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**STRUCTURAL ANALYSIS OF THE PLACE OF WINE IN  
BRAZIL**

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Supervisor: Paulo Roberto de Mendonça Motta

**FREDERIC DARTAYRE**

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## **Abstract**

With the constant decrease of the wine consumption in traditional winemaking countries, more and more Brazil is seen as an appealing market. But the country also pretends to become an international player of winemaking in its own right.

Both the participants of the Brazilian wine industry and the foreigners trying to get advantage of this promising market are facing new challenges to develop the consumption of wine in the world's fifth largest country.

Among all the possible actions to be taken in that sense, it also is worth taking time for a collective thought on the place of wine in the country, as well as the factors that shape it. What are these factors, which ones really make the difference, and what is their respective impact on the evolution of the place of wine in the country?

After drawing the big picture of the wine market situation, this thesis tries to identify the levers of the evolution of the place of wine in Brazil. Using the tools of prospective, it aims at putting into perspective the different driving forces that influence its development, and in particular the relative influence of the political drivers. This paper also intends to be a first step of a prospective study as it constitutes a solid base for scenario planning.

This paper is divided in five chapters starting with "introduction", followed by chapter 2 "Theoretical framework". Chapter 3 is "Methodology", followed by chapter 4 "Description and analysis of the results". Finally the results are discussed and concluded in the last part "Conclusions and implications for future studies".

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## **Table of Abbreviations**

BRL: Brazilian Real

CIA: Central Intelligence Agency

GDP: Gross Domestic Product

IWSR: International Wine and Spirit Research

L: Liter

MHL: Million Hectoliters

ML: Million Liters

OIV: Organisation Internationale de la Vigne et du Vin (International Organisation of Vine and Wine)

UN: United Nations

UNCTAD: United Nations Conference on Trade and Development

## **1. Introduction**

The history of wine in Brazil really started with the intensification of the immigration, especially from Italy, during the last quarter of the nineteenth century. Italian immigrants settled in the state of Rio Grande do Sul and sparked off the winegrowing industry, in particular in the sub-region of Serra Gaúcha.

On the international scene, in 2008, Brazil ranked fifteens for the wine production. The same year it was the twenty-fourth importer of wine in volume and twenty-sixth in value (OIV, 2010). One has to admit that these numbers level with the relative importance of wine in the life of Brazilians: they are not very impressive yet.

Nowadays, the average consumption of wine in Brazil is about two liters per capita and per year. It is relatively low, especially if compared with about fifty to sixty liters in countries such as Italy or France. But it is also the reason why there is a strong potential increase.

Observers expect that the growth of the wine consumption in Brazil will remain strongly positive for the next years (IBRAVIN, 2009), whereas the evolution in traditional winemaking countries is already negative for several decades (OIV, 2010).

Therefore, it is not a surprise that European producers, among others, now see the country's 190 million inhabitants as an appealing potential market.

Besides the potential market it represents, Brazil has the potential to become an international player of winemaking in its own right. Indeed Brazil now records extremely promising performance in wine production. Nonetheless, according to observers, the production of high quality grapes remains far below Brazil's production capacity. Winemaking is still in its infancy, but it is growing (WINE BUSINESS INTERNATIONAL, 2007).

While Brazil is on his way of becoming a more significant participant in the regionally distinct and fine wine market, the actors of the Brazilian wine industry are confronted to a very competitive and constantly evolving environment.

Among all the actions to be taken to reach this objective – for instance, marketing efforts to develop the consumption, rationalization and clarification of the roles of the industry structures and research organizations – It also is worth taking time for a collective thought on the place of wine in the country, as well as the factors that shape it.

## **2. Stakes**

### ***2.1 A competitive environment: looking toward the future***

International wine business is flourishing and promising. It is very competitive too and investments often are long-term investments. The participants have strategies, and quite naturally the strategic approaches need foresight of the competitive environment.

Therefore most of the winemaking countries invest in foresight strategic studies or prospective studies. Most of them share the common objectives of positioning the wine industry in question in a global perspective, with a focus on anticipating the sector evolution in the long run, through the analysis of the long-term trends and risks of rupture.

“There is no favorable wind for the man who doesn’t know where he is going”, said Seneca. Godet commented: “Action becomes meaningless without a goal and only anticipation points the way to action and gives it both meaning and direction” (GODET, 2004).

Prospective studies have been conducted extremely successfully by the Australian wine sector, which published “Strategy 2025” in 1996, a landmark document that “created a new unity and purpose”, according to chairman K. McLintock (MCLINTOCK, 2007). In 2007, the Australian wine sector published a new document, “Directions 2025”, considering that “[...] after a decade of unprecedented change in global wine trading conditions, [they] need to reassess the priorities and challenges facing Australian wine, most of which were anticipated in “Strategy 2025”. As a self-reliant sector that drives its own destiny, [they] must continue to react and adapt to changing market needs and conditions”.



In particular, through the past decade, Australian wine has become subject to a significantly more competitive global environment, has been confronted by an imbalance between its supply and demand, and has run up hard against the realities of climate change and scarcity of irrigation water (MCLINTOCK, K.; CAILLARD, A.; COUCHE, S.; DePALMA, M.; FORTUNE, J.; HENRY, P.; HøJ, P.; HORGAN, T.; LOWE, D.; McKENZIE, M.; ODELL, J.; PIRIE, A.; SOUTTER, J.; STANFORD, L.; STRACHAN, S.; TOLLEY, S.; WOODS, D., 2007).

Prospective is not about trying to predict what will happen in the year 2025 or 2030. Pierre Aigrain once commented: “Prospective is not about indulging in fantasies about determinism or potential events in the future based upon extrapolating the past. Prospective simply enumerates the possibilities, and confronts prevailing trends and revealing facts; perspective doesn’t pretend to announce what will happen, but rather offers a method to achieve the desirable. Above all, prospective encourages society to choose among fundamental options. [...] Everything will not be decided in one meeting in 1968. Therefore, it’s not about defining an exact solution for 2020 in 1968. Prospective is flexible and allows for continual re-evaluation so that society may make the most appropriate choices for the future as events unfold and updated information is available.” (AIGRAIN et al., 1968). The studies conducted by the Australian wine sector suit perfectly this approach of prospective, as it is a flexible and iterative process whose objective is to make the most appropriate choices for the future.

Australian wine sector is far from being the only one to conduct such prospective studies. Most of the traditional wine-growing countries are regularly conducting the same kind of studies, and new world winemaking countries, in particular Argentina, Australia, Canada, Chile, Mexico, New Zealand, South Africa and the United States follow the same direction (MCLINTOCK, 2007).

## **2.2 *Wine politics and actors’ strategies***

In “Wine Politics”, T. Colman compares the very different histories and trajectories of the wine industries of France and the United States, worlds apart in terms of government involvement, industry organization, and cultural context. From that

foundation, Colman catalogs the myriad ways in which wine around the globe is impacted by a long list of what might seem to be outside forces, ranging from gangsters to regulators to self-appointed wine critics. “Critics and commentators widely acknowledge the importance of the growing area and winemaking style in creating what ends up in the bottle. But, more than wine consumers realize, politics matters, too. Politics determines not only which grapes grow where, what can be written on the label, which wines are exported or imported, which wines are available in local stores, and how much a wine costs, but, perhaps most important, it also affects the quality of the wine in the bottle.” (COLMAN, 2008)

Brazil is expected to be on the brink of being one major market for wine in the world as well as becoming a participant of the fine wine production on its own right. These two dynamics are certainly related somehow, and both depend on various actors, whose interactions are worth being examined, since they will shape the future of wine in the country.

Indeed, the actions of the different players involved in the Brazilian wine scene will shape the future of wine in Brazil and then strategic analysis of the interplay of these actors constitutes an important step if one wants to figure out how the wine scene could evolve. Such an analysis “aims at resolving, or at least recognizing, the conflicts amongst actors who are all pursuing their own interests. The interplay of these actors will certainly condition the evolution of the system under study” (GODET, 2006). The actors affecting the system in question include grape and winegrowing industry, authorities, importers, distributors, customers and citizens, etc.

Such analyses allow the participants to better understand the “important relationships amongst actors, as well as their respective convergences and divergences vis-à-vis several important stakes and objectives related to these stakes”, and, as a consequence it also allows the actors to better reach their objectives and build a winning strategy.

### **3. Problem**

Actors of the Brazilian wine scene are multiple, they are of different natures and they all have influence on different factors determinant for the future of wine in Brazil. What are these factors, which ones could be considered the most important or influential, and what is their respective impact on the perspectives of wine in the country?

### **4. Objectives**

The general purpose of this paper consists in identifying and evaluating the factors of evolution of what I have called the place of wine in Brazil.

Through the identification of the factors which characterize the place of wine in the Brazilian society, it aims at putting into perspective the different driving forces that influence its development, and in particular the relative influence of the political drivers.

A secondary objective of this paper is about building the base for identifying the possible scenarios for the Brazilian wine scene in the midterm future, since the identification of the drivers constitutes a good base for such prospective study.

### **5. Theoretical framework**

There are few data available on the subject and most of them are the result of marketing studies or rely on consumer behavior studies. The approach chosen here to understand the perspectives of wine in Brazil is different by nature since we are more interested in the structure itself, of which we are going to try to understand the behavior, rather than focusing on the consumers.

In social theory and cultural sociology, structural research focuses on concrete manifestations of culture in everyday practice and in particular the measurement of cultural aspects of social structure using a variety of tools such as matrix' based structural analysis.

Answering such a question as “knowing if Brazil will meet or not its expectancies” or “what are the possible scenarios for the Brazilian wine scene in X years” is beyond the scope of this study. However, work on the topic of prospective constitutes a very interesting framework for meeting the requisite of understanding and identifying what are the key factors that will shape the future of the Brazilian wine scene. Indeed, such identification, known as structural analysis, constitutes an important step of the prospective approach and has therefore been properly formalized in this context, in particular by Godet (GODET, 1993, 1996, 1997, 2004, 2006).

### ***5.1 The system under study and its context***

A system is a set of interrelated elements or variables, which are sufficiently defined as to be distinct from its environment. Therefore, the system can be represented as the combination of a set of elements and a set of interrelationships among those elements. Marques adds that “the system should be seen as a whole, which cannot be dissociated from its active elements and the meaning of which can only be fully perceived when analyzed simultaneously with the set of the interrelationships involved.” (MARQUES, 2006)

Those relationships define the law of evolution of the system. Still according to Marques, the evolution of the relations between the variables explains the phenomenon of self-regulation (or “feedback”) and the path to the future, which are fundamental concepts for understanding the social system, as they are linked to the actors’ strategies.

For a better appropriation of the system under study, Marques proposes to divide it into subsystems or dimensions, which are grouping of variables, defined in accordance with a mixed criterion of analytical homogeneity and usefulness for planning. Marques comments: “The homogeneity is based on the categories normally adopted for the description of the reality, through economics, sociology, political science, techniques, and so on.

The following figure shows the dimensions specification suggested by Marques that has been accepted within the present study.

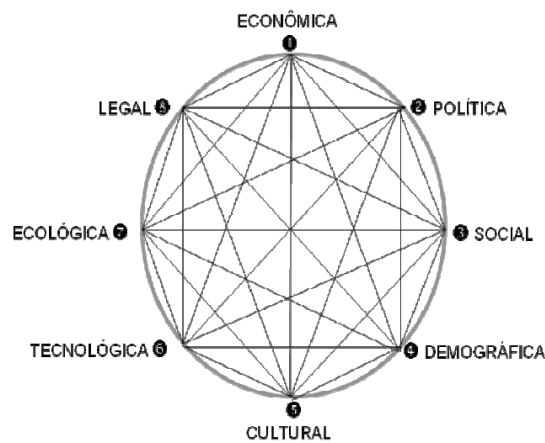


Figure 1 - The prospective diamond – Source: MARQUES, 2009

## 5.2 Presentation of the method

Structural analysis intends to investigate systems and their dynamics. This method, in particular, aims to structure ideas. It enables the description of system thanks to a matrix which combines its constitutive elements.

The method consists in extracting the key variables of the system through the analysis of these relations. These key variables, i.e. the variables essentials to the evolution of the system, are the variables which are both influential and dependent.

In order to apply the analysis structure method, three steps should be taken: 1) the inventory of the variables, 2) the description of the interrelationships between them, and 3) identification of the essential variables.

## 5.3 Listing the variables

The very first action to be taken is to define the scope of the system under study. Then comes the listing of the variables, which is a fundamental step for the rest of the prospective process. The listing includes all the variables, internal and external, which characterize the system under study.

It is very important to be as exhaustive as possible in this process and avoid leaving aside any line of research, which could be prejudicial for the rest of the study.

Godet suggests establishing the listing during qualitative workshops and consolidating the listing by means of non-directed interviews with experts, or representatives of actors in the system.

An optional step might be taken here to make sure of the homogeneity of the list. It consists in completing, grouping, splitting, or even eliminating some of the variables.

According to Marques, the final list should not contain more fifty variables. Then a detailed glossary of the variables must be established to continue the structural analysis. It consists in a clear designation of the variables, which must be commonly accepted among the participants of the study, and which must be fully understandable for people outside the group. It is therefore recommended to give a precise definition of the variables and identify its main characteristics.

It is also important to note that the list should be updated if needed until the end of the prospective process.

#### ***5.4 Description of the relationships between variables***

Each variable is fully qualified through its relationships with other variables. Therefore, this stage consists in discovering the relationships between couple of variables, basically through the use of a dual-entry “structural analysis matrix”. The lines and columns of the matrix correspond to the variables identified in the first stage of the structural analysis method.

Various slightly different approaches exist to fill up the matrix in order to evaluate the variables’ interrelationships but in every case the fill-in phase must be qualitative. Some approaches require weighting the influence of a variable over one other. This is not the case with the approach used in the present study, in which the structural matrix is a Boolean matrix whose cells are attributed a value of 0 or 1. When a variable in a row influences a variable in a column, a 1 is placed in the cell at the intersection. When there is no influence, a 0 is inserted or the cell is left empty. The filling-up of the matrix is performed systematically in this fashion, examining the rows and checking if they have

any influence on the columns. The structural matrix represents the structure of the system, which can also be represented by a graph obtained from the structural matrix.

With this approach, the fill-in phase consists in posing  $n \times (n-1)$  questions, for  $n$  variables, which represents approximately 2500 combinations for 50 variables. It is clear that some of them would have been forgotten if such a systematic questioning had not been made.

This systematic investigation has the double advantage to enable one to avoid errors and to help to organize and classify ideas. It also gives the chance to redefine certain variables in order to refine the system's analysis.

For the purpose of this paper, I used the URCA model proposed by Marques (MARQUES, 2006), which intends to facilitate filling out the structural matrix, reducing the number of questions and making it possible to work only with the part above the diagonal of the matrix, in which the diagonal and the lower part are filled out automatically. The quantity and the quality of the information in the URCA matrix is strictly equivalent to the full matrix. Besides it is possible to convert one to the other.

### ***5.5 Visualization of the variables in the influence / dependence plane***

Reading the matrix is intuitive and it is easy to make a quick interpretation of either the direct influence exerted by a given variable on the others or the dependence of this given variable regarding to the other variables. Indeed, it is done by reading the lines or the columns of the matrix, respectively.

The direct influence of a variable is evaluated by counting the 1 on the line of the given variable, which is to say counting the number of variables or columns this variable is exerting influence on. Respectively, the direct dependence of a given variable is evaluated by counting the 1 on its column, i.e. the number of lines or variables which exert influence on it.

Therefore, by considering the number of columns containing 1 for a given variable on a specific line and the number of lines containing 1 for a given variable on a specific

column, one gets two numbers ranging between 0 and  $n-1$  representing the direct influence and the direct dependence of the variable, respectively.

Then it is very easy to plot the variables in an influence / dependence plane, where each variable is represented in a graph by a point having for coordinates its overall influence value on the ordinate axis and its dependence value on the abscissa axis. This is a very convenient way to visualize the system and identify the variables of interest, regarding their own influence and dependence levels.

Although this representation is rich of information, it knows a great limitation. Indeed a variable can exert influence on a small number of variables, which in turn exert influence a much bigger number of variables. It is obvious that even if the direct influence this given variable is low, its effect on the system might be increased tenfold if this variable exerts influence on other very strong variables. We need to evaluate the indirect influences of each variable with a method which is able to propagate the influence of the variables and evaluated their global influence on the system, in order to identify the key variables of the system.

## ***5.6 Identification of the key variables***

Godet proposed a method which aims at solving the problem of identifying the key variables of a system, taking into consideration the indirect influences of its constituting variables: The MICMAC method.

This method relies on a simple mathematical approach consisting in multiplying the matrix by itself a certain number of times in order to evaluate the indirect influence of the variables. The greater the number of times the matrix is multiplied by itself, the deeper the indirect influence of the variables is evaluated.

Then, Marques came with another method of calculation of the indirect influences, CHIVAS, which intends to avoid some drawbacks of the MICMAC method. In CHIVAS, the calculation of the hierarchization is performed with the use of an exponential function of the structural matrix. This function, known as matrix series, makes it possible to take effects of indirect influences as a potentialization property of



the matrix into account. The matrix series converges, in other words it leads to a matrix of stable results, upon which the calculation of the hierarchization of the variables will be made, which can be considered in the present case as an improvement in relation to the MICMAC method from Godet, which leads to matrices the values of which explode exponentially). The more important – most influential or more sensitive variables – in hierarchization will be especially observed later on, in scenarios construction for example.

As it represents an improvement in the calculation of the indirect influences, this paper relies on the use of the CHIVAS method.

Once the filling out of the URCA matrix is concluded, the identification of the key variables results of the application of the CHIVAS model which automatically calculates the hierarchy of the variables, making it possible to select the most important variables thereby reducing the number to be dealt with later on (MARQUES, 2006).

### ***5.7 Visualization of the indirect influence / dependence chart, and interpretation***

The hierarchization of the variables is done automatically by the CHIVAS method. However it relies on the very same principle as the one we used previously to calculate an overall direct influence and dependence of the variables. For each variable, it consists in summing the numbers occurring on its corresponding line in the resulting matrix from the CHIVAS calculation to get its overall influence. Equally it consists in summing the numbers occurring on its corresponding column to get its overall dependency.

Then, following the same method as previously exposed for direct influence and dependence, it is possible to plot the variables in an indirect influence / dependence plane chart.

Once the variables plotted in the indirect influence / dependence plane, Godet proposes a way of graphically interpreting the role of the variables in the system. It consists in clipping four frames in the graph by drawing a vertical line and then a horizontal line

passing by the center. Therefore we get four areas, corresponding to the four categories of the classification proposed by Godet.

- First, there is the category of the drivers, that is to say the determinant variables. They are both very influent and not very dependent and are located in the top-left corner of the plot area. The evolution of the system depends a lot on these variables since they are very influent. Moreover their little dependency makes them proper drivers of the system, since they are not influenced by feedback effect from the other variables, which means they are not controlled by the system itself.
- Then there is the category of the relay variables, characterized by their great influence but also a great dependence towards other variables. These variables are located in the top-right corner of the plot area. These variables are by nature factors of instability since they can be influenced by other variables in the system, leading to strong feedback and unpredictable effect. Nevertheless it is advisable to distinguish the variables depending on their position in the relay frame. Some are more influent than dependent (above the diagonal) and can in a sense be considered as drivers, even if their unstable character must be taken into account. The ones which are more dependent than influent result more from the evolution of the system and are not proper levers.
- The variables situated in the down-right plot area belong to the depending or result variables. These variables are not very influent but are very dependent. They mainly result from the evolution of the other variables of the system, in particular the ones belonging to the drivers and the relay variables. These variables do not have any impact on the system.
- In the last frame, in the down-left area, one can find the excluded variables of the system, the variables which do not have influence and which are not dependent. These variables have no influence on the system and cannot take advantage of the evolution of the other variables. Since they do not present any interest for the researchers they are excluded. However, like for the relay variables, it might be advisable to distinguish the variables situated in this frame depending on their

position inside the frame. If we draw a diagonal, they might be located more dependent than influent or the opposite. It sometimes can make sense to make the distinction between the two sub-categories for more detailed analysis.

It is all about interpretation and since the limits between the categories are somewhat subjective, we can also consider the variables located near the two frontiers between the four frames as particular variables in the sense that they different role depending on the context. For instance, they can be considered now as secondary drivers, now as weak objectives, now as secondary stakes.

It might be interesting to compare the positions of variables in the direct and the indirect classifications obtained by CHIVAS, for example by plotting them on the same graph, in order to visualize the relative effect of the indirect influences on the system.

## **6. Methodology**

### **6.1 *Type of research***

For the classification of this research study we have used the taxonomy proposed by Vergara (VERGARA, 2007), which characterizes studies according to two axes: ends and means.

According to the ends, the research is both exploratory and descriptive. Exploratory because there is little or no information about the evolution of the structural system we have called the place of wine in Brazil. The research can be considered descriptive too, since it describes the characteristics of a phenomenon but also establishes the relations between the main variables influencing it.

According to the means, the research is bibliographic and documental, since it was realized through the investigation of books, reports, articles and theses as well as through the interpretation of empirical data collected through an original manner in what I have called a “virtual workshop” established for the occasion and which will be explained further.

The study can be characterized as transversal, eventually, because the data was collected at one point in time. Thus, the research doesn't focus on the observation of the evolution of opinions and positioning of the interviewees.

## **6.2 Data collecting**

### **6.2.1 Bibliographic research**

The bibliographic research consisted in gathering information about structural analysis and the Brazilian wine scene. The types of documents that have been researched include rapports, books, journals, technical periodicals, dissertations, articles and theses.

### **6.2.2 Virtual workshops**

Collecting of primary data has been done via a temporary website that I have specially created for the purpose of this research.

This website enables to stimulate the collective thought by letting the participants add new variables, but also edit, comment and delete existing ones. Any modification done by one participant of the study is visible by all the others in real time.

Moreover the participants don't only see only the last state of a variable but they see the historic of the modifications too, which allow them to comment the modification or even make an adjustment. So the website simulates real life workshops and thus, stimulates the collective thought among the group of participants of the study.

In order to enhance the description of the system, the website interface gives the participants the possibility to group the variables into subsystems or dimensions, defined in accordance with a mixed criterion of analytical homogeneity and usefulness for planning. It also has the great advantage to stimulate the collective thought. The homogeneity is based on the categories normally adopted for the description of the reality, through economics, sociology, political science, techniques, etc. Usefulness makes it possible for the most important aspects for the organization to be highlighted. The dimensions' specification accepted used for the collecting the data are the ones

suggested by Marques and represented on Figure 1 (page 13). The categories will be refined at the data consolidation stage.

The biggest advantage of the virtual workshops is that the participants don't have to contribute at the exact same time, which brings higher flexibility. Nevertheless, the duration of the study should be fixed to a reasonable length, during which participants can interact and remain focused on the subject. A length of one month has been chosen for the data collect, in September 2010, divided in two periods of two weeks. The first one for the identification of the variables and the second one for identification of the relationships between them.

On a second tab, participants of the study can collectively fill-in the association matrix (see Figure 3). Users can complete the matrix but they also can modify the values that are already filled-in. The system keeps track of all the modifications, which allows the researcher to consolidate the data with ease after the data collecting.

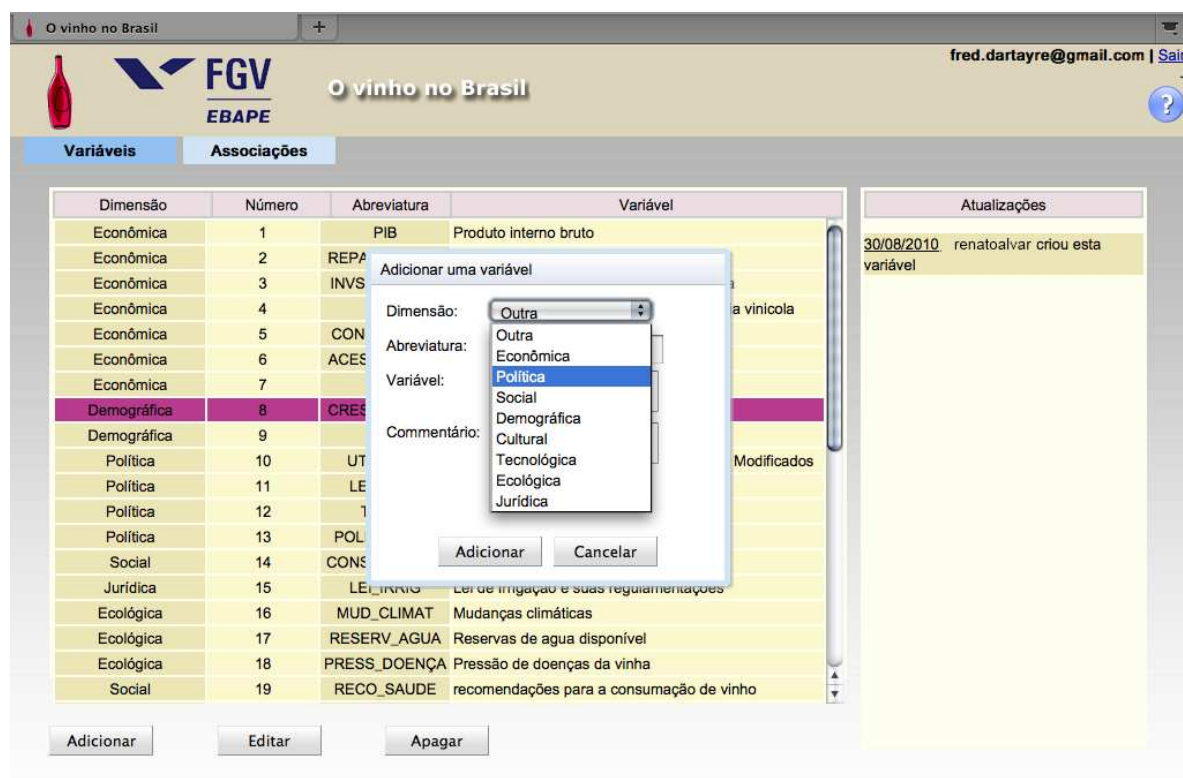


Figure 2 - Website interface, variables

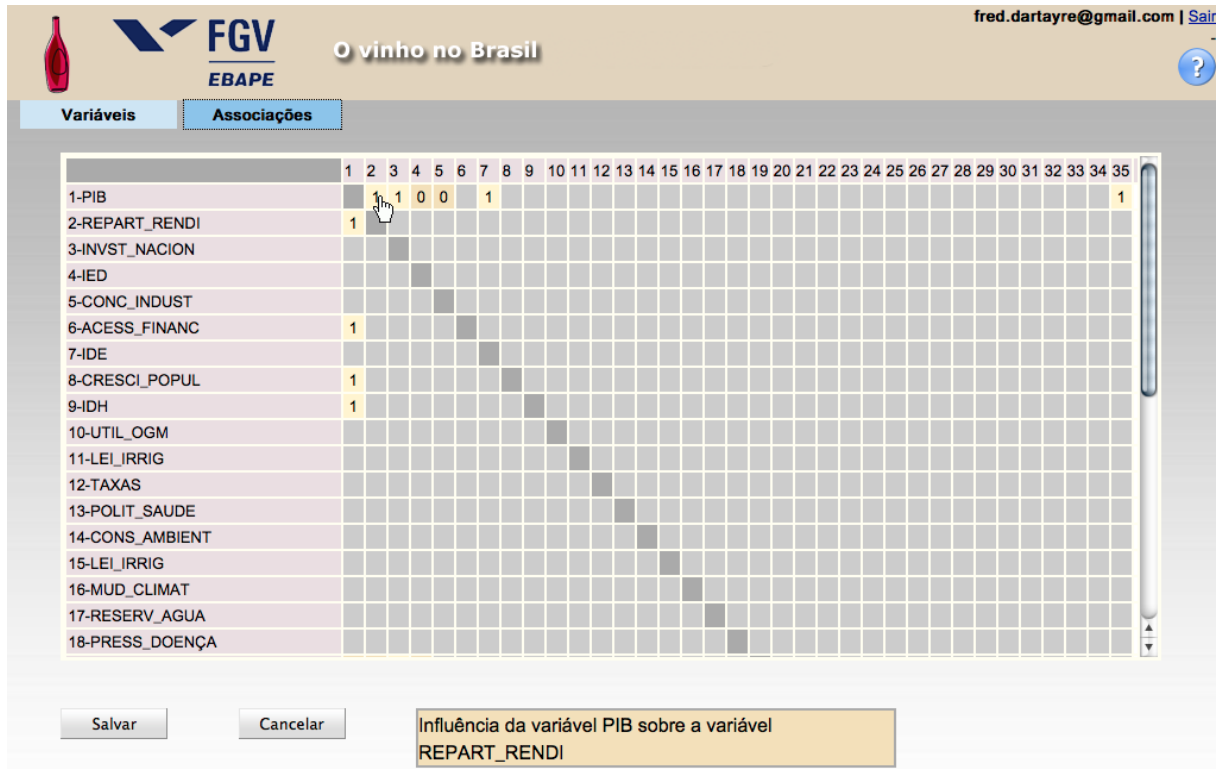


Figure 3 - Website interface, associations

### 6.2.3 Data consolidation

Godet recommends consolidating the listing and to make sure of the homogeneity of the list. It consists in completing, grouping, splitting, or even eliminating some of the variables.

## 6.3 Limits of the method

### 6.3.1 Composition of the team

The approach is very subjective by nature. Therefore it is important that the participants come from different backgrounds in order to avoid the results being strongly biased by one dominant opinion within the group, as it could be the case with an expert group. Moreover, as we have seen in the introduction, the great diversities existing in Brazil, be them geographic or of income, do not facilitate the composition of the team, since it is difficult to have participants representing this diversity. It is important that the group be aware of it and takes it into consideration in order to avoid this drawback.

The group of respondents was constituted of six present and former students of the Fundação Getulio Vargas, from Rio de Janeiro and São Paulo. All of them have a particular interest in wine but none of them is involved in the wine industry, in order to avoid biased or partial point of view.

Moreover it is not impossible that the group make collective mistake. Indeed, gaining collective consensus is not a proof of accuracy of the result, even if the collective approach tends to reduce this risk.

### **6.3.2 Teaming up**

The implementation of a structural analysis is not easy since it requires consensus among participants. Ideally it should be done during live meetings, which requires the team of participants to meet altogether during several full days (GODET, 1997).

It is a heavy process necessitating time and a big investment from the participants. According to Godet, the full process requires months, including a minimum of a two days meeting for the identification of the variables and a two to three days meeting for filling out the structural analysis' matrix of about fifty variables (GODET, 1991).

There are, of course, lighter methods to identify essential variables as the one chosen for the present study. The use of a specifically designed online tool to facilitate the process through the use of web technologies was a choice I made to overcome the logistic difficulties of teaming up the participants in the same place at the same time for several days. However this approach may not substitute perfectly to live meeting.

Moreover managing to reach a consensus is requisite (GODET, 1991). Thus, it might be very difficult to reach this objective when more than ten persons are involved. On the other hand, the bigger the group is, the more objective it is and the more accurate the results might be. This is a paradox, since the approach would benefit a big group and at the same time it is not manageable to deal with a big group. The requisite of a consensus prevails, and it is the choice which has been made for the present study by keeping the size of the team reasonable.

## **6.4 Usefulness and uses of structural analysis**

### **6.4.1 Identification of prospective scenarios**

A scenario is a tool whose utility is the description of a possible future, assuming the intervention of events or conditions between the time of the scenario writing and the horizon in which the scenario is set. The purpose is not to forecast the future but rather to help the decision making process.

Anticipating the future implies to deal with different factors of different natures. Now, "the need to deal simultaneously with quantitative factors, qualitative factors, structural discontinuities, uncertainty and actors' strategies gave rise to the methodology of prospective studies, the operational structure of which involves scenarios" (MARQUES, 2009).

The construction of scenarios relies mainly on the evaluation of the potential effects of the possible actions taken by the actors of the system on the key variables identified by structural analysis.

In order to construct prospective scenarios, it is advisable to divide this set of key variables into two subsets according to two criteria: the deterministic character of the variables and their sensitivity to actors' actions. Indeed, regarding key variables whose evolution are of deterministic nature and are not sensitive to actors' moves, the method consists basically in extrapolating the trends and taking into consideration the existing correlation between different evolutions.

On the contrary, regarding key variables which are very sensitive to actors' actions, the prospective approach integrating the actor's strategy study is of valuable help.

### **6.4.2 Strategic watch and prospective vigilance**

Companies that want to embark on strategic watch first have to identify what they want to watch, in other words, to identify the parameters and variables to monitor. Indeed, a selection must be made as it is impossible to monitor everything.



This choice is not an easy choice, especially when the strategic time horizon is far away. Obviously, the variables identified as the most influential ones by the structural analysis must be under close watch. Actors' strategy analysis should be used as a complement to watch variables describing competitive issues too.

It is important to note that the list of key variables identified by structural analysis should be updated regularly since strategic watch must be a permanent process.

## 7. Description and analysis of the results

### 7.1 *The system under study and its context*

#### 7.1.1 Main international trends

##### 7.1.1.1 *Consumption tendencies*

The observation of the wine consumption in the world during the last two decades suggests that two opposing dynamics are taking action simultaneously, leading to a strong decrease of the world wine consumption directly followed by a progressive increase from the late 1980's.

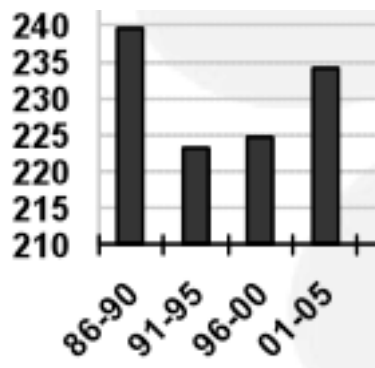


Figure 4 - World consumption of wine (MHL) - Source: OIV, 2010

From the second half of the eighties to the middle of the nineties, the consumption of wine in the world has decreased strongly, falling from an average of about 240 MHL between 1986 and 1990 to less than 225 MHL between 1991 and 1995. This situation then slowly reversed, increasing from 225 MHL in 2000 to about 243 MHL in 2008.

Unless a strong economic accident occurs, the evolution of the consumption of wine in the world is expected to remain positive in the future (OIV, 2010).

This evolution, negative and then positive, is due to the conjunction of two opposing tendencies: first, there is a fall of the domestic consumption in countries with historical wine tradition; that is to say countries traditionally producing and consuming wine and which integrated this product as a part of their culture. This tendency is essentially due to a deep change in wine consumption modes in these countries with, in particular, a decrease of the regularity of the consumption, when the number of consumers remains roughly constant (OIV, 2010).

This phenomenon is overwhelmingly counterbalanced by the consumption in non-traditional winemaking countries, which has strongly increased, leading finally to a positive growth of the world consumption.

Various factors impact the evolution of the wine consumption in the world and draw the relative importance of each country on the wine scene. One of the more obvious factors impacting the relative importance of each country is the demographic evolution of the potential consumers' base. On the other hand, other factors such as economic growth, social, religious or moral interdiction, public health constraints, or quite simply local taste, also are strongly influents and must not be neglected.

#### ***7.1.1.2 The demographic factor***

That said, the demographic factor obviously has a direct impact on the quantity of wine consumed in a given country. The world population continues to grow at a sustained rate and possibly new markets emerge. The following table shows the expected evolution of the ranking of the twenty most populated countries in the twenty first century.

Rank	1950		2000		2050	
1	China	554.8	China	1 275.2	India	1 531.4
2	India	357.6	India	1 016.9	China	1 395.2
3	U.S.A.	157.8	U.S.A.	285.0	U.S.A.	408.7
4	Russian Federation	102.7	Indonesia	211.6	Pakistan	348.7
5	Japan	83.6	Brazil	171.8	Indonesia	293.8
6	Indonesia	79.5	Russian Federation	145.6	Nigeria	258.5
7	Germany	68.4	Pakistan	142.7	Bangladesh	254.6
8	Brazil	54.0	Bangladesh	138.0	Brazil	233.1
9	United Kingdom	49.8	Japan	127.0	Ethiopia	171.0
10	Italy	47.1	Nigeria	114.7	Congo, DR	151.6
11	France	41.8	Mexico	98.9	Mexico	140.2
12	Bangladesh	41.8	Germany	82.3	Egypt	127.4
13	Pakistan	39.7	Viet Nam	78.1	Philippines	127.0
14	Ukraine	37.3	Philippines	75.7	Viet Nam	117.7
15	Nigeria	29.8	Turkey	68.3	Japan	109.7
16	Spain	28.0	Egypt	67.8	Iran	105.5
17	Mexico	27.7	Iran	66.4	Uganda	103.2
18	Viet Nam	27.4	Ethiopia	65.6	Russian Federation	101.5
19	Poland	24.8	Thailand	60.9	Turkey	97.8
20	Egypt	21.8	France	59.3	Yemen	84.4

**Figure 5 - Most populated countries, projections to 2050 (M inhabitants) - Source: UN, 2004**

We can already foretell that, among the future most populated countries, some won't be significant targets for winemaking countries, in particular for patent religious interdiction as in Pakistan, Indonesia, Bangladesh, Egypt, or Iran.

UN ranks Brazil eighth most populated country in 2050, and considering that many of the top-ranking countries won't probably be major wine consumers, the Latin country is positioning itself as an extremely promising market.

### **7.1.1.3 Economic growth**

Beside the demographic factor as well as religious, moral, and social interdictions, the economic growth matters too. Indeed, wine is not a first necessity good and therefore its consumption is directly related to the level of development (CCEF, 2009). According to the Economist, the richest countries in 2040 will be ranking as in the following table:

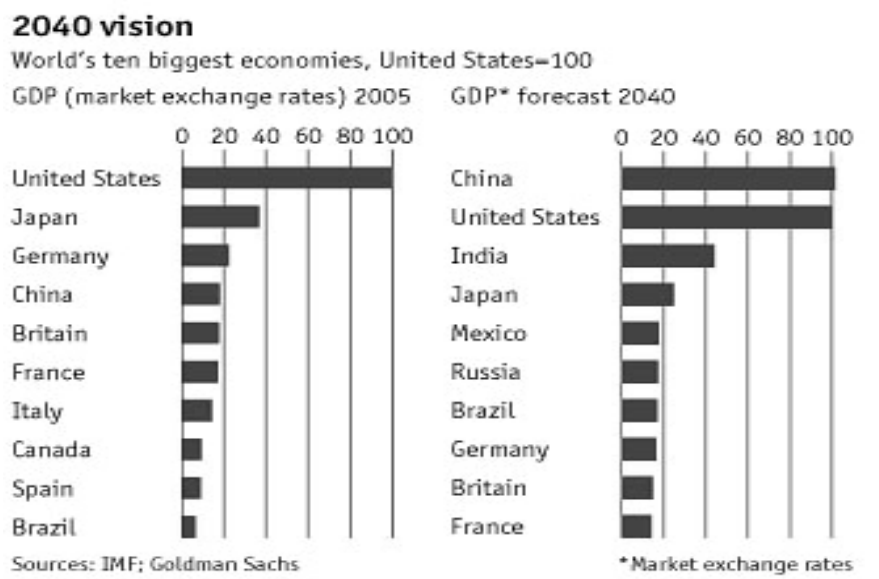


Figure 6 – World's ten biggest economies – Source: The Economist, 2006

The gross domestic product (GDP) is a measure of a country's overall official economic output. As it is often positively correlated with the standard of living (O'SULLIVAN, SHEFFRIN, PEREZ 1996), and assuming that wine consumption is positively correlated to the economic development, the GDP foresight gives an insight into the future most important potential markets for wine. It is reasonable to assume that wine consumption is correlated to economic development since wine is often characterized as a luxury good, i.e. a good for which demand increases more than proportionally as income rises.

Again Brazil is positioning itself as a potentially very interesting wine market.

According to projections made by the International Wine and Spirit Records (IWSR) for VINEXPO<sup>1</sup> for the period 2008-2012, world consumption is expected to grow by six percents in volume in five years. In value, this growth is even faster: nine percents in five years and twenty-four percents in ten years, which represents a world market of more than US\$ 166 billion in 2012 (VINEXPO / IWSR, 2007). For comparison purpose, the revenue generated by wine retail sales in 2007 was equivalent to the

<sup>1</sup> Created in 1981, by the Bordeaux Chamber of Commerce and Industry, the VINEXPO exhibition has established itself over the years as the key event for major international operators in the wine and spirits sector.

revenue of the cosmetic industry and twice the revenue of the G.Y.M.E (Google, Yahoo, Msn, EBay) (VINEXPO / IWSR, 2007).

This study confirms that the development of the wine sales in the world does not operate in traditional wine producing and consuming countries anymore but in emerging areas of consumption.

Rank	Country	2001	2005	2001-2005	2010	2005-2010
1	France	31.13	27.44	-11.84%	24.89	-9.31%
2	Italy	26.15	26.91	2.89%	27.2	1.09%
3	USA	19.23	23	19.59%	27.3	18.69%
4	Germany	20.7	21.93	5.94%	23.54	7.31%
5	UK	9.54	11.89	24.57%	12.87	8.29%
6	Argentina	12.24	10.67	-12.84%	10.35	-2.94%
7	Spain	10.58	9.7	-8.32%	9.01	-7.11%
8	Romania	4.79	4.98	4.12%	5.15	3.39%
9	Russia	3.57	4.9	37.26%	6.37	29.97%
10	China	3.35	4.1	22.45%	5.58	35.91%

**Figure 7 – World's ten biggest wine markets (MHL) – Source: VINEXPO / IWSR, 2007**

Still according to the study IWSR for VINEXPO, Brazil is expected to record an increase by 4.23% of its wine consumption between 2009 and 2013. Nowadays, Brazil is the second biggest wine consumer in Latin America, with 326 MHL in 2006 and the perspective of 369 MHL in 2011 (WINE BUSINESS INTERNATIONAL, 2010). According to a study from IBRAVIN<sup>1</sup>, annual consumption of wine in Brazil could jump from 2 L per capita to 9 L by 2025 which would let Brazil be one of the five biggest wine markets in the world (IBRAVIN, 2010).

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<sup>1</sup> The Brazilian Wine Institute defines itself as an association free of any lucrative finalities, the forum where dialogs take place in the search of a harmonious development of the productive chain, representatives of the grape producers, wine industry, cooperatives, Government of the State, also with the participation of several teaching and researching entities, as well as Associations of Professionals connected with the sector.

## **7.1.2 Brazil: The big picture**

### **7.1.2.1 *The market***

With 190 million inhabitants in 2007, Brazil is the fifth more populated country in the world and enjoys a strong economy which outweighs that of all other countries of South America.

The macroeconomic indicators reflect that the country now enjoys a greater stability and independency. It built up foreign reserves and significantly reduced its debt to the point of becoming a net external creditor (CIA, 2010).

The country also enjoyed being one of the first emerging countries to recover from the last global financial crisis and knew only one semester of recession. All this contributes to making Brazil an attractive destination for foreign investments (CIA, 2010).

The country is characterized by large and well developed agricultural, mining, manufacturing and service sectors. And even if winemaking does not count among the priorities, it could benefit already well developed infrastructures.

Even if the knowledge of wine among the Brazilian consumers improves rapidly, it is still quite limited. It should be noted that many improvements are in progress on the market, which should facilitate and accelerate the consumption of wine in Brazil, and thus bring opportunities to its participants (CCEF, 2009).

Nowadays, the market of alcoholic beverages is dominated by two types of products: the spirits, dominated by sugarcane liquor, and beer. The market of spirits is promising and other kinds of liquors than sugarcane products are gaining market shares. A good example of it is the case of vodka, which is gaining popularity among young people (CCEF, 2009).

The market of beer is the most important in the sector of alcohols. Brazil was the fourth brewer in the world in 2007. Despite the adoption of a law reinforcing the prohibition of drink-driving, the revenue of alcoholic beverages is expected to keep increasing by five

to six percents the upcoming years. Nevertheless the progression of wine revenue is expected to remain below this overall average (CCEF, 2009).

#### **7.1.2.2 A developing production**

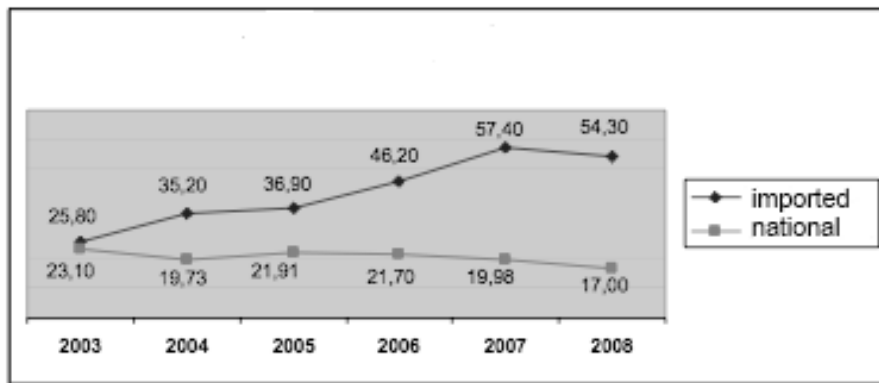
The capacity of fine wine production has known many improvements during the last years and Brazil is now considered as one of the best region of the world for making sparkling wines (CCEF 2009). On the international scene, Brazilian winemaking industry ranked twenty-second in 2007 in terms of cultivated surface, sixteen for grape production and fifteen for wine production, according to the Wine and Grape International Organization (OIV, 2009). The organization also predicts that the Brazilian wine industry will know a strong development within the next few years. In the south hemisphere, Brazil is the fifth producer in quantity, after Chile, South Africa, Australia and Argentina.

Two main categories of wines should be distinguished on the Brazilian market: table wines, elaborated from hybrid grapes (*Concord*, *Herbemont*, *Isabel*, *Seyve*, etc.) and American grapes (*Vitis Labrusca*, *Vitis Burquina*, etc.) and fine wines elaborated from European grape originating from *vitis vinifera* (*Cabernet Sauvignon*, *Cabernet Franc*, *Pinot Noir*, *Merlot*, *Chardonnay*, *Riesling*, *Sauvignon blanc*, etc.).

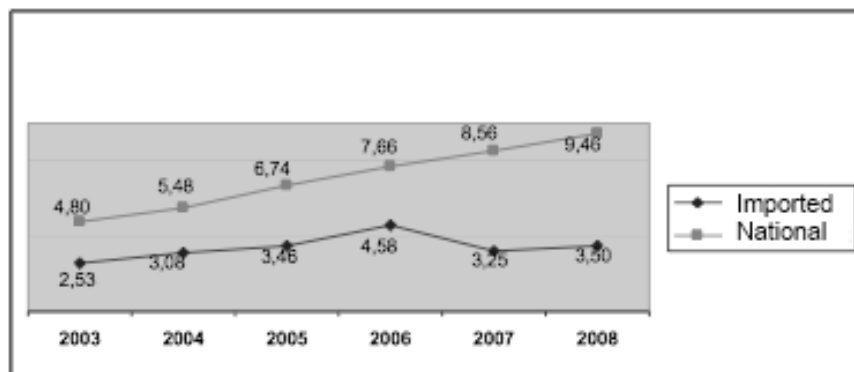
Most of the wines consumed in Brazil are locally produced. And even if they are quite often underestimated, it must be noted that since the day Brazil joined OIV in 1995, Brazilian producers have won more than 1600 gold, silver and bronze medals and awards for their wines.

#### **7.1.2.3 A growing market**

In 2008, almost 215 ML of Brazilian wines have been marketed in the country, including table wine and fine wine. Still in 2008, 7.56 ML of sparkling wines were sold in the country, which represents an increase of 8.4% from 2007 and 33% from 2005. Meanwhile 1.9 ML of muscatel type has been sold, that is twenty percents more than in 2007 and almost three times more than in 2004.



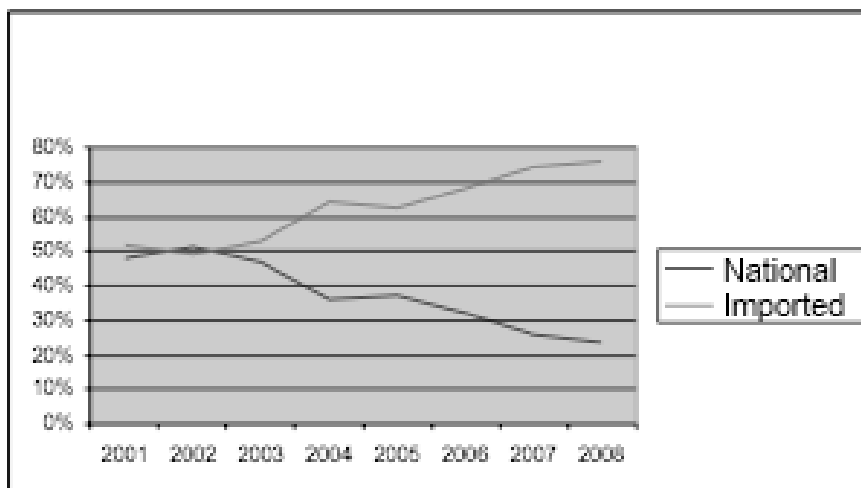
**Figure 8 - Sales of fine wine in Brazil (ML) – Source: IBRAVIN, 2009**



**Figure 9 - Sales of sparkling wines (ML) – Source: IBRAVIN, 2009**

In parallel, wine importations are developing at a faster pace, sustained by a general increase of domestic consumption, and a more favorable monetary parity. Sales recorded an increase of forty percents between 2003 and 2008.





**Figure 10 - Proportion of domestic and imported wines (%) – Source: IBRAVIN, 2009**

The rise of the Real, which supported foreign wines, played an important role in their increasing presence on the Brazilian market. The two traditional suppliers of wines in Brazil, Italy and Portugal, have lost their leadership to the benefit of Chile and Argentina, which represent together half of the imported quantity. When Mercosur agreements came into force, they reinforced the competition while strongly favoring wines from neighboring countries which benefit lower taxes (CCEF, 2009).

Country	2008		
	% in volume	% in value	Rank
Chile	33.94	30.68	1
Argentina	26.77	22.56	2
Italy	18.13	14.73	3
Portugal	11.35	14.3	4
France	4.49	9.81	5
Spain	1.83	3.64	6
Uruguay	1.65	1.26	7
Australia	0.37	0.75	8
South Africa	0.57	0.7	9
Germany	0.55	0.64	10
USA	0.12	0.33	11
New Zealand	0.1	0.32	12

**Figure 11 - Main wine suppliers in Brazil – Source GTA – Global Trading Atlas, 2009**

#### ***7.1.2.4 A still modest domestic consumption***

The domestic consumption in Brazil remains modest, since it still represents only two liters per capita and per year (IBRAVIN, 2010).

Indeed, the place of wine is not of considerable importance in Brazil, and only a limited part of the population has some knowledge about it.

Moreover, wine is expensive in consequence of a heavy taxation and therefore, it remains reserved to a limited part of the population. It explains that almost all the wine is sold in the regions of the biggest cities, that is, São Paulo, Rio de Janeiro and Brasília, where the purchasing power is the highest.

The present increase of wine consumption happens in parallel with a constant and fast improvement of the wines' quality (CCEF, 2009).

##### ***7.1.2.4.1 The consumer***

At the end of the year 2007, Brazil counted 190 million inhabitants, divided in 54 million households. Mainly urban, the population is concentrated in the regions of South and Southeast, which represents almost sixty percents of the population, with more than twenty percents in the only state of São Paulo (IBGE, 2008).

##### ***7.1.2.4.2 Geographic disparities***

Wine consumption still remains very concentrated in the regions of the half South of the country, in particular in big cities, by reason of a much higher purchasing power and a massive presence of foreigners. In the South, consumed wines are essentially produced locally. The types of wine consumed differ according to the regions. For instance, there is an important consumption of white wine and sparkling wine in the Northeast (CCEF, 2009).

According to the statistical data provided by Target Marketing, São Paulo city still largely ranks first of the domestic consumption, whereas its influence tends to diminish (from 11.1% in 2004 to 9.0% in 2008). Two other cities of the Southeast region rank second and third: Rio de Janeiro and Belo Horizonte (TARGET MARKETING, 2008).

These disparities constitute an element to be taken into consideration when studying what is the place of wine in the Brazilian society. We can expect many disparities as well in the perception of wine between the different parts of the country.

#### **7.1.2.4.3 Social classes and income distribution**

There are considerable economic disparities too, between people and between regions as well, Brazil being known as one of the most non-egalitarian country of the world, even if these inequalities tend to be reduced. Indeed, social programs and programs of redistribution of income, as well as the increase of the payroll has let emerge a new middle-class, which was excluded from the consumption market before (UBIFRANCE, 2009).

The Brazilian population is divided into five main socio-economic status categories: A, B, C, D and E, distributed as following:

	Average household income (BRL)	Part of total consumption (%)
A1	13680	4.6
A2	8930	17.5
B1	4408	20
B2	2470	24.6
C1	1444	17.4
C2	912	9.9
D	608	5.7
E	342	0.3

**Figure 12 - Socio-economic categories in 2008 – Source: Target Marketing, 2008**

There has been a fast evolution of the distribution of the population into the socio-economic categories the last two years. Between 2006 and 2007, almost 20 millions Brazilians entered the C class, which now represents the main category for the first time of Brazil history (CETEM-IPSOS, 2008). In 2008, it represented 86.2 million people and more than twenty-five percents of the country consumption. These new consumers are characterized by their consumerist appetite, which follows their increasing purchasing power (UBIFRANCE, 2009).

The spending of the households depends a lot on the socio-economic category in which they fit. A study of Fécomercio SP, published in august 2008 shows that the average day spending of a Brazilian family was about R\$ 44.83 in 2007 (FECOMERCIO, 2008), which still does not permit easy access to expansive and not necessary products like wine.

These income disparities are also reflected in the amount of information available about wine consuming behavior in Brazil. It is also a point to consider when analyzing the place of wine in Brazil, since we can already expect that it is not homogeneous.

#### **7.1.2.4.4 Potential of consumption**

Today, Brazil is the scene of a constant increase of the internal domestic consumption, driven mostly by the high and middle classes and more and more by popular classes as well. This category of low-income population, which represents the biggest part of the population, now holds more and more the attention of companies, which try to find an answer to the start of saturation of the consumption in the higher classes (UBIFRANCE, 2009).

According to a study from Bain & Company in 2008 for the journal Exame, the whole consumption should represent 1000 billion US dollars in 2012, increasing by 28% from 2008 (BAIN AND CO., 2008).

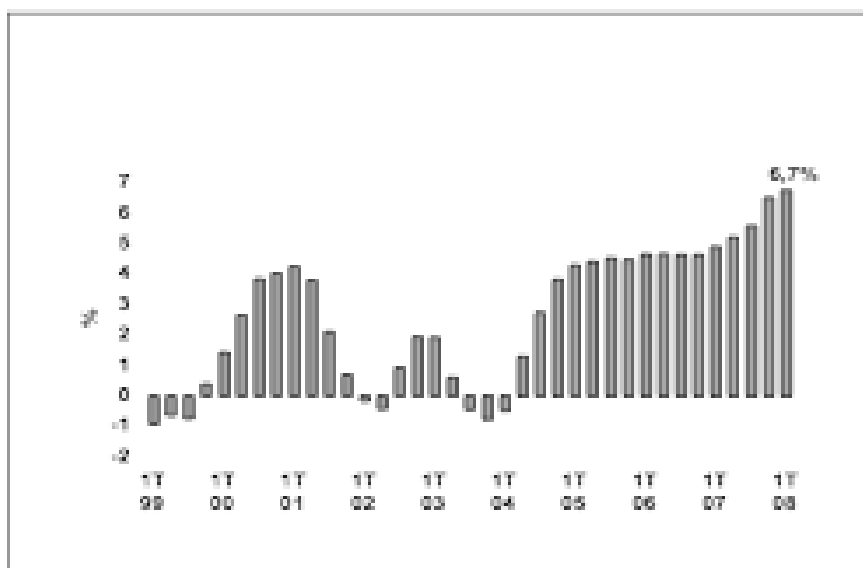


Figure 13 - Households consumption, cumulated over 4 semesters – Source IBGE, 2010

Propensity to consume is an inherent attribute of Brazilian. Besides the satisfaction of material desires, it appears that consumption also fulfills the role of social assertion (UBIFRANCE, 2009).

Winter and some key times (Christmas, Easter, Valentine’s Day, etc.) give rise to burst of consumption of wines and liquors. Christmas and New Year eve, as well as the family and social events of the A and B categories of the population, represent occasions of drinking champagne and sparkling wines (CCEF, 2009).

According to a survey “São Paulo profile”, the Brazilian consumer tends to become more exigent and less loyal to brands. The rate of consumers loyal to one brand has lowered down from 35% in 2001 to 30% in 2010. As always, companies will have to fit better the lifestyle of their consumers, reinforce the quality of their services, improve customer relationship as well as the personalization of their products and have to offer more competitive prices. It appears that the first criteria for the choice of a bottle are, in order of importance, the price, which must be reasonable, the quality and notoriety of the brand. Then come the taste, the type of wine and the look of the bottle (CCEF, 2009).

The market of wine, as for the other goods in general, has evolved the last years towards higher quality. Despite an awareness campaign of the consumers by the professionals of wine (importers, distributors, etc.), which are present essentially in the Southeast of the country, most of the Brazilian still have a limited knowledge of the products and the important consumption of alcoholic and non-alcoholic beverage within the C and D classes goes to cachaça, rum, beer and sodas (like Coke and Guarana sodas) (CCEF, 2009).

The Brazilian market evolves from an “occasional” consumption towards a more “regular” one. Supermarkets and specialized stores made efforts to guide customers’ choices and they now offer large information about types of wines, regions, grapes, assemblies, or even organize degustation events. We can now see numerous articles, websites, specialized journals, which are major vectors of education.

#### **7.1.2.4.5 Tendencies in the sector of alcoholic beverages**

The knowledge of wines is improving and therefore the market tends to be more qualitative and closer to the European standards. The importation of wine of low quality is very limited nowadays. The fact of being imported is still a criterion of quality when it is in question of choosing a wine (CCEF, 2009). Some years ago, buying an imported wine in Brazil was very expensive because of the taxes on imported products. Since then, the taxes have lowered down and the imported wines are now accessible to a larger consumer base.

The market of liquors is also changing and gets closer to European and North American standards as well. Of course, sugarcane liquor is still the most consumed but it loses market shares in favor of vodka or rum. It should be noted that large investments are done for innovation and sponsoring. For example, at the occasion of carnival, 2 millions were invested by the rum brand Montilla (Pernod-Ricard) and 2.5 million by Smirnoff (Diageo), especially in Northeast. Those actions participate of the changes in the habits of consumption of the Brazilians. Spirits in Brazil represent a promising market, which offers more and more opportunities to foreign products.

It should also be noticed that the market of beer is also evolving towards a greater diversity, with value-added products like Premium and Light beers. Young people represent the majority of the consumers and are the main target of advertising campaigns. Women represent 30% of the consumer audience, which is particularly remarkable since the advertising campaigns often ignore them (CCEF, 2009).

#### **7.1.2.4.6 The distribution circuits**

Historically protective, the Brazilian economy is progressively opening itself (CCEF, 2009). According to the UNCTAD – the UN Conference on Trade and Development -, Brazil ranks fourth of the countries offering the best business potential, right after China, India, and USA (UNCTAD, 2011).

There are many important importers operating on the Brazilian market, representing mainly major brands, usually with an exclusivity agreement. Most of these importers have a strong presence in mass-market distribution like supermarkets and specialized stores, which are the first buying places for alcoholic beverages and wines (CCEF, 2009).

Various distribution channels exist in Brazil, and the choice of one among them depends on the type of product, on the region and on the socio-economic category to reach.

Mass-market retailing is the first employer and the main distribution circuit in Brazil, and thus represents a very powerful and influent sector. Supermarkets represent 91.3% of this revenue, where the three big ones, Companhia Brasileira de Distribuição (Pão de Açúcar, groupe Casino), Carrefour, and Wal-Mart, share 46% of them. The rest is shared among many small regional actors, which are well established and even have a faster growth rate though (CCEF, 2009).

The competition between the big three to dominate the sector is very tough. They rely on different growth strategies and invest enormous amounts in organic growth, opening new concept stores and developing e-commerce, and buy-outs.

Hypermarkets, which only represent 6% of the stores nowadays, already represent 35% of the sales and are still developing (CCEF, 2009).

Luxury supermarkets are city center stores established in wealth neighborhoods of the big cities like Jardins in São Paulo, Ipanema ou Barra da Tijuca in Rio de Janeiro, targeting high purchasing power customers. Even if they are not well developed, these stores enjoy some prestige. The choice of one of them depends on the type of products, the image and localization. Their customers look for luxury products and give preference to them for buying wine (CCEF, 2009).

Moreover some delicatessens and wine merchants meet the demand of customers. Among them, Lidador, A garrafera, Terroir, Empório Santa Maria are well-known. One can now find Brazilian top of the range products in those stores (CCEF, 2009).

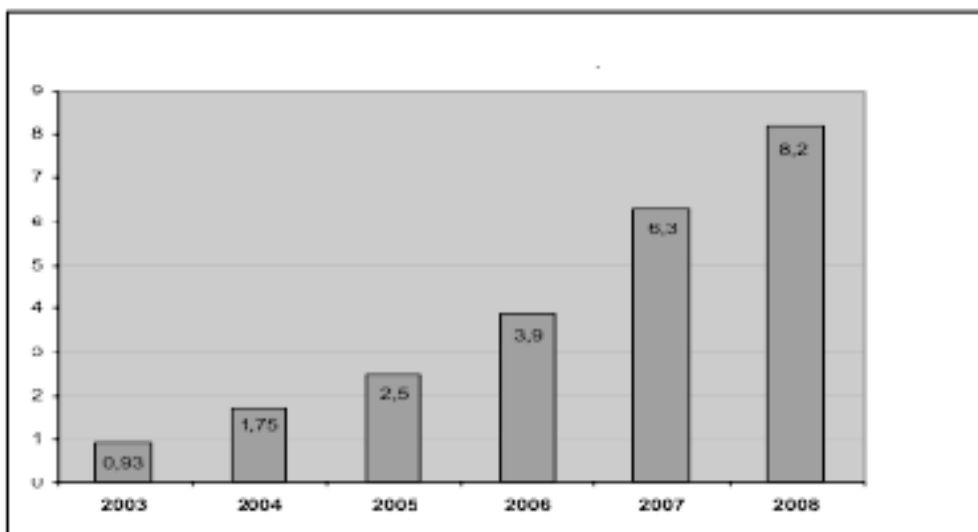
It is complicated to follow the part of the sales done by bars, hotels and restaurants since there are no statistics published at the inter-professional level, and every single company has their own monitoring indicators.

Hotels, bars and restaurants shop at wholesalers for domestic products and usually directly at specialized importers for foreign wines.

Duty-free stores in international airports hold a not insignificant place in the wine retailing. Duty free shops are long-term concessions to private companies. Brazilian legislation is specific in terms of removal of tax: it allows purchases up to 500 USD per passenger over eighteen. Therefore many Brazilians from the highest social categories and foreigners living in Brazil buy alcoholic beverages when entering in the country. Thus, international airports are major distribution centers of various products, in particular luxury products and wine and spirits.

Finally, E-commerce, which had difficult beginnings, is now a buoyant sector, with a growth rate around 30%. Twelve million Brazilians have bought at least once on Internet in 2008, which generated 8.2 billion BRL (CCEF, 2009).





**Figure 14 - Revenue of E-Commerce (billion BRL) – Source CCEF, 2009**

Selling of wines and spirits takes advantage of the fast growth of the sector, but is still very limited with regards to international purchases, mainly because of the current regulation, which authorize only importation of wine through official importers registered at ministry of agriculture, even if most of importers have a web portal allowing purchase of wines online (CCEF, 2009).

On the other hand, telemarketing has become a very efficient channel in Brazil. Almost all the importers and wholesalers, and even some producers, have a service of mail order selling, or by telephone, with home delivery service.

#### **7.1.2.5 The Brazilian wines in the world**

The creation of the first consortium of wine export “Wines from Brazil”, which groups together numerous companies of the wine industry, including the most important producers interested in conquering foreign markets, helps Brazil to enter the club of “wines of the new world”. The very same kind of initiative enabled the take-off of the exportations of cachaça a few years ago.

Exportations were still increasing at the sustained pace of thirty-five percents in 2008 and 2009, and external sales of sparkling wine have been multiplied by three in value, in particular towards the USA (CCEF, 2009).

## **7.2 Results of the structural analysis**

### **7.2.1 Homogenized variables**

The structural analysis enabled the construction of a unit of representations of the system under study in its present state. This "system" characterizes the place of wine in the Brazilian society. The participatory process that has been conducted allowed aligning the different representations of a group of people of the "system" under study.

This unit of representations was achieved through the collective identification of the variables that characterize the system.

To assure homogeneity of the list of variables, an important phase consisted in completing, grouping, splitting, or even eliminating some of the variables: this is the consolidation phase. This process, as the one of identification of the variables, involves subjectivity. The grouping could be different. The data presented in the part “Brazil: The big picture” in introduction constituted a valuable for this phase of data consolidating.

It appeared a posteriori that the categories used for collecting the data (economic, political, social, demographic, cultural, technologic, ecologic, legal) did not fit ideally the reality of the data. Instead, new categories, more natural, emerged.

Five major categories to which the variables are related were identified here: Consumption, production, regulation, economy and social.

### **7.2.2 Variables related to consumption**

Within the variables related to consumption, the variables have been grouped in three distinct sub-groups, depending on whether they are related to behavior aspects, costs aspects or product and packaging aspects.

#### Behavior aspects

##### *1. Attitude*

Named Cons\_behavior\_attitude in the URCA matrix, this variable relates to the attitude toward wine consumption, as hedonism, gastronomy, snobbery or ascetism.

*2. Individual drinking practices*

Named Cons\_behavior\_individual\_practices, this variable relates to the individual forms of drinking and drinking occasions.

*3. Social drinking practices*

Named Cons\_behavior\_social\_practices, this variable relates to the social forms of drinking and drinking occasions.

*4. Quantity consumed*

Named Cons\_behavior\_quantity, it is the average consumption (in liters) per capita per year.

*5. Health – Image of alcohol*

Named Cons\_behavior\_health\_image, this variable relates to the way wine is perceived in the Brazilian society. It also includes the way the actors of the wine industry, the media, politics, etc. communicate about the benefits and dangers of wine consumption.

*6. Education*

Named Cons\_behavior\_education, this variable relates to the level of education of the consumers.

*7. Population pyramid for consumers*

Named Cons\_behavior\_pyramid\_consumers, this variable relates to the age distribution of the wine consumers.

*8. Buying habits*

Named Cons\_behavior\_buying\_habits, this variable relates to the place and buying habits, as well as the distribution channels of wine.

*9. Housing*

Named Cons\_behavior\_housing, this variable relates to the place and type of housing of the consumers, in particular it relates to the possibility of storage of the wine.

Costs aspects

*10. Income*

Named Cons\_costs\_income, this variable relates to the standard of living of wine consumers.

#### *11. Price*

Named Cons\_costs\_price, this variable relates to the price of wine.

### Product characteristics and packaging

#### *12. Type of wine*

Named Cons\_product\_type\_wine, this variable relates to the types of wine consumed in Brazil, be it fine wine, table wine, color, sparkling

#### *13. New products*

Named Cons\_product\_new\_products, this variable relates to the presence and influence of the new products on the consumption practices.

#### *14. Packaging*

Named Cons\_product\_packaging, this variable relates to the influence of the packaging on the consumption practices

### **7.2.3 Variables related to production**

The variables related to production can be classified in three subgroups, which are: natural factors, wine producing techniques and oenological techniques.

#### Natural factors:

#### *15. Terroir*

Named Prod\_nature\_terroir, this variable relates to the local conditions (*terroir*) and character (topsoil, subsoil, climate) of the places of production.

#### *16. Vintage*

Named Prod\_nature\_vintage, this variable relates to year of production, which is a relevant data when concerning wine production, since there are good and bad years.

#### *17. Major hazards*

Named Prod\_nature\_hazards, this variable relates to special conditions which may occur, such as exceptional weather conditions or diseases such as phylloxera.

#### *18. Potential regions*

Named Prod\_nature\_potential\_regions, this variable relates to the capacity and means employed for identifying regions with high potential.

#### Wine producing techniques:

##### *19. Agronomical techniques*

Named Prod\_techniques\_agro\_techniques, this variable relates to the agronomical techniques employed, such as inputs, handling and equipments.

##### *20. Yield*

Named Prod\_techniques\_yield, relates to both the yield and the yield forecast of the production.

##### *21. Grape variety*

Named Prod\_techniques\_grape\_variety, this variable refers to the types of grape used, be it hybrid grape (Concord, Herbemont, Isabel, Seyve, etc.), American grapes (Vitis Labrusca, Vitis Burquina, etc.) or grape originating from *vitis vinifera* (Cabernet Sauvignon, Cabernet Franc, Pinot Noir, Merlot, Chardonnay, Riesling, Sauvignon blanc, etc.).

##### *22. Research and development*

Named Prod\_techniques\_r&d, this variable relates to the investment in research and development, know-how, formation and information.

#### Oenological techniques:

##### *23. Oenological practices*

Named Prod\_oeno\_techniques\_practices, this variable refers to the use and impact of oenological practices, such as the use of lactic acid bacteria, microbiology, or the use of different types of additives.

##### *24. Aging*

Named Prod\_oeno\_techniques\_aging, this variable relates to the conditions of wine aging, in particular in which type of packaging.

##### *25. Quality control*

Named Prod\_oeno\_techniques\_quality\_control, this variable refers to the methods of quality control.

#### *26. Research and development*

Named `Prod_oeno_tech_r&d`, this variable refers to the investments for improving oenological techniques.

### **7.2.4 Variables related to regulation**

The variables related to production can be classified in the two following subgroups: fields on which regulation is exerted, actors of the regulation and/or of representation.

#### Fields on which regulation is exerted:

##### *27. Declarations*

Named `Regulation_type_declarations`, this variable refers to the declarations, controls and anti fraud mechanisms existing in Brazil.

##### *28. Conditions of production*

Named `Regulation_type_production`, this variable refers to regulation relating to grape variety, density, alcohol content, oenological practices, and so on.

##### *29. Yield*

Named `Regulation_type_yield`, this variable is about the regulation of the production yield.

##### *30. Designations*

Named `Regulation_type_designations`, this variable relates to the protection of the designations of origin.

##### *31. Regulation of labeling*

Named `Regulation_type_labeling`, this variable concerns the rules regulating the labeling of the wine bottles.

#### Actors of the regulation and/or of representation:

##### *32. Mercosur operational actors*

Named `Regulation_actors_mercosur`, this variable refers to the impact of Mercosur rules.

##### *33. Brazilian public operational actors*

Named `Regulation_actors_public`, this variable refers to the public operational actors and their influence on the market. These include the ministry of agriculture, ApexBrasil

and Conabat at the national level and entities such as IFRS and Embrapa at the regional level.

*34. Professional actor*

Named Regulation\_actors\_professional, this variable refers to entities as UVIBRA and ABE and their influence on the regulation.

### **7.2.5 Economic variables**

In this category, the variables are grouped in the following subgroups: production economy, Brazilian wine industry economy, and international wine industry economy.

Production economy:

*35. Cost of production of grape*

Named Economy\_production\_grape\_production\_cost, this variable relates to the cost of production of the grape.

*36. Cost of wine making*

Named Economy\_production\_wine\_making\_cost, this variables relates, for its, to the cost of fabrication of the wine.

*37. Cost of workforce*

Named Economy\_production\_workforce, this variable refers to the cost of workforce and the weight of the social security contributions.

*38. Costs related to site value*

Named Economy\_production\_site\_value, this variable refers to the value of land.

Brazilian wine industry economy:

*39. Weight of the companies*

Named Economy\_domestic\_weight\_companies, this variable refer to the size of the companies of the sector and their weight in the industry economy.

*40. Regional concentration*

Named Economy\_domestic\_regional\_concentration, this variable refers to the regional concentration of the companies of the sector.

*41. Cost of transportation*

Named Economy\_domestic\_transportation, this variable relates to the cost of transporting the raw and transformed materials, as well as the finished product.

*42. Domestic taxation*

Named Economy\_domestic\_taxation refers to the domestic taxation on products.

*43. Employment*

Named Economy\_domestic\_employment, this variable refers to the evolution of the number of farmers and middlemen

*44. Domestic marketing*

Named Economy\_domestic\_marketing, this variable refers to the structure of marketing channels, including associations of producers and wine dealers.

International wine industry economy:

*45. World trade agreements*

Named Economy\_world\_trade\_agreements, this variable refers to the agreements at the international level, within GATT and Mercosur.

*46. World competition*

Named Economy\_world\_competition, this variable refers to the severity and impact of the international competition.

*47. World policies*

Named Economy\_world\_policies, this variable refers to the policies of the nations in terms of regulation of the offer and the demand.

*48. Advertising*

Named Economy\_world\_advertising, this variable refers to the impact of the advertising at the international level.

*49. World taxes*

Named Economy\_world\_taxes, this variable refers to the weight of taxes at the international level.

*50. World trade market*

Named Economy\_world\_trade\_market, this variable refers to the influence of the vineyard world trade market.



### **7.2.6 Application of the URCA model**

The collective process of identifying the interrelationships between every couple of the variables identified in the previous step, led to fill out the following URCA matrix:



### **7.2.7 Results of the CHIVAS method**

The converging model of CHIVAS leads to the identification of fifteen drivers, i.e. variables which are both influential and little dependent. These variables are the ones that influence the system the most.

The **DRIVERS** are:

#### **Variables related to fields on which regulation is exerted:**

- Conditions of production
- Designations
- Labeling

#### **Variables related to the actors of regulation and/or of representation**

- Mercosur operational actors
- Brazilian public operational actors
- Professional actors

#### **Variables related to production economy**

- Weight of the companies
- Regional concentration
- Domestic taxation

#### **Variables related to the international wine industry**

- World trade agreements
- World competition
- World policies
- World advertising

- World taxes
- World trade market

Then the CHIVAS algorithm finds out 6 relay variables, that is to say variables that are both influent and dependent. These variables are factors of instability since the evolution of one of them can cause chain reactions in the whole system.

The **RELAY VARIABLES** are:

**One variable related to environmental factors:**

- The “terroir”, i.e. the local conditions (*terroir*) and character (topsoil, subsoil, climate) of the places of production, but also the ability and the will to develop it.

**Variables related to the wine production techniques:**

- Agronomical techniques
- Yield and yield forecast techniques
- The grape variety
- Investment in Research and Development

**One variable related to oenological techniques:**

- Investment in Research and development in the oenological area.

The method found out 16 result variables, i.e. depending variables. Those ones are little influent and very dependent.

The **RESULT** variables are:

**Variables related to consumption behavior aspects**

- Individual drinking practices
- Social drinking practices

- Quantity consumed

**One variable related to the cost aspect**

- The price of wine

**Variables related to the products characteristics and packaging**

- Type of wine
- New products
- The packaging

**Variables related to natural factors**

- Vintage
- Natural hazards
- Identification of potential regions

**Variables related to oenological techniques**

- Oenological practices
- Aging
- Quality control

**Variables related to the production economy**

- Cost of production of the grape
- Cost of wine making

**And finally one variable related to the Brazilian wine industry economy**

- Domestic marketing

Finally, the CHIVAS model classifies the 13 other variables as excluded, that is to say the variables that are autonomous, being both little influent and little dependent. These variables are the less interesting ones for our study.

The **EXCLUDED** variables are:

**Variables related to consumption behavior**

- Attitude towards wine, such as hedonism, gastronomy, snobbery or ascetism
- Health, image of alcohol
- Education
- Population pyramid for consumers
- Place and buying habits
- Place and type of housing

**One variable related to cost aspect**

- Income or standard of living of wine consumers

**Variables related to regulation**

- Declarations
- Regulation of the yield

**Variables related to production economy**

- Cost of workforce
- Site value

**Variables related to the Brazilian wine economy**

- Cost of transportation
- Employment

CLASSIFICATION WITHOUT HIERARCHY ORDER ACCORDING TO URCA MATRIX			50			VARIABLES HIERARCHY ACCORDING TO CHIVAS		
DEFEND	MOTRIC	CLASS	POS	VARIABLE	DEFEND	POS	VARIABLE	MOTRIC
86	165	DESC	1	Cons_costs_price	4 697	1	Prod_nature_terroir	2 557
1 835	74	RES	2	Cons_product_type_wine	4 497	2	Economy_domestic_regional_concentration	2 356
1 592	56	RES	3	Prod_techniques_agro_techniques	2 327	3	Regulation_actors_public_regional/national	2 187
1 810	3	RES	4	Cons_product_packaging	2 008	4	Regulation_type_designations	2 147
458	230	DESC	5	Prod_nature_vintage	1 961	5	Prod_techniques_r&d	1 911
74	157	DESC	6	Economy_domestic_marketing	1 959	6	Prod_techniques_agro_techniques	1 850
1	361	DESC	7	Cons_behavior_individual_practices	1 835	7	Economy_domestic_weight_companies	1 801
334	124	DESC	8	Cons_behavior_quantity	1 810	8	Regulation_type_production	1 716
2	55	DESC	9	Economy_production_wine_making_cost	1 780	9	Regulation_actors_mercosur	1 702
1	244	DESC	10	Cons_behavior_social_practices	1 592	10	Economy_world_trade_market	1 654
4 697	27	RES	11	Cons_product_new_products	1 573	11	Prod_techniques_grape_variety	1 640
4 497	228	RES	12	Prod_oeano_techniques_practices	1 453	12	Economy_world_competition	1 503
1 573	233	RES	13	Prod_oeano_techniques_aging	1 384	13	Economy_world_policies	1 440
2 008	232	RES	14	Prod_techniques_r&d	1 370	14	Economy_world_taxes	1 346
1 101	2 557	LIG	15	Prod_nature_potential_regions	1 349	15	Prod_oeano_techniques_r&d	1 272
1 961	60	RES	16	Prod_techniques_grape_variety	1 318	16	Economy_domestic_taxation	1 253
1 060	719	RES	17	Prod_oeano_techniques_r&d	1 309	17	Regulation_type_labeling	1 249
1 349	584	RES	18	Prod_techniques_yield	1 245	18	Economy_world_trade_agreements	1 174
2 327	1 850	LIG	19	Prod_nature_terroir	1 101	19	Economy_world_advertising	1 109
1 245	1 071	LIG	20	Prod_oeano_techniques_quality_control	1 076	20	Regulation_actors_professional	1 075
1 318	1 640	LIG	21	Prod_nature_hazards	1 060	21	Prod_techniques_yield	1 071
1 370	1 911	LIG	22	Economy_production_grape_production_cost	1 036	22	Prod_oeano_techniques_aging	908
1 453	720	RES	23	Economy_domestic_employment	847	23	Regulation_type_yield	886
1 384	908	RES	24	Regulation_type_declarations	714	24	Economy_domestic_marketing	803
1 076	787	RES	25	Economy_production_workforce	526	25	Prod_oeano_techniques_quality_control	787
1 309	1 272	LIG	26	Cons_behavior_health_image	458	26	Economy_domestic_employment	771
714	123	DESC	27	Economy_production_site_value	398	27	Economy_production_site_value	729
52	1 716	MOT	28	Cons_behavior_bying_habits	334	28	Prod_oeano_techniques_practices	720
99	886	DESC	29	Economy_world_competition	316	29	Prod_nature_hazards	719
52	2 147	MOT	30	Economy_domestic_regional_concentration	311	30	Economy_domestic_transportation	717
78	1 249	MOT	31	Economy_domestic_taxation	263	31	Economy_production_workforce	692
99	1 702	MOT	32	Economy_domestic_weight_companies	258	32	Prod_nature_potential_regions	584
174	2 187	MOT	33	Economy_domestic_transportation	204	33	Economy_production_wine_making_cost	549
190	1 075	MOT	34	Regulation_actors_professional	190	34	Economy_production_grape_production_cost	436
1 036	436	RES	35	Regulation_actors_public_regional/national	174	35	Cons_behavior_pyramid_consumers	361
1 780	549	RES	36	Economy_world_trade_market	109	36	Cons_costs_income	244
526	692	DESC	37	Economy_world_advertising	102	37	Cons_product_new_products	233
398	729	DESC	38	Regulation_type_yield	99	38	Cons_product_packaging	232
258	1 801	MOT	39	Regulation_actors_mercosur	99	39	Cons_behavior_health_image	230
311	2 356	MOT	40	Cons_behavior_attitude	86	40	Cons_product_type_wine	228
204	717	DESC	41	Economy_world_policies	83	41	Cons_behavior_attitude	165
263	1 253	MOT	42	Regulation_type_labeling	78	42	Cons_behavior_education	157
847	771	DESC	43	Cons_behavior_education	74	43	Cons_behavior_bying_habits	124
1 959	803	RES	44	Economy_world_taxes	63	44	Regulation_type_declarations	123
52	1 174	MOT	45	Regulation_type_production	52	45	Cons_behavior_individual_practices	74
316	1 503	MOT	46	Regulation_type_designations	52	46	Prod_nature_vintage	60
83	1 440	MOT	47	Economy_world_trade_agreements	52	47	Cons_behavior_social_practices	56
102	1 109	MOT	48	Cons_behavior_housing	2	48	Cons_behavior_housing	55
63	1 346	MOT	49	Cons_behavior_pyramid_consumers	1	49	Cons_costs_price	27
109	1 654	MOT	50	Cons_costs_income	1	50	Cons_behavior_quantity	3

Figure 16 - Results of the CHIVAS method

### **7.2.8 Interpretation of the position of the variables in the influence / dependence chart**

The CHIVAS model also calculates levels of dependency and influence and ranks the variables according to these two axes. The value of the ranking on each axe is obtained by summing the values of each line (influence) and by summing the values of each column (dependency) of the matrix resulting from the CHIVAS method calculation. Knowing that the variable 14 has a value of dependency of 2008 and a value of influence of 232, it is easy to position it in the plan influence / dependence, adopting the following convention: the dependency is represented in abscissa and the influence in ordinate.

Then, a scatter plot chart allows visualizing the position of every single variable in the dependence-influence plan. It is particularly interesting to scatter plot the variables this way, since it allows better understanding of the role of the variables in the system.

Moreover it gives the possibility to “exclude” variables located at the margin, i.e. that don’t belong clearly to one of the previous categories. Those variables are located in the area called middle cluster in Figure 17. These variables play a regulating role in the system and can successively act now as secondary levers, now as weak objectives, now as secondary stakes.



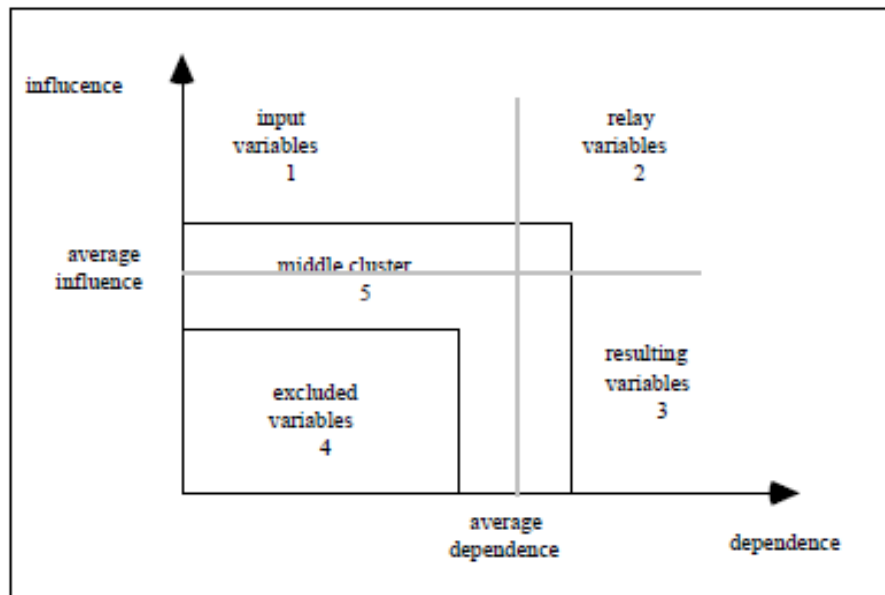


Figure 17 - The influence / dependence chart - Source GODET, 1996

The following figure (Figure 18) presents scatter plots of the variables in the influence / dependence chart.

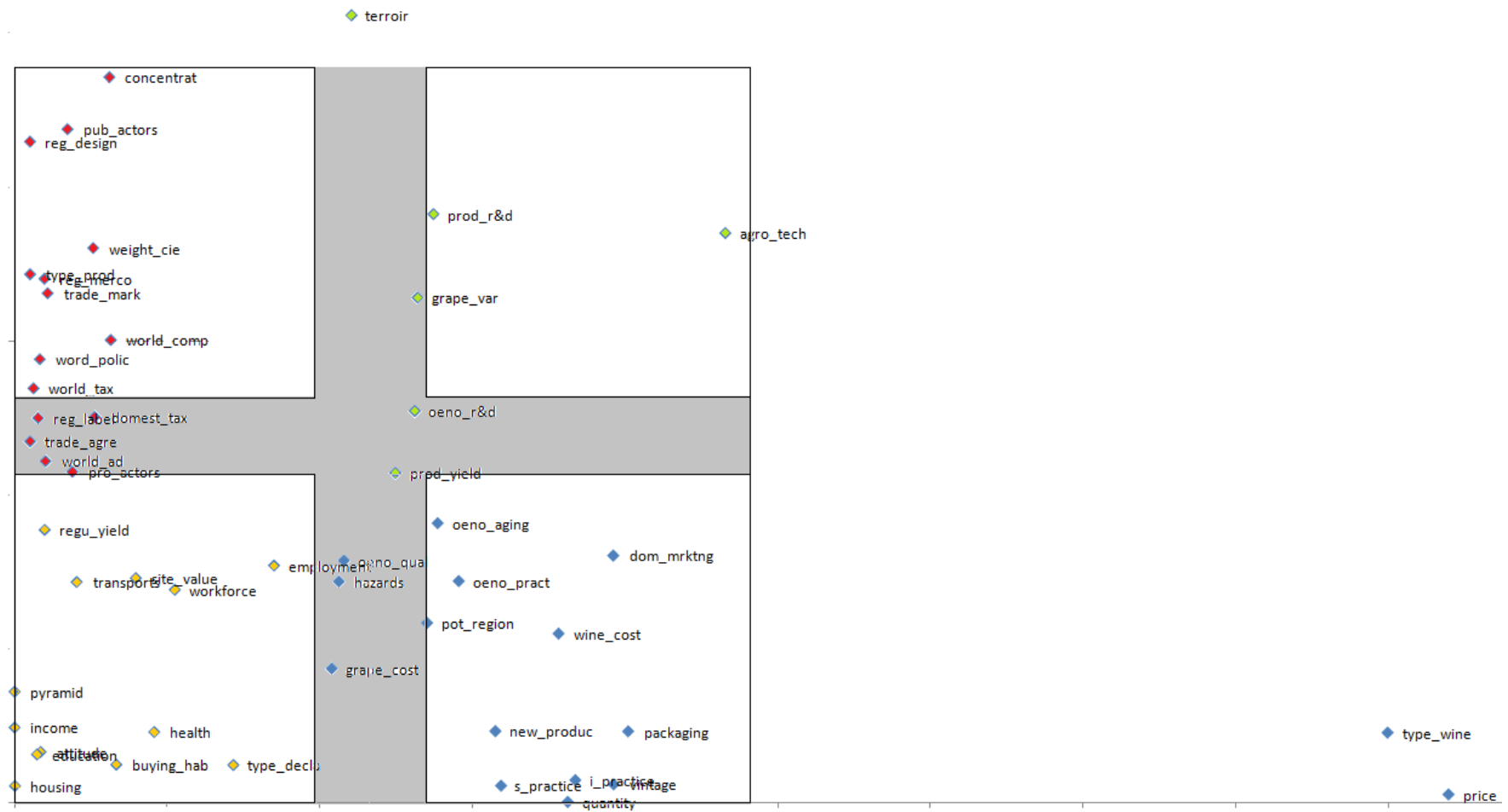


Figure 18 - Scatter plot in the influence / dependence plane

In Figure 18 - Scatter plot in the influence / dependence plane, drivers identified by CHIVAS are plotted in red, relay variables in green, result variables in blue and excluded variables in yellow.

First of all, we can see that two variables have somehow been discarded by the model since their level of dependency is so high and their influence so low that:

- First, they have little interest since they have no impact on the system.
- Second, their levels of dependency is so high that they are some kind of outliers in the sense that it is better to exclude them before analyzing the rest of the variables, which is what the CHIVAS model did. Indeed, if we carefully look at the limits identified by the system for the classification, it appears that the type of wine and its price haven't been taken into consideration.

Now, it appears that CHIVAS doesn't make the distinction between the variables located at the margins and the others, which is fine because it gives the possibility to further analyze the results by providing the levels of dependency and influence.

Drawing the so-called middle cluster as I did gives the possibility of a second level of interpretation of the variables which don't act clearly but rather as regulating variables of the system by playing one role or another depending on the evolution of the other variables.

For example, I would downgrade the role of professional actors, of international advertizing, trade agreements, and the differences between taxes in the world to the place of secondary levers. And to a lesser extent, the regulation of labeling and the Brazilian level of taxation. These variables are still influent enough to be positively considered as levers and might play an important role in the evolution of the system.

### **7.2.9 Stability / instability of the system**

The repartition of the variables within the different sectors of the influence-dependence plan reveals the stability of the studied system.

- In a stable system, the variables are distributed in large numbers in areas 1 and 4, that is to say there is a lot of drivers and result variables. The biggest advantage of such a system is to present a clear dichotomy between the variables on which the actors can act and the resulting variables
- In an instable system, the variables are located mostly around the main diagonal; that is to say in the sectors 2 and 4. The stake variables or relay variable (in the area 2) being at a time influent and dependent, any action on one of them impacts all the others and itself by feedback.

The place of wine in Brazil is clearly a stable system since the variables in the stake sector are very few.

#### **7.2.10 Highlight of the hidden variables**

As previously said, it is particularly interesting to compare the positions of variables stemming from the direct and indirect (CHIVAS) classifications, for example by situating them on the same influence x dependence plane. This presentation has the advantage of qualifying the global, but quite superficial, appreciations made on variables by intuitive or direct classification.

Comparing the direct and indirect positioning of the variables allows, of course, confirming the importance of some variables, but it also gives the possibility to identify that some variables, which were expected to be of low importance a priori, play an important role because of the indirect relationships effect.

GODET highlights that in general, structural analysis conducted by MICMAC or similar approach such as the present CHIVAS leads to the following observation:

- 80% or more of the results confirm the first intuitions since for many variables the direct classification and the indirect one don't differ.
- Between 10 and 20% of the results appear as not intuitive since from one hierarchy to the other, some variables are strongly upgraded or downgraded in the classification.

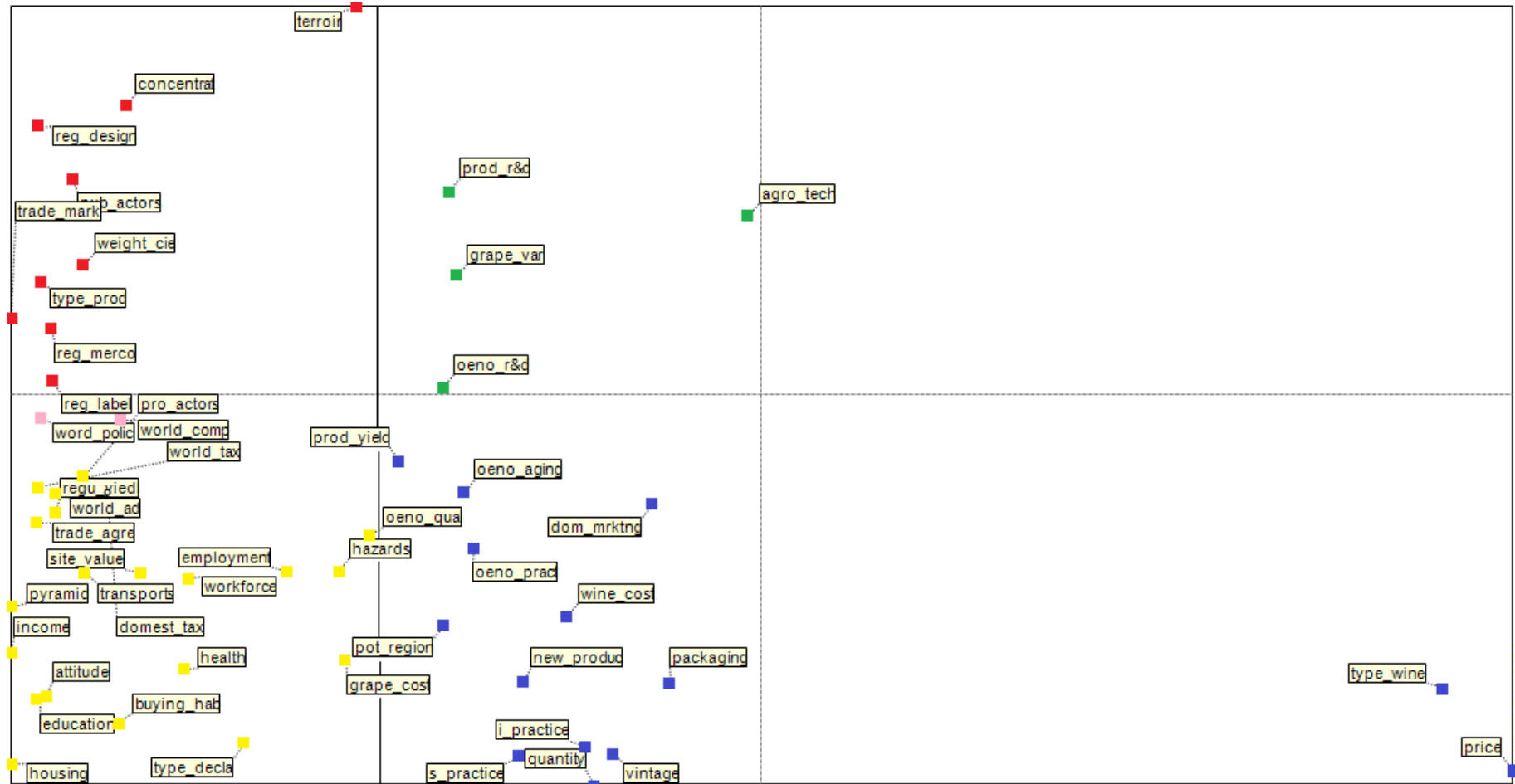


Figure 19 - Scatter plot in the direct influence / dependence plane

#### The upgraded variables:

These are the variables which don't seem to have a strong influence at "first look" and which proved to be determinant for the evolution of the system by the interplay of indirect relationships.

- Regulation of the conditions of production
- Mercosur operational actors
- Brazilian public operational actors
- World trade agreements
- World competition
- World policies
- Taxes in the world
- Yield

#### The downgraded variables:

- Brazilian taxes
- Natural hazards
- Population pyramid of consumers
- *Terroir* or local conditions of the places of production

Twelve variables are reclassified, which means that 24% of the results of the CHIVAS model application are counterintuitive.

## **8. Conclusions and implications for future studies**

After this study, it is possible to draw a qualitative assessment of which structural analysis ensured the objective frame.

Those conclusions reflect the opinion of the members who participated to the two stages of the process, the identification of the variables and the filling up of the crossed impacts matrix. The composition of the group is naturally not neutral in the expression of the general opinion. But the great advantage of the prospective analysis as well as the online data collecting framework that I set up is the serenity they create for the participants to be able to express freely their points of view. Everyone could express his opinion and change his mind at any time, while seeking a general consensus.

First of all it appears that the system is quite stable, which doesn't mean it won't evolve. It rather means that if some of the variables of the system vary, the latter won't probably be destabilized chaotically, but rather evolve predictably.

#### The drivers:

The structural analysis shows that the drivers are not very numerous and highlights variables which are of economical or political nature. Moreover these variables are for approximately half of them internal to the system and therefore external for the other half.

When comparing the values of direct influence, which can be considered as more intuitive, and the results of CHIVAS, it appears that mainly variables external to the system were upgraded while many "intuitive" internal drivers have been downgraded in the classification.

It results that the place of wine in Brazil is greatly conditioned by international variables such as Mercosur actors, world trade agreements, world competition, world policies or the different level of taxes in the world. Meanwhile, some intuitive variables such as the domestic taxes or the population pyramid of the consumers were downgraded.

One of the motivations of this paper was to check the validity of the hypothesis formulated by COLEMAN in "Wine politics", who states that wine around the globe is impacted by numerous outside forces, ranging from regulators to self-appointed wine critics. "Critics and commentators widely acknowledge the importance of the growing area and winemaking style in creating what ends up in the bottle. But, more than wine

consumers realize, politics matters, too. Politics determines not only which grapes grow where, what can be written on the label, which wines are exported or imported, which wines are available in local stores, and how much a wine costs, but, perhaps most important, it also affects the quality of the wine in the bottle.” (COLMAN, 2008)

Indeed, the actions of the different actors involved in the Brazilian wine scene will shape the future of wine in Brazil. Strategic analysis of the interplay of actors should constitute one of the crucial future steps in a further study based on those results. This future step could aim “at resolving, or at least recognizing, the conflicts amongst actors who are all pursuing their own interests. The interplay of these actors will certainly condition the evolution of the system under study” (GODET, 2006). The actors affecting the system in question include grape and winegrowing industry, authorities, importers, distributors, customers and citizens, etc.

It is therefore extremely interesting to see that the most influent variables of the system almost exclusively relate to regulation, policies, agreements and politics, at the Brazilian and international levels.

#### The excluded variables:

In this category come variables of social nature, which appear to be unable to make the system evolve. Most of them are political too and in that sense we can state that any political action on them would have no effect on the system. That gives us perspective about the influence of politics on the place of wine, since the variables depending on politics are many but not all of them are proper levers which can make the system evolve.

#### The relay variables:

There are few relay variables. This is a factor of stability of the system because the relay variables, being both influent and dependent, can create a domino effect if one evolves in a way or another.

#### The result variables:



Variables such as agricultural techniques, grape variety, research and development in oenology and production techniques, are stake variables. That means that concerning those variables, there is nothing for granted.

### ***8.1 Implications on the place of wine in Brazil***

Considering the great stability of the system, it is unlikely that the place of wine knows a huge breakthrough in the future; it rather will keep evolving towards an increasing democratization – but maybe not at a faster pace -, especially if no particular political action is taken in this sense. The market of wine, as for the other goods in general, keeps evolving towards higher quality, while the emergence of a middle class with an increased purchasing power.

That said, wine consumption might keep evolving at a slightly slower pace than other alcoholic beverages such as beer, as it is the case today. Nevertheless, the country is the scene of a constant increase of the internal domestic consumption in general, driven mostly by the high and middle classes, and the fast redistribution of the population into the socio-economic categories resulting in a fast growing middle class, should lead to a sustained increase of wine consumption in the country. It may also have some ripple effect and work for establishing wine as a product fulfilling the role of social assertion in the lower categories. But there is nothing granted about it. It must be noted though that the substantial disparities in the country makes it difficult to draw a general conclusion. The geographic disparities are such that the reality from one part of the country to another is completely different. It must be kept in mind that the income disparities are very important as well. Even if the consumption modes are getting closer to European standards, it is far from being true everywhere and for everybody.

It appears from the structural analysis that companies involved in the wine industry have few levers to influence the place of wine in the society by themselves. The only lever that companies might operate individually is the domestic marketing driver, even if it is clear that collaborative effort would probably have a deeper impact on the global perception of wine in Brazil.

Indeed, private actors of the industry may have a much stronger influence by joining their efforts and through lobbying actions. It is no coincidence that the weight of the companies and regional concentration are strong drivers of the system. It allows companies to have a stronger influence on the politics and have, consequently, indirect influence on strong drivers of the system, in particular the fields on which regulation is exerted, such as the conditions of production, the designations, and labeling. These drivers directly impact the readability of the products, which participate greatly to a better relative positioning of the Brazilian wines within the world competition, be it on the foreign markets or the domestic one.

As the sector of beer, the sector of wine could also benefit greatly from entering a process of concentration with the emergence of big brands which would be able to produce wines targeting specific submarkets and matching the regional tastes. Following the example of the beer sector, this could be done through innovation, a greater diversity and value-added products taking into account the many diversities existing in Brazil.

Moreover, big brands have the power to conduct large communication campaigns and give visibility to wine. Nowadays, mass market retailers like Carrefour or federations like “Wines from Brazil” have this ability to communicate widely, but without the same incentives or the same means respectively. I strongly believe that federations lack political support and financing, compared to what happens in countries successfully developing the wine business.

Such organization as “Wines from Brazil”, which participate to international fairs and tasting events, really makes sense. Moreover, some observers state that the dynamic of the qualitative boom observed on the market results in particular from the creation of this particular organization and from investments of big companies. It makes no doubt that such initiatives should be promoted in the future, since they can change the way wine is perceived in Brazil but also the way Brazilian wines are perceived in the world, one probably exerting feedback effect on the other.

Besides the previously cited influential factors, the others are international variables – world trade agreements, world policies, world advertising, world taxes and world trade market –, which are, by nature, more difficult to influence, unless strong and joint commitment of the actors, including politics at the highest level of the state..

Countries with a long wine tradition (France, Italy, Spain, Portugal, etc.), but also countries producing the so-called new world wines (USA, Australia, Chile, Argentina, Mexico, New Zealand, South Africa mainly) have invested and continue investing large amounts of money in the development of the production, domestic sales, exportation and also in the promotion and the defense of a culture of wine. These actions are often supported by governments, and covers areas as wide as technical or strategic research, and communication. No doubt that it contributes a lot to the increasing proportion of imported wines in Brazil for instance.

Brazil is a growing market for wine but it is mainly foreigners who take advantage of it, in particular Argentina and Chile which benefit from lower taxes than countries situated outside of the Mercosur area. I believe that the keys of the success of some other alcoholic beverages like vodka, i.e. large investments and sponsoring, are worth being more deeply explored by the Brazilian wine industry, in particular at the occasion of peak consumption, like Christmas, Easter or Valentine's Day.

## ***8.2 Implication for future studies***

The creation of a culture of wine cannot be done without understanding and accompanying the new consumers. A new consumer is not only a new consumer in the meaning of an additional client. What makes him a new consumer is its own approach of wine, its mode of consumption, which may break with the consumption modes in other countries, in particular of old world wine regions. Other factors as the temperature for example, which is, in most part of Brazil higher than in Europe would probably have an influence on the types of wine consumed. It would be worth exploring this through a marketing oriented study to understand better how to satisfy the taste of these new consumers, all while taking into account the many disparities characterizing the country.

Another factor would be worth being evaluated. Brazilians, and in particular the ones who belong to the A and B classes take good care of their health and are known to be sensitive to the marketing of nutritional products. I believe that wine is generally well accepted because, when being drank moderately, it seems to have the reputation of being good for health. Nevertheless, a better understanding of the perception of wine, taking into consideration the income and geographic disparities as well would bring relevant information about the market.

About the prospective approach of understanding the place of wine in Brazil and its possible changes in the future, structural analysis can be completed by the use of other tools. In particular actors' analysis would be very instructive as well.

This step consists in evaluating the "important relationships among actors, as well as their respective convergences and divergences vis-à-vis several important stakes and objectives related to these stakes" will allow analysts to take into consideration the "richness and complexity of the system under study by supplying intermediary results which clarify certain dimensions of the problem" (GODET, 1997).

Indeed, as GODET stated, "The future is never totally predetermined - however influential past trends may be, the future remains open to several possible scenarios. The actors in the system under examination possess various degrees of freedom which they will be able to exercise, through strategic action, in order to arrive at the goals they have set themselves, and thus successfully to carry out their project.

From this, it follows that analysis of these actors' moves, confronting their plans, examining the balance of power between them (in terms of constraints and means of action) is essential in order to throw light on the strategic issues and the key questions for the future (which are the outcomes and consequences of foreseeable battles)." (GODET, 1991)

The central point in actors' strategy analysis is to focus on the actors who directly or indirectly control the key variables identified by the structural analysis. For this purpose, we can construct an 'actors' strategies' table, presented in the form of a square matrix (actors x actors) in which the diagonal cells are filled in with the objectives of

the respective actors and the other cells contain the means of action that each actor may use against the others in order to achieve his goals.

As for the structural analysis, filling in this matrix should be a collective process. Likewise, this information on actors' strategy can be collected or complemented by conversations with experts who are representative of each group of actors. Of course it is usually difficult to ask an actor about his strengths and weaknesses and even more to ask him about his own strategy. Therefore, it is much easier to interview each actor about the other ones and then to crosscheck the information. By interpreting cumulated and partially true information, a more or less coherent picture of the whole situation emerges.

In practice, the time needed to make the actor analysis is generally shorter than it is required for the structural analysis. The time needed for gathering and checking the information and then analyzing it, however, must not be underestimated. Moreover the analysis of the actors' strategy would benefit widening the work group to other participants having a deeper knowledge of the industry (GODET, 2004).

I strongly believe that it would be the opportunity to anchor this process of reflection well opportune at a time where the importance of political choices matter in a context of strong competition.

## References

AIGRAIN, P.; BOULET, D.; LALANNE, J.-B.; LAPORTE, J.-P, MELANI, Ch. Les comportements individuels de consommation du vin en France : évolution 1980-1995, Rapport INRA ESR Montpellier, ONIVINS Paris, 1996.

BAIN AND CO.; Study for the newspaper Exame, 2008

BALARH, M.; BRETON, R.; LACOMBE, C.; MOREAU, H.; RUZINDANA, A.: THERIAULT, M. L'industrie du vin au Québec à l'aube de 2012. Montreal, 2002.

BUIGUES, P.A. Prospective et compétitivité. - Paris: Mac Graw Hill, 1985.

CASTRO, A.M.G. DE; JOHNSON, B. B.; PAEZ, M. L. A. & FREITAS FILHO, A. Análise prospectiva de cadeias produtivas agropecuárias. In: Anais do XX Simpósio de Gestão da Inovação tecnológica, USP/FEA/PACTo, São Paulo, 1998.

CIA Fact Book; 2010. Retrieved from <https://www.cia.gov/library/publications/the-world-factbook/geos/br.html>

COELHO, A.; MONTAIGNE, E.; RASTOIN, J.-L. Globalization of the World Wine Market and Restructuring of the Supply-Side, Research in Economics and Rural Sociology, INRA Social Sciences. N° 5-6, November, 2006.

CETEM-IPSOS PUBLIC AFFAIRS, Observador Brasil 2009, 2009.

COLMAN, T. Wine politics. How Governments, Environmentalists, Mobsters, and Critics Influence the Wines We Drink. New York. 2008.

CORNELIUS, P.; VAN DE PUTTE, A.; ROMANI, M., Three Decades of Scenario Planning at Shell, California Management Review 48, 2005

GODET M., From anticipation to action, Unesco, 1993.

GODET, M.; ROUBELAT, F.; Creating the future: the use and misuse of scenarios, Long range planning, vol. 29, n°2, avril 1996.

GODET, M. Manuel de prospective stratégique, tome 1 Une indiscipline intellectuelle, tome 2 L'art et la méthode, Dunod, Paris, 1997.

GODET, M. et al. – La boîte à outils de prospective stratégique. - Paris : LIPSOR working papers, 2004.

GODET, M.; DURANCE, P.; GERBER, A.; Strategic Foresight, problems and methods, Issue n°20, 2006

GOUVEA DE SOUZA; The power of the brand in the buying decision, 2008

HERVIAS, A; MENDIZABAL, Brazil and the new latitude approach to wine, Wine Business International, 2007.

IBGE, Instituto Brasileiro de Geografia e Estatística. Retrieved from <http://www.ibge.gov.br/home/>

IBRAVIN. Instituto Brasileiro do Vindo. 2010. Retrieved from <http://www.ibravin.org.br>

IWSR. International Wine and Spirit Research. 2010. Retrieved from <http://www.iwsr.co.uk>

KAHN, H.; WIENER, A. J.; The Year 2000, 1967

LOINGER, G.; DURANCE P. ; La prospective régionale, de chemins en desseins ; neuf études de cas en France et en Europe, Editions de l'Aube, Datar, coll. Bibliothèque des territoires, 2004

MARQUES E; FGV EBAPE handout, Rio de Janeiro, 2006

McLINTOCK, K.; CAILLARD, A.; COUCHE, S.; DePALMA, M.; FORTUNE, J.; HENRY, P.; HøJ, P.; HORGAN, T.; LOWE, D.; McKENZIE, M.; ODELL, J.; PIRIE, A.; SOUTTER, J.; STANFORD, L.; STRACHAN, S.; TOLLEY, S.; WOODS, D. Wine Australia: directions to 2025: an industry strategy for sustainable success. National Wine Center, Kent Town, 2007

OIV; 2009; Le marché du vin au Brésil; Retrieved from [http://www.obs-viti-cg34.com/viti/download\\_file.jsp?filename=chiffresBresil.pdf](http://www.obs-viti-cg34.com/viti/download_file.jsp?filename=chiffresBresil.pdf)

OIV; 2010; Retrieved from <http://www.oiv.org/uk/accueil/index.php>

O'SULLIVAN, A.; SHEFFRIN, S. M.; PEREZ, S., Survey of Economics: Principles, Applications, and Tools, Upper Saddle River, NJ, Pearson, Prentice Hall. 2008

PRICEWATERHOUSECOOPERS; 2006/2007: From São Paulo to Shanghai, New Consumer dynamics: the impact on modern retailing.

PROSPECTIVES CCEF, Le vin dans le monde à l'horizon. Prospectives CCEF, 2009.

RASTOIN, J.-L.; COELHO, A. The irresistible ascent of wine multinationals, Eurowine, 2004

SCHWARTZ P., The art of the long view, Doubleday, 1991.

THE ECONOMIST; A survey of the world economy; September 16th 2006. Retrieved from



<http://www.economist.com/surveys/downloadSurveyPDF.cfm?id=7877964&surveycode=NA&submit=View+PDF>

THOLLOT, W.; BERDUGO, G. Les principaux importateurs de vins et spiritueux au Brésil. São Paulo: Mission Economique de São Paulo. 2008.

UBIFRANCE et les missions économiques; Le consommateur brésilien, 2009

UN; Department of Economic and Social Affairs; Population Division; WORLD POPULATION TO 2300, 2004

UNCTAD; 2011; Retrieved from  
<http://unctadstat.unctad.org/ReportFolders/reportFolders.aspx>

VERGARA, S. C. Projetos e Relatórios de Pesquisa em Administração. 9ª ed. São Paulo: Atlas, 2007.

VINEXPO, IWSR, Le marché mondial du vin et ses perspectives, 2010.

WINE BUSINESS INTERNATIONAL, 2010. Retrieved from [http://www.wine-business-international.com/129---en-top\\_navi-home.html](http://www.wine-business-international.com/129---en-top_navi-home.html)

WACK, P., Scenarios: Uncharted Waters Ahead, Harvard Business Review. September-October, 1985.

WACK, P., Scenarios: Shooting the Rapids, Harvard Business Review. November-December, 1985.

WINES FROM BRAZIL, 2010. Retrieved from <http://www.winesfrombrazil.com/>

WINES FROM BRAZIL, IBRAVIN, APEX. Estratégias do Wines From Brazil, 2008