4 (%)</i>	<i>54.65</i>	<i>48.71</i>	<i>51.29</i>	<i>40.70</i>
Turnover of the fifth EWF	150.1	141.1	124.1	99.7
Turnover of the sixth EWF	112.0	122.8	73.5	85.8
Turnover of the seventh EWF	110.8	80.5	56.6	79.5
Turnover of the eighth EWF	87.4	76.1	56.6	53.3
Cumulated turnover: first to the eighth EWF	2 225.3	2 084.2	1 557.0	1 043.7
Total EWF turnover	3 229.1	3 414.9	2 429.3	1 779.6
<i>Weight of 8 (%)</i>	<i>68.91</i>	<i>61.03</i>	<i>64.09</i>	<i>58.60</i>

Cumulated weight of the largest EWF in France

As we could expect due to their more ‘industrial’ activity, not only is the EWF sector much more concentrated than the SWF sector, but this phenomenon continues with an increase of 14 points for the 4 largest EWF (and 10 points for the 8 largest) from 1992 to 2000. Contrary to the still wine activity, it follows the general path of the other food and drink sectors in France.

There is a clear leader within this industry, with a weight of 19 %, growing to 35 % of the censed cumulative sales of the sparkling and Champagne businesses panel. Some changes appear among the other places and a new firm emerges to reach the fourth place during this period.

There is a ‘counter-intuitive’ economic evolution in the wine business in France, with a quite stable ‘atomisation’ of the still wine firms.

This leads us to propose another complementary explanation aside from the choice of ‘grape origin’. It comes from a ‘configuration’ combining very traditional ownership and governance: more than 75 % of the firms in our panel are family owned, and 16 % are still fully controlled by a sole and exclusive owner, although the financial analyses above clearly demonstrated a need for more investors and equity in this highly ‘capital intensive’ industry. The survival of this specificity in France can be compared to some arts and crafts or other highly personalized businesses: the ‘confidence’ of the consumers appears to be higher in a vineyard owner or regional merchant, guaranteeing the origin / quality of the grapes and traditional wine making, than its trust for an industrial product or brand.

Part 3: a tentative scheme to describe the French wine economic system

The different levels (or stages) of the system

Viticulture

Almost certainly viticulture is the best-known aspect of the system, thanks to the Agriculture census of year 2000, as well as, the national and regional studies run by the Statistical Services of the Agriculture Ministry. There is little uncertainty about the size of the French vineyard (880,000 ha), which yield an average of 65 hl/ha and reaches an average⁶ production of 57 million hectoliters (MM hl), regrouping the output of the 38,000 independent grape growers and wine producers and the 850 collective winemaking cooperatives (owned by the farmers, they are considered at the ‘viticulture level’).

It has been estimated in this census that the 57 MM hl of wine produced by French agriculture represented slightly less than 9 000 MM € in year 2000. This wine, which is yearly available at the ‘viticulture level’, is either to be sold in bulk (part of it to be distilled) or to be bottled at property level. A rough estimate of the wealth produced by these businesses can be approached by the sum of the added value⁷ they produce. It can be evaluated at 60 to 70 % of the total viticulture sales turnover, representing 6,000 MM € at ‘property’ level (independent producers and cooperatives).

Stable stocks (42 MM hl equivalent to about 9 months production), distillations (8 to 9 MM hl for Armagnac, Cognac, Brandy and industrial uses) and imports (5 to 6 MM hl of bulk per year in between 1992 and 2000, mostly from Italy and Spain) leads to a reliable evaluation of 50 MM hl for the French production of commercial wines at the ‘viticulture level’.

Wine firms

Before our first attempt to define the population of these firms, which constitute the spearhead of the French wine industry to capture food and drink distribution in France and on foreign markets,

⁶ Worked out for the 1990 decade

⁷ For a discussion of the measure of ‘value created’, see J. Caby and G. Hirigoyen (1998).

only partial and private information (from the French *Négociants Syndicate* and the viticulture office of the *Credit Agricole* bank) were available.

The French National Institute of Statistics (INSEE), within its ‘industrial classification’, does not specifically define a ‘wine sector’: it is in fact represented on the agricultural side (independent properties, cooperatives), on the industrial side (wineries, bottlers, etc.), as well as on the commercial side (‘*négociants*’, merchants, brokers, wholesalers, etc.). This explains why it has been quite difficult to settle upon both the boundaries and the weight of this ‘intermediary’ activity. In particular, there are large uncertainties about the real activity status of some wine firms and about the commercialized flows they represent:

- An estimated 34 % of the availabilities are directly sold in bottle to the consumer or the distribution channels by the viticulture level (mostly independent growers, ‘bottling at the property’),
- A few hundred among the 38,000 independent wine-farmers also market wines others than their own, and can be assimilated to small ‘merchants’,
- Most cooperatives either sell in bulk to merchants or to their marketing unions, but they also bottle and export a growing share of their own production,
- More cooperative unions have developed their own private ‘*négociant*’ business, buying wine from other producers and cooperatives. A few of them, among the largest, have also taken over some of the largest regional ‘merchants’ in the past twenty years.
- The food and drinks distribution supermarkets oligopolies (5 centralized buying offices in France representing more than 60 % of the ‘off’ sales to the consumer) have developed their own assembling and bottling centers.

We finally have to mention that the amount of double counts, which can be quite important, will have to be evaluated, thanks to the use of the ‘added value’ concept, which discounts all internal purchases within this level of the system.

The first part of this article has been describing the methodology used in order to try and overcome these pitfalls in the measurement of the cumulated ‘weight’ of the firms composing this intermediate economic level.

In short, our estimation of the value produced is based upon the French wine firms panel constituted for *Onivins*. It agglomerates almost 550 French wine firms with sales of 2.3 MM € or more. French wines export figures, which represent the only reliable data about the commercialization of the ‘wine firms’ level⁸, allowed us to compute a ‘correction coefficient’ for the sales and added value obtained from our panel (which represents about 75 % of the total value of French wine exports), in order to estimate the total sales of the sector to distribution channels.

The estimated sales given in the table below show a cumulated value of 18,000 MM € (of which 30 % is exported), which is highly unsatisfactory, as it includes double counts either from firms also belonging to the ‘viticulture level’, or from other wine firms.

Year 2000 MM €	Panel: Export sales	France exports (customs)	Correction coefficient	Panel: Sales in France	Estimation of sales in France	Total sector estimated sales
Still Wine Firms (SWF)	2 621	3 807	1.45	7 389	10 732	14 539
Effervescent Wine Firms (EWF)	1 488	1 643	1.10	1 743	1 925	3 568
TOTAL	4 109	5 450		9 133	12 657	18 107

⁸ Thanks to the French customs export declarations aggregations and the French Center for External Commerce (CFCE) statistical work.

A similar adjustment of the ‘added value’ produced by the wine firms of the Panel gives an estimate of 4,000 MM €. It allows us to eliminate approximately 5,000 MM € of double counts, and reach a final evaluation of total turnover amounting to 13,000 MM €.

This figure corroborates a commonly evocated figure when guessing the ‘economic weight’ of the wine sector in France.

Year 2000 MM€	Correction coefficient	Panel: Added value	Total sector estimated added value
SWF	1.45	1 833	2 658
EWf	1.10	1 255	1 380
TOTAL		3 088	4 038

As total French wines export sales are 5,500 MM €, it therefore leaves 7,500 MM € to be sold within French distribution channels.

Wine firms sales in France and distribution channels purchases

The available data retracing sales of the wine sector to the various distribution channels can be either very precise and reliable or quite vague and approximate, depending upon their degree of organization or concentration.

Clearly, the distribution panels summarizing supermarket chain sales give a very accurate figure (rounded here at 13 MM hl for a value of 3,000 MM €), and the recent restaurant panel financed by Onivins defines volumes of still wine sales bought at 3 MM hl and 1,000 MM €. However, the direct ‘cellar door’ sales, offers made to the consumer through specialized stores (off-licenses), and the wine consumption of foreign visitors in France. Hence, the destination of about 7 MM hl still remains unexplained...

Wine consumption in France and consumer purchases

This is a highly reliable figure, due to licensing in France by the Indirect Rights and Taxes Office. It reaches 32 MM hl, and corresponds to 58 liters consumed per capita, for an estimated value of 13,000 MM € purchased by French households, including a 19.6 % Value Added Tax (VAT) (or almost 11,000 MM €, excluding VAT). This would represent an added value produced by the French distribution Channels of around 3,500 MM €.

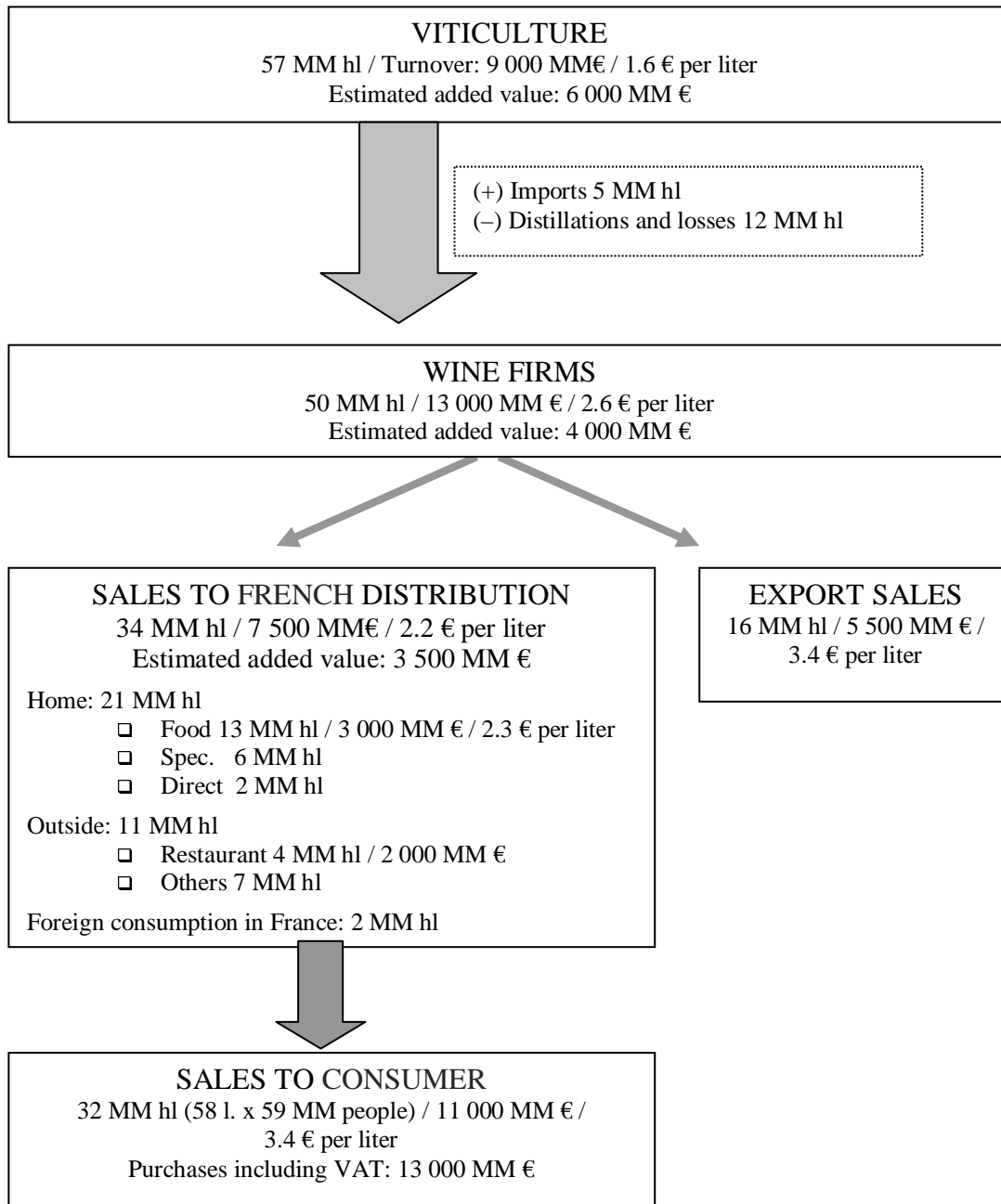
The ‘system’ diagram presented below tends to offer a synthetic view of the French wine sector production with the relative weight of both sales and added value at each stage, revealing the ‘black boxes’ at the intermediate levels: the ‘wine firms’ and the distribution.

The total added value produced by this economic sector reaches an estimated 13,500 MM €, split in between viticulture (6,000 MM €), wine firms (4,000 MM €) and distribution channels in France (3,500 MM €).

It should only be seen as an initial exploratory approach of this question, as long as the uncertainties concerning quite a few figures cannot yet be totally clarified.

Because some parts of the French wine industry remain unknown or vaguely estimated, the data presented in Flow Chart 1 (the ‘wine economic system’) have been rounded, after examination of the coherence of each system level as compared to the level above or below.

Flow chart 1: the 'wine economic system'
 An estimated and simplified view in France (year 2000)



Conclusion

Some strong methodological trends emerge from this exploratory research about the wine sector in France. They come from the unique aspects of the original census of French wine firms, designed to find their position, weight and financial characteristics, linked with more frequent ‘configurations’, within this highly successful economic sector of the French food and drink industry.

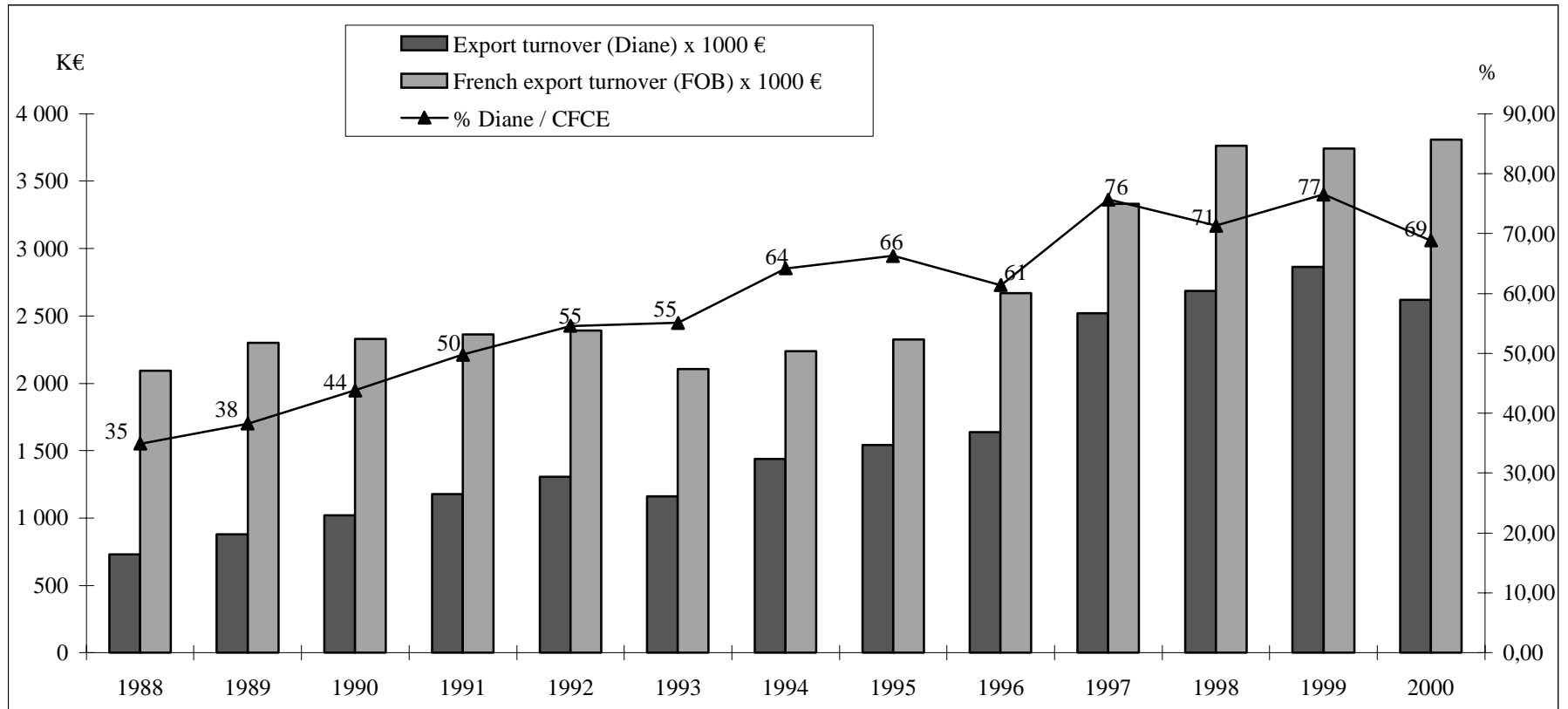
- This work to reach an eventual exhaustive listing of the French wine firms confirms the thoughts emerging from previous research. That is the potentially fruitful mean, thanks to a micro-economic census leading to a sector level analysis, to describe a largely unknown macro-economic situation. This methodology authorizes some new evaluations and hypotheses, such as the real economic weight of the sector, its regional impact, either a dynamic comparison of its concentration over the years, or a financial estimate of the strengths and weaknesses of the levels or businesses composing the ‘system’.
- Although, the panel is highly representative of the entire population of wine firms in France, the first unique aspect of this specific sector is the large heterogeneity of the firms’ characteristics. Therefore, the possible inferences are limited by the low level of significance of some of the statistical tests. This intrinsic weakness is, from our point of view, satisfactorily compensated by the multiple cross views and coherence controls. These controls have been used in order to validate the links found in the macro-economic exploratory description of the sector and also between size, export rates, performance, structure, governance, etc. of the wine firms level.

Another characteristic emerging from this research is that, contrary to the widely accepted economic view in similar economic industrial sectors where ‘big is beautiful’, there is no sign of concentration in the still wine business, when the contrary is true for the effervescent wine firms in France. This finding contradicts all expert reports recommending an offer concentration in the Old World, in order to successfully compete with the oligopolies dominating the New World wine industry. In France, the ‘hectomaniac’ businesses significantly under perform the medium firms with strong territory legitimacies...

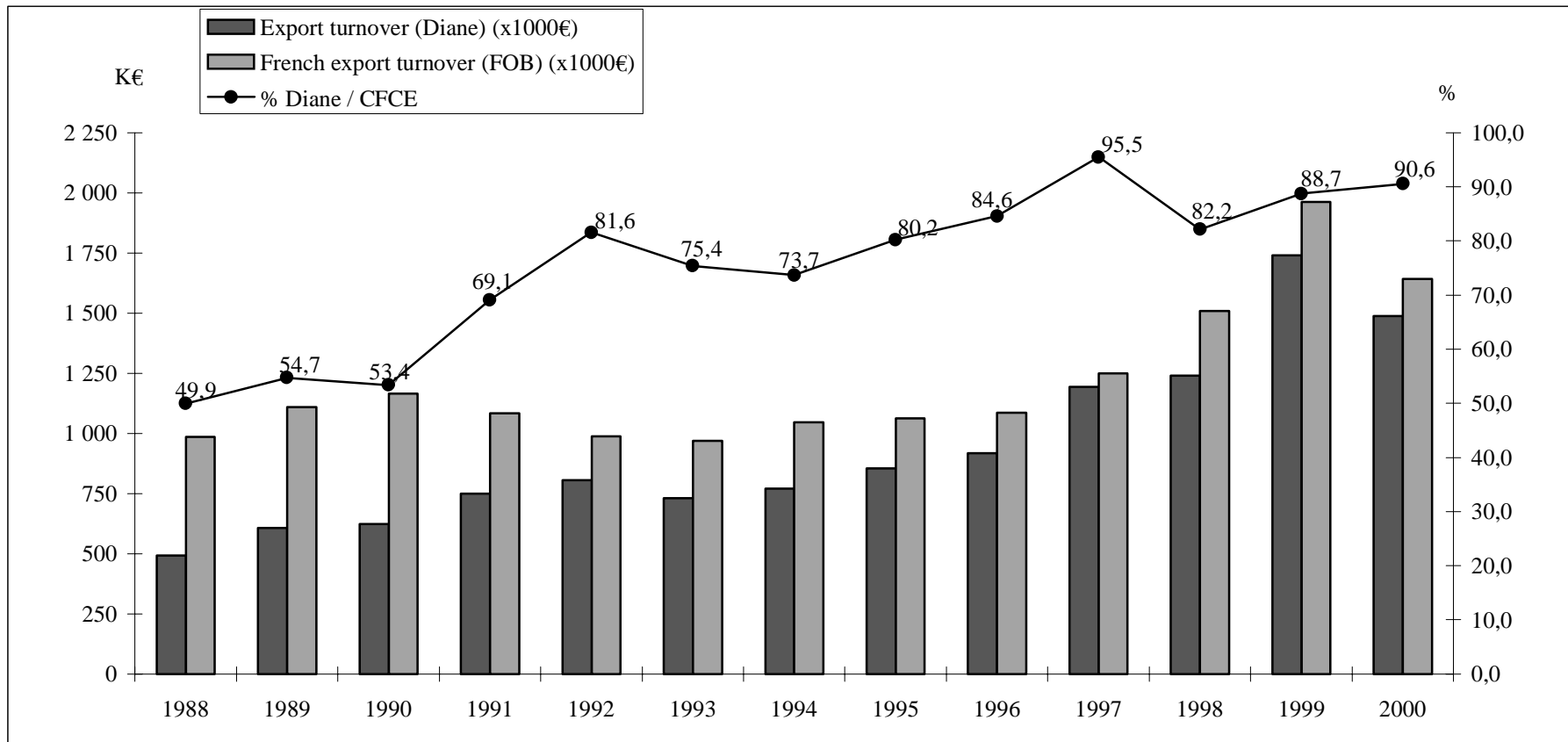
Some weaknesses of this exploratory article are quite explicit: the still incomplete exhaustiveness of the census, the well known limits of the financial data bases used, lead time in the publication of financial information of most firms, and the subjective choices of the ‘pertinent’ ratios and analyses performed. Some others are implicit such as the very wide heterogeneity within the firms or typologies of our panel, which reinforces the need for cautious interpretation of the main findings presented above.

Finally, the question of the need for more in depth research, through an exhaustive ‘strategic and prospective’ survey among the 700 wine firms (complemented by a current research of about 250 cooperatives), with sales above 2.3 MM €, should be addressed. In particular the atomisation of the offer, the dominant family governance, the strong link to the wine production region all leading to a high volatility of the financial performances and some financial structure fragility during the lows of the wine market cycles, could, in our view, justify to take this research further.

DIANE data representativeness in comparison with French still wine exportation



DIANE data representativeness in comparison with French sparkling wine exportation



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