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Gastronometrica IX

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June 04 – 07, 2014

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(International Organisation of Vine and Wine)

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Lyon 2014

www.vdqs.net
How to Use This Booklet of Abstracts?

You will find in this booklet all the abstracts of the submissions which were accepted by the scientific committee.

At the end of this booklet, you can find a complete alphabetical list of all authors and co-authors with a link to the page where you can find their abstract.

Unfortunately, some speakers have informed us that they will be unable to participate at the conference. However, their abstracts have been included in this booklet.

Please, note also that you can find the full version of those papers (and sometimes also the ppt presentation) on the website of the conference, in the private area reserved for VDQS – EuAWE – SQG members.

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Our next Conference will be held 2015, in Brno (Czech Republic).

Expecting this event, please don’t forget to consult our web site regularly, to participate in our facebook groupe (VDQS) and page (EuAWE), to keep in touch via Twitter (EuAWE) and to send your work for publication in Enometrika
**Wednesday June 4th, 2014**

14:30 – 15:00  
**Opening**  
Managing director of Isara,  
**Pascal DÉSAMAIS,**  
President of the General Council of Rhone-Alpes  
**Jean-Jack QUEYRANNE,**  
The scientific coordinator of the International Organisation of Vine and Wine (OIV)  
**Jean-Claude RUF**

15:00 – 16:30  
**Plenary Session A:**  
**Antoine BAILLY** – Université de Genève, CH  
"Wine and Divine: from Bacchanals to Prohibitionism"  
**Jon H. HANF** – Universität Geisenheim, DE  
"Pay what you want – A New Pricing Strategy for Wine Tastings?"  
(joint paper with Oliver GIERING)

17:00 – 18:30  
**Plenary Session B:**  
**Giulia MELONI** – LICOS, KU Leuven, BE  
"The Rise and Fall of the World’s Largest Wine Exporter and its Institutional Legacy"  
(joint paper with Johan SWINNEN)  
**Ricardo SELLERS-RUBIO** – Universidad Alicante, SP  
"The Economic Efficiency of Wineries of Protected Designations of Origin"  
(joint paper with Francisco MAS-RUIZ)

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**Abstract:**  
"Vinum bonum hominis baetificat con " ... The wine is good when it gladdens the heart of man. This conference is more humanistic than quantitative, although VDQS was part of my scientific career at his creation ... for science and for humanity.

To place this conference right, let’s go back to the Bible, which mentions wine 441 times ... an matchless marketing, we would say today, countersigned by God himself. Good wine, turn water into wine at a rustic meal, and for good health wine is recommended for all (Paul to Timothy).

It was mentioned to the extent that during the Prohibition in the United States in 1924 two Yale professors wanted to remove the term wine of bible.

In other religions, metaphor between divine wisdom and bacchanalia is common. The wine is at the center of texts in Persia, Mesopotamia and the Greek civilization. From Dionysius, Hippocrates, Bacchus to Muhammad which prohibits the consumption of alcohol, even if the word alcohol comes from the Arabic «al Khol» significant the finest.

But then monasteries and wine appellations spread the distribution of wines, like Clos Vougeot or Chateauneuf du Pape in Avignon. Christianity is a great propagandist for wine. St Vincent the Saint of winemakers helps.

But intoxication remains a sin, especially for bad wine and traitors who abuse, such as Ganelon, with 1000 beautiful Saracen women. And then let’s also talk about prohibition and the fight against alcoholism.

These are the contents of a conference with a historical and humanistic vision for the VDQS to live between modeling and consumption beyond the myths!
**Pay what you want – A New Pricing Strategy for Wine Tastings?**

Jon H. HANF, Oliver GIERING  
University of Giessenheim, DE  
jon.hanf@hs-gm.de, oliverheinz.giering@hs-gm.de

**Abstract**

In Germany nearly 20% of all wine sales are directly sold. Hence, customers have to be attracted to the wineries. As a result most often wine tastings are for free despite of the associated costs. However, often visitors feel obliged to buy some bottles of wine even though they are not in favor of this wine. Dissatisfaction might occur. Hence, other strategies have to be developed in order to cover the costs but reducing the risk of dissatisfaction. In this context we want to introduce the concept of “Pay What You Want”.

This is a pricing strategy where buyers pay any desired amount for a given commodity, sometimes including zero. In some cases, a minimum price may be set, and/or a suggested price may be indicated as guidance for the buyer. The buyer can also select an amount higher than the standard price for the commodity.

Giving buyers the freedom to pay what they want can be very successful in some situations, because it eliminates many disadvantages of conventional pricing. Buyers are attracted by permission to pay whatever they want, for reasons that include eliminating fear of whether a product is worth a given set price and the related risk of disappointment. For sellers it obviates the challenging and sometimes costly task of setting the “right” price. For both, it changes an adversarial conflict into a friendly exchange, and addresses the fact that value perceptions and price sensitivities can vary widely among buyers.

Thus, aim of our paper is to discuss the possibility to introduce “Pay-What-You-Want” pricing in the German wine business. We will first provide a literature overview. Afterwards we will combine these findings with existing example.
The Economic Efficiency of Wineries of Protected Designations of Origin: Empirical Evidence from Spain
Ricardo SELLERS-RUBIO, Francisco MAS-RUIZ
University of Alicante
Ricardo.Sellers@ua.es; Francisco.Mas@ua.es

Abstract

Collective brands (and regional or geographical brands or designations) have proliferated in recent years, and the products marketed under these brands now represent an important percentage of consumer purchases. The wide use of the collective label strategy has provoked interest in the academic world but the extant studies are only based on estimating collective brand equity through the price premium consumers are ready to pay (e.g. Fernández Barcala and González Díaz, 2006) and on the impact of collective reputation indicators on product price (e.g. Landon and Smith, 1997, 1998; Loureiro and McCluskey, 2000; Schamel, 2000). This has allowed the characterisation of collective labels through two main features (Fishman, Finkelshtain, Simhon and Yacouel, 2008): i) their labels are perceived as signs of superior quality by consumers, who are prepared to pay a price premium for them; and ii) the member producers of collective labels only share a brand name, and are generally autonomous companies that take individual decisions and make their own profits.

In any case, we can ask ourselves what the efficiency of a member company of a PDO label would be and whether there are conditions that affect this efficiency. The efficiency of a decision making unit (for example, a company) refers to a relative judgement around the relationship between the resources used -inputs- and the results obtained -outputs- in the development of its activities; bearing in mind that between the two elements is the underlying idea of opportunity costs. A unit will be efficient if, given a certain availability of inputs, it is able to produce the maximum amount of output possible; or, alternatively, if it can reach a certain level of output using the lowest quantity of inputs possible. The efficiency of a decision making unit has a relative character, as it includes the performance of the other units that make up the sample. The interest in studying these aspects rests on their important implications on managers' decisions in terms of the effectiveness of public PDO labels in creating value-added for producers.

Thus, the objective of this study is to examine the capacity of a PDO label to generate greater performance from a company efficiency perspective while controlling the role of the different characteristics of the member companies. The central hypothesis is that a PDO has a positive impact on the economic efficiency of its member companies and that this is because a PDO label is a collective reputation indicator that foments efficient investment in quality in terms of member returns. The methodology is based on the non-parametric efficiency estimation technique of Data Envelopment Analysis (DEA) and on the application of different regression models that explain company efficiency through both the PDO label, as an indicator of collective reputation, and the characteristics of the company. The empirical analysis is made on PDO labels in the Spanish winery sector; an interesting example for our purposes given the proliferation in the wine market of PDO labels.

Keywords: PDO, wineries, Spain, Efficiency
JEL-Code: M30

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www.vdqs.net Lyon 2014 10
WINE as INVESTMENT & INVESTMENT in WINE

Chaired by:

Foreign Direct Investment in the Wine and Spirits Sector
J. François OUTREVILLE
HEC Montréal, CA

A Barrel of Oil or a Bottle of Wine: How do Global Growth Dynamics Affect Commodity Prices?
Serhan CEVIK, Tahsin SAADI-SEDIK
International Monetary Fund, US

Long-run Relationships between Prices of Fine Wines and Stock Market Indices
Jan BENTZEN, Valdemar SMITH
University of Aarhus, DK

Creating Jobs from New Investment in the Wine Sector
Martin PROKEŠ, Pavel TOMŠÍK
Mendel Univ. Brno, CZ

Wine Funds – An Alternative Turning Sour?
Philippe MASSET, Jean-Philippe WEISSKOPF
Ecole hôtelière de Lausanne, CH

Wine - Investment: A Profitable Alternative Investment or a Simple Long Term Pleasure?
Marie-Claude PICHERY, Catherine PIVOT
LEDI Univ. de Bourgogne & Centre Magellan, Univ. Jean Moulin - Lyon 3, FR

Foreign Direct Investment in the Wine and Spirits Sector
J. François OUTREVILLE
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Abstract

The objective of the paper is to identify some of the determinants of foreign investment of the largest multinational enterprises (MNEs) operating in the wine industry. The factors that drive firms to invest abroad and determine the location of those investments are examined in the case of the world wine industry. The list of the largest MNEs has been compiled using financial databases and company websites.

The results of this study have some important implications. They indicate that location-specific advantages of host countries i.e. market-seeking factors, resources-seeking factors and efficiency do provide an explication of the internationalization of firms in some preferred countries rather than others.

Keywords: Wine production, Globalization, Foreign Direct Investment

A Barrel of Oil or a Bottle of Wine: How do Global Growth Dynamics Affect Commodity Prices?
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Abstract

This paper explores empirically the causes of extreme fluctuations in commodity prices over January 1990 to June 2010 and seeks to identify the relative contribution of advanced and emerging market economies to the changes in commodity prices. Our assumption is that analyzing two very distinct goods—crude oil and fine wine— helps to identify common determinants of commodity prices. We find that the growth rate of global aggregate demand is the key macroeconomic determinant of the fluctuations in both crude oil and fine wine prices over the sample period. While advanced economies account for more than half of global consumption, emerging market and developing economies make up the bulk of the incremental change in demand, thereby having a greater weight in commodity price formation. The coefficient of emerging market industrial output growth is about three times as high as that of advanced economies in oil price regressions and almost five times more powerful in fine wine price regressions. The results also show that the shift in the composition of aggregate commodity demand is a recent phenomenon.

Keywords: Commodity prices; Crude oil; Fine wine; Comovement; Global growth; Emerging economies

JEL Code: Q11, Q39, Q41, Q43
Long-run Relationships between Prices of Fine Wines and Stock Market Indices
Jan BENTZEN, Valdemar SMITH
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Abstract

The purpose of the paper is to analyze the long-run relationship(s) between price indices of fine wines, i.e. the most expensive wines, and the stock market indices. Fine wines, like e.g. Premier Cru wines, are often considered a substitute for financial investments via the stock markets and therefore of some interest to compare price developments for wines and equities.

The wine price data used are the so-called ‘Live-ex Fine Wine Index’ which are available in two versions: one index for the First Growth wines (Premier Cru) and another index representing one hundred fine wines, the latter defined as having obtained at least 95 points on a leading wine critics scale – and the wine available at the UK market.

The financial data are three indices: the SP500, the FTSE and MSCI, i.e. stock market indices representing the USA, the UK and a global index like the MSCI (a ‘world market’ index).

The data are monthly data and span the period from January 1988 to the present. At a first glance the price index of fine wines do seem to outperform the stock markets – even by a major margin – and this is fully consistent with the view of fine wines as a reasonable long-term investment. Looking at the business cycle fluctuations in wine prices they do not seem to coincide with the stock market swings which is a further advantage in relation to risk management. The analysis will deal with these issues and also include formal tests for the statistical properties of the wine prices as well as any causality between wine prices and equity prices.

Creating Jobs from New Investment in the Wine Sector
Martin PROKEŠ, Pavel TOMŠÍK
Mendel University of Brno, CZ
martin.prokes.umo@mendelu.cz, tomsik@mendelu.cz

Abstract:

Wine sector development and investment should lead to the creation of new jobs. Significant assumptions were made in the region of South Moravia in the southeastern part of the Czech Republic.

The main research objective of this paper was to find multiplication effects based on new plantings of vines and investments in the wine sector in the last ten years. This study describes how to increase vineyard area related to the Czech Republic’s accession to the European Union in 2004, when restrictions were associated threats of further expansion of vineyards. To achieve the objective of the study was developed inside structural analysis of the wine sector, conducted marketing research data collection and mapping a summary of the investment.

The dynamic development of the wine category, major changes in market and consumer demand are the main causes of increasing the attractiveness of the sector for investment in new plantings of vineyards and subsequent related investments in the production of wine. The main results include the finding that the increase in new plantings of vineyards to four times the annual average has led to an increase in the number of grape growers and wineries have doubled over the last ten years. For the development of the entire wine sector is also linked to the need to create new jobs directly in the industry, but also multiplication effects of related industry suppliers, as well as customers

Keywords: creating jobs, development, investments, multiplication effects, restrictions EU
Wine Funds – An Alternative Turning Sour?

Philipppe MASSET, Jean-Philippe WEISSKOPF
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Abstract

Over the last two decades the financial industry has evolved at its fastest pace ever. Financial products have become more complex and have been blamed for much of the recent financial and economic crisis. At the same time, the finance industry has started to take an interest in physical goods and has turned them into alternative (investable) assets to satisfy an increased demand by investors. Real estate has been packaged into REITs and commodities into ETC, while the art, stamp, classic car or coin market have been proposed as alternative investments by portfolio managers. Investors who were looking for high returns were not too disappointed as according to the Knight Frank Luxury Investments Index collectibles yielded returns between 83% and 430% over the period 2003-2013. At the same time wine funds have emerged and become a serious contender for money from (Ultra) High Net Worth Individuals, especially from Russia and China. Finance professionals have further advertised them as a mean to benefit from the enthusiasm for alternative investments (see Lim Fat and Vetsch [2010]). According to Chris Smith of the Wine Investment Fund, in 2011 “total holdings in formal funds […] and quasi-managed funds (like Berry Bros) are around USD 1'200 million” [Rose, 2011]. We thus are looking at a market that is by no means small and that has gained in importance over the last decade.

In this paper, we want to shed more light on the opaque market for wine funds that has emerged over the last ten years and has drawn money from investors from all over the world. We analyze wine funds to understand whether fund managers have superior selectivity and market timing abilities as compared to both the wine and stock markets. The wine market in general, and by extension the wine fund market, display features that should allow fund managers to generate abnormal returns and time the market. It is a segmented market on which arbitrage possibilities might appear but cannot always be exploited due to low liquidity and high transaction costs. This paired with the multiple distribution channels heavily benefits market insiders. Moreover, the relative information asymmetry between professionals and the public yields possibilities to profit from market inefficiencies and to better anticipate market movements through insider information. We believe that these market characteristics make it an ideal setting to test selectivity and market timing abilities of fund managers.

The case for or against a direct investment in fine wine is still open. Several studies (Jaeger [1981], Fogarty [2006], Sanning et al. [2008], Masset and Henderson [2010]) find that fine wine is an interesting alternative to classic assets. Not only does it offer higher returns for a lower risk but it also appears to be weakly correlated with other assets. On the other side, some authors (see Krasker [1979], Burton and Jacobsen [2001]) find that fine wine is a difficult investment due to high costs, breakage and illiquidity and only offers very limited benefits for investors. It thus remains an open question whether investors should consider fine wine in their portfolio allocation. Wine funds managed by professionals could help alleviate some of the concerns and make wine investments more attractive. At the same time, it is well documented (see Jensen [1968], Gruber [1996], Chen et al. [2010] or Elton et al. [2012]) that professionally managed mutual funds rarely outperform index funds (exchange traded funds).

It is thus not clear whether wine fund managers are able to take advantage of the various market efficiencies and to deliver added-value to investors. Wine funds offer a unique opportunity to analyze fund manager capabilities as they should be able to benefit from distinctive advantages. First, wine fund managers should display a deeper knowledge of financial and wine markets than private investors. Especially, the wine market with its diverse distribution channels offers an advantage to investors inside professional networks. This position enlarges their potential buyers and sellers’ pool but also allows them to source wines at lower prices from sellers that are not accessible to individual investors. Second, due to the asymmetric information on the wine market professional investors should be able to benefit from insider information. They should better forecast future demand but also have more precise information on the inventories of chateaux and négociants which has a strong impact on the supply of certain wines. Thus professionals should be more apt to pick the wines that are going to outperform in the future. Finally, wine fund managers should be able to lower costs due to economies of scale for insurance and storage costs.

Surprisingly, while evidence on wine investments has gained increased attention and literature on mutual funds is very vast, a comprehensive study of wine investment funds is to the best of our knowledge so far inexistent. Only Lucey and Devine [2011] analyze wine fund performance as part of a larger study on wine performance. They report that performance varies depending on the wine fund. Most funds display high returns that are, however, more than compensated by high volatility. This high volatility is in majority due to the year 2008 in which the financial crisis heavily impacted wine funds. Discarding this year volatility strongly decreases and returns slightly increase. They also find that wine funds display a higher Sharpe ratio than their Bordeaux and Rhône index due to a better diversification and expert wine picking in funds.

We use data on nine large wine funds over the period 2000-2013 to investigate descriptive characteristics of the market for wine funds. For a subsample of six wine funds over the period 2008-2012 we examine whether wine fund managers are better performing than the wine market, and classic financial assets in the form of stocks and bonds. We find that for a U.S. investor wine funds offer poor returns and might only be interesting from a financial and economic crisis. At the same time, the finance industry has started to take an interest in physical goods and has turned them into alternative (investable) assets to satisfy an increased demand by investors. Real estate has been packaged into REITs and commodities into ETC, while the art, stamp, classic car or coin market have been proposed as alternative investments by portfolio managers. Investors who were looking for high returns were not too disappointed as according to the Knight Frank Luxury Investments Index collectibles yielded returns between 83% and 430% over the period 2003-2013. At the same time wine funds have emerged and become a serious contender for money from (Ultra) High Net Worth Individuals, especially from Russia and China. Finance professionals have further advertised them as a mean to benefit from the enthusiasm for alternative investments (see Lim Fat and Vetsch [2010]). According to Chris Smith of the Wine Investment Fund, in 2011 “total holdings in formal funds […] and quasi-managed funds (like Berry Bros) are around USD 1'200 million” [Rose, 2011]. We thus are looking at a market that is by no means small and that has gained in importance over the last decade.

In this paper, we want to shed more light on the opaque market for wine funds that has emerged over the last ten years and has drawn money from investors from all over the world. We analyze wine funds to understand whether fund managers have superior selectivity and market timing abilities as compared to both the wine and stock markets. The wine market in general, and by extension the wine fund market, display features that should allow fund managers to generate abnormal returns and time the market. It is a segmented market on which arbitrage possibilities might appear but cannot always be exploited due to low liquidity and high transaction costs. This paired with the multiple distribution channels heavily benefits market insiders. Moreover, the relative information asymmetry between professionals and the public yields possibilities to profit from market inefficiencies and to better anticipate market movements through insider information. We believe that these market characteristics make it an ideal setting to test selectivity and market timing abilities of fund managers.

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We use data on nine large wine funds over the period 2000-2013 to investigate descriptive characteristics of the market for wine funds. For a subsample of six wine funds over the period 2008-2012 we examine whether wine fund managers are better performing than the wine market, and classic financial assets in the form of stocks and bonds. We find that for a U.S. investor wine funds offer poor returns and might only be interesting from a portfolio diversification perspective. Wine fund managers, in most cases, do not show selectivity or market timing abilities. Only one fund manager displays positive risk-adjusted portfolio diversification perspective. Wine fund managers, in most cases, do not show selectivity or market timing abilities. Only one fund manager displays positive risk-adjusted portfolio diversification perspective.
Wine - Investment:
A Profitable Alternative Investment or a Simple Long Term Pleasure?
Marie-Claude PICHERY, Catherine PIVOT
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Abstract
To develop their strategies concerning heritage and/or financial investment, many investors seek diversification, and wines are part of new "alternative" asset classes (Coffman, Nance, 2009 ; Maset, Weisskopf, 2013). Moreover, individuals (usually very wealthy) wishing to constitute a cellar with great wines (Pivot, 2013) are looking for information to help them take their decisions. Beyond guides or results of individual or collective tasting (notes, ranking, ...), they can consult the indices regularly published by the London International Vintner's Exchange which are depending of a secondary market (sales of collectors' cellars for example) and consist in selective information and indicators that help the professionals to advise investors and individual buyers. However they are based on a very small percentage of the world's wine production.

A first stage of work in progress is devoted to the analysis of historical trends of these three indices and their more or less sensitive to phenomena surrounding markets and their stakeholders. The purpose of the paper is to identify and study the links forged between financial and stock market indicators and fine wine prices constructed from auctions in different places around the world. What do they reveal from the behavior of actors on these very specific markets?

Reflection is developed according to a double originality. The first one is based on three indices (Liv-ex Wine 50, Liv-ex Wine 100, Liv-ex Wine Investables Ind) concerning estates from Bordeaux area, including more and more "châteaux" and consequently sensitive to response of increasingly large potential buyers and sellers agents, participating to or interested in auctions. The second one consists in a comparative analysis of performance on the stock markets from a variety of economic indicators (SSEC, Interbank interest, etc.) recorded in three favored geographic areas: the European Union, the United States and the Southeast Asia.

The purpose of this work is twofold:
- to make a first historic analysis of performance through an investment in wine by comparing its performance with those that would have been possible to obtain at the same time by providing financial term investments;
- to introduce the regional diversity of performance by considering the situation in the three selected geographic areas.

References

Keywords: fine wines; price index; auction; investments
JEL Code: D44, G11, Q11

Thursday June 5th, 2014
11:00 - 13:00
SESSION 2a

PROSPECTIVES & STRATEGIES
Chaired by:

Trade Liberalization in the Presence of Domestic Regulations: Likely Impacts of the TTIP on Wine Markets
Bradley RICKARD, Olivier GERGAUD, Wenjing HU Cornell Univ., US & KEDGE- Bordeaux Business School, FR

Towards Sustainability in the Wine Industry through Engineering and Management Tools
Stella Maris UDAQUIOLA, Rosa RODRIGUEZ, Susana ACOSTA, María CASTRO, María Verónica BENAVENTE, Marcelo ECHEGARAY, Ricardo SIERRA
Instituto de Ingeniería Química - Universidad nacional de San Juan, AR

How to Improve Wine Quality? The Challenge facing South African Cooperatives
Joachim Ewert, Jon H. Hanf, Erik Schweickert
Univ. Stellenbosch, ZA & Univ. Geisenheim, DE

Price or Quality Competition? Old World, New World and Rising Stars in Wine Export
Diego LUBIAN, Angelo ZAGO
Università degli Studi di Verona, IT

Winners and Losers in the Global Wine Industry
Geoffrey LEWIS, Tatiana ZALAN, Matthew SCHEBELLA
Melbourne Business School, Torrens Univ. & Univ. South Australia, AU
Trade Liberalization in the Presence of Domestic Regulations: Likely Impacts of the TTIP on Wine Markets
Bradley RICKARD, Olivier GERGAUD, Wenjing HU
Cornell University, US and KEDGE- Bordeaux Business School, FR
bjr83@cornell.edu, olivier.gergaud@kedgebs.com, wenjhu81@gmail.com

Abstract
The United States and the European Union have embarked on ambitious negotiations to create a comprehensive free trade agreement known as the Transatlantic Trade and Investment Partnership (TTIP). The agreement, if reached, will promote trade between the two regions by liberalizing trade barriers including tariffs and other non-tariff barriers. Agricultural markets receive relatively high levels of support and protection in both regions, and therefore are sensitive to the discussions surrounding the TTIP. In particular, wine is the highest valued agricultural product traded between the United States and the EU, and any reduction in trade barriers from the TTIP has the capacity to generate additional trade in this sector. We carefully develop parameters to characterize the effects of tariffs (which differ for bulk and bottled wine) and domestic regulations in the wine industry; domestic policies in the EU are tied to wine and grape production (such as planting restrictions of specific varietals in the EU) while in the United States domestic policies largely apply to wine consumption (regulations concerning distribution and sales). Our simulation model examines the price, trade, and welfare effects from reductions in each of these policies, and from reductions across all policies. Results show that even modest reductions in tariffs would have much larger trade and welfare implications that would reductions in domestic regulations.

Towards Sustainability in the Wine Industry through Engineering and Management Tools
Stella Maris UDAQUIOLA, Rosa RODRIGUEZ, Susana ACOSTA, María CASTRO, María Verónica BENAVENTE, Marcelo ECHEGARAY, Ricardo SIERRA
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Abstract
Sustainable development aims the consecution of general social welfare with an adequate technical and economical structure, minimizing the consumption of natural resources and the impacts on the environment and keeping the quality of the territorial ecosystems, its biodiversity and cultural identity. One of the most important aspects that need urgent treatment is the change of the production systems in order to provide more efficiency and cleaner processes. The impact which the "occidental development" set upon the human life comes from the way we transform nature to produce goods and services for the society. Taking this fact as basis for our work, we have recognized that, however there is a greater consciousness (awareness) of the necessity of more sustainability in the production activities, not always, but rather seldom, the adequate steps are taken.

During the last 10 years we have done research in the wine sector of the Province San Juan in Argentina with the objective to study the environmental performance of the wine industry and lately to increase the sustainability through the minimization of its impacts on the environment. San Juan is a province in Argentine at the Mountain Range of The Andes and wine production is its main economical activity. The quantity of grapes used for wine production was in year 2013 of 6.376.274 Qq. San Juan is the second grape producer in Argentine

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<th>Producto</th>
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<th>2003</th>
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<th>2011</th>
<th>Participación en el total nacional en % (sobre datos del último año)</th>
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<td>Uva para pasas</td>
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<td>39,00</td>
<td>47,00</td>
<td>37,00</td>
<td>45,00</td>
<td>38,00</td>
<td>32,00</td>
<td>32,00</td>
<td>16,00</td>
<td>88,6%</td>
</tr>
<tr>
<td>Uva para vinificar</td>
<td>Miln de Tn</td>
<td>492,00</td>
<td>641,00</td>
<td>747,00</td>
<td>704,00</td>
<td>770,00</td>
<td>780,00</td>
<td>505,00</td>
<td>576,00</td>
<td>693,00</td>
<td>24,7%</td>
</tr>
<tr>
<td>Mosto Concentrado</td>
<td>Miln de Tn</td>
<td>1.359,00</td>
<td>1.986,00</td>
<td>2.734,00</td>
<td>2.639,00</td>
<td>3.176,00</td>
<td>3.071,00</td>
<td>2.050,00</td>
<td>2.778,00</td>
<td>44,5%</td>
<td></td>
</tr>
<tr>
<td>Vinos</td>
<td>Miln de Tn</td>
<td>2.591,00</td>
<td>3.103,00</td>
<td>3.197,00</td>
<td>2.943,00</td>
<td>2.464,00</td>
<td>2.716,00</td>
<td>2.083,00</td>
<td>2.958,00</td>
<td>2.657,00</td>
<td>17,0%</td>
</tr>
</tbody>
</table>

Table 1: Production Data of Grapes and wines of San Juan, Argentina

A first work dealt with the identification and assessment of the main effects that the production of wine has on the environment and the people in the neighbourhood. The most relevant impact was at this time the untreated wastewater, which was discharged in the next water course or lake. This situation produces unpleasant smells and waste material, but it is a problem that has been partly solved through the implementation of wastewater treatment plants.
Trying to evaluate how sustainable is this industry, we took a deeper insight in the process and we identified a very important amount of water used only to wash and clean the different equipment and installations. As the province San Juan is located in a deserted area, water is an utmost scarce resource and the only source is the River San Juan which is made of thaw water. An optimization was carried out, using the pinch analysis technique, in order to reduce the amount of fresh water used to wash the vessels and fresh water and wastewater networks were designed achieving a saving up to 44%.

Along with these design tools some other changes were analysed with very low inversion costs but also contribute to sink the amount of water used in the process. It must also be mentioned that these improvements not only save an important natural resource but also produces a saving in the wastewater treatment plants as they have to manage lower wastewater quantities.

It was also seen that wine cellars show very high electrical energy consumption. The energy is used mostly to cool the most first and then the wine in different operations during the process. This cooling energy represents from 50 to 70% the total consumed electrical energy. Using pinch analysis an optimal heat exchanger network was designed for two temperature intervals (10 and 5 K) and an energy saving of 75,3 to 51% respectively was obtained.

To allow a better assessment of the environmental performance of the 5 plants, a global indicator was modelled and calculated using the AHP (Analytic Hierarchy Process). By means of the AHP technique, the global priorities were calculated and applying equation 1, a global indicator was obtained.

\[ GI = \sum \omega_i x I_i \]  

However, it has a limited value because it gives only the possibility to compare different cellars but do not allow to state how good or bad a process is from an environmental standpoint, then there is not a reference “is” value to compare with. Nevertheless, these indicators have to be determined periodically so as to see if they improve or not. A system must be designed to obtain reliable data, in order to obtain better indicators and the possibility to take reliable and adequate decisions. One of the greatest difficulties encountered is the uncertainty in the data that was needed along the whole work.

As a final conclusion, we would like to say that the results to be presented let think how much improvement of the environmental performance may be achieved by using some tools that allow the optimization of the technological and management aspects of this industry. Much work is still to be done but these preliminary results build a path to more sustainability in the wine production.

Table 2: Indicators for 5 wine cellars in the province of San Juan, Argentina

<table>
<thead>
<tr>
<th>Bodega</th>
<th>B 1</th>
<th>B 2</th>
<th>B 3</th>
<th>B 4</th>
<th>B 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>I 1</td>
<td>0.285</td>
<td>0.534</td>
<td>0.735</td>
<td>0.03</td>
<td>0.725</td>
</tr>
<tr>
<td>I 2</td>
<td>0.015</td>
<td>0.007</td>
<td>0.009</td>
<td>0.011</td>
<td>0.004</td>
</tr>
<tr>
<td>I 3</td>
<td>65,776</td>
<td>1225</td>
<td>30,557</td>
<td>61,391</td>
<td>43,711</td>
</tr>
<tr>
<td>I 4</td>
<td>2,694</td>
<td>1.8</td>
<td>1,131</td>
<td>0.313</td>
<td>0.915</td>
</tr>
<tr>
<td>I 5</td>
<td>0.156</td>
<td>0.242</td>
<td>0.090</td>
<td>0.097</td>
<td>0.202</td>
</tr>
<tr>
<td>I 6</td>
<td>2,694</td>
<td>3,000</td>
<td>0.840</td>
<td>0.282</td>
<td>0.686</td>
</tr>
</tbody>
</table>

Table 3: Global Priorities (\( \omega_i \))

<table>
<thead>
<tr>
<th>Alternativas</th>
<th>Prioridades</th>
</tr>
</thead>
<tbody>
<tr>
<td>B 4</td>
<td>0.551</td>
</tr>
<tr>
<td>B 1</td>
<td>0.266</td>
</tr>
<tr>
<td>B 5</td>
<td>0.247</td>
</tr>
<tr>
<td>B 3</td>
<td>0.142</td>
</tr>
<tr>
<td>B 2</td>
<td>0.099</td>
</tr>
</tbody>
</table>

A system must be designed to obtain reliable data, in order to obtain better indicators and the possibility to take reliable and adequate decisions. One of the greatest difficulties encountered is the uncertainty in the data that was needed along the whole work.

As a final conclusion, we would like to say that the results to be presented let think how much improvement of the environmental performance may be achieved by using some tools that allow the optimization of the technological and management aspects of this industry. Much work is still to be done but these preliminary results build a path to more sustainability in the wine production.
How to Improve Wine Quality? The Challenge facing South African Cooperatives
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Abstract
Still today the vast majority of South African wine is produced by wine cooperatives or former cooperatives which still adhere to the cooperative principles. These principles can be delineated by the identity of users and owners, the democratic principle of voting and the non-existing of barriers of entry. Additionally, the legally manifested business aim to nurture their members can be seen as a further characteristic. Traditionally, the aim to establish countervailing power has been regarded as the most important duty of a co-operative. Other business aims like correcting market failure, guaranteeing markets and enhancing margins can be seen as levers to operationalize the main business aim.

By using a property right approach Cook (1995) pointed out five general sets of problems: Free Riding Problems, Horizon Problems, Portfolio Problems, Control Problems and Influence Cost Problems. Using a principal-agent approach and the concepts of opportunistic behavior, conflicts of interest, asymmetric information and stochastic conditions Eilers/Hanf (1999) show that it is not clear who is the principal and who is the agent, i.e. both the co-operatives and the members can be principals and agents. For this reason, neither leadership mechanisms nor selective terms of delivery can be enforced by the co-operatives, i.e. the members can deliver all the commodities which alternative dealers do not accept. Cooperatives being forced to accept these commodities face the problem of adverse selection. In this context the aim of our paper is to analyse whether these problems exist at South African wine cooperatives and if they exist we try to work out some solutions applying a case study approach.

Price or Quality Competition?
Old World, New World and Rising Stars in Wine Export
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1. Introduction
Recent contributions in the theory of trade and firm heterogeneity show insightful results. Melitz (2003) with his workhorse model in this ‘new new trade theory’ argues that a firm’s product competitiveness depends upon price: the cheapest goods are the most competitive. An extension of this heterogeneous firms trade (HFT) model turns it into the quality heterogeneous firms trade (QHFT) model, where competitiveness depends upon the quality adjusted price: when consumers care about quality, the highest priced goods are the most competitive. In this latter case, firms with the lowest observed prices are the least competitive. Using trade data it is possible to discern between the HFT and QHFT models.

Given that transportation costs rise with market distance, the HFT model predicts that cheaper products are sold in more distant markets, while the QHFT tells that more expensive goods travel more.

These clearly opposed empirically testable implications provide the foundation of a testing of these models by Baldwin and Harrigan (2007; BH henceforth) and Baldwin and Ito (2008; BI henceforth), who can thus distinguish between price or quality competition. In particular, BI classify export goods (at the HS 6-digit level of disaggregation) of major exporting countries by quality and price competition. They find a high proportion of quality-competition goods for the major EU countries and a lower proportion for Canada, Australia and China. On a similar vein, Fontagné et al. (2008) find that the developed countries’ products are not directly competing with the developing countries’ ones. Because of their products’ superior quality, EU countries, for instance, have less direct competition with developing countries’ products than Japan or the US.

Our paper uses the BI empirical approach, by estimating the price-distance relationship in the wine trade for major exporting countries using panel data. We can then define a list of three types of wine exporting countries: those for which wine exports face price competition, those facing quality competition, and those that cannot be confidently placed in either category.

2. The model and data
The empirical model we employ is similar to BI. We look at a given origin nation’s exports of a wine (HS4 and HS6) product to all the major destination countries over a time period as long as possible (1995-2011 for the HS4, shorter for HS6 data). The regression equation is the following:

\[ P_{t,d} = \beta_0 + \beta_1 \log(DIST_{d}) + \beta_2 \log(GDP_{t,d}) + \beta_3 \log(GDPCAP_{t,d}) + \epsilon \]

where \( P_{t,d} \) is the log of the FOB unit value index to destination country \( d \) at time \( t \); \( DIST_{d} \) is the bilateral distance from the country under consideration to the destination country \( d \); \( GDP_{t,d} \) is the destination-country GDP at time \( t \); \( GDPCAP_{t,d} \) is the corresponding GDP per capita; and \( \epsilon \) is...
an iid error. The main idea is that a negative sign of the coefficient $\beta_1$ would indicate price competition, while a positive sign would imply quality competition.

Price data come from UN COMTRADE. For the general “Wine of fresh grapes” category data is available from 1995 to 2011, while for its subcategories only for a shorter period. Bilateral distances between countries are available from the CEPII database, while GDP and population data are from the World Bank.

3. Preliminary results

In the following Table 1 we report the results of the estimation for the major producing countries from the old and new world.

Table 1. Results for HS 22.04 (Wine from fresh grapes)

<table>
<thead>
<tr>
<th>Countries</th>
<th>$\beta_1$</th>
<th>St. dev.</th>
<th>Countries</th>
<th>$\beta_1$</th>
<th>St. dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Old World</td>
<td></td>
<td></td>
<td>New World</td>
<td></td>
<td></td>
</tr>
<tr>
<td>France</td>
<td>1.566***</td>
<td>0.145</td>
<td>Argentina</td>
<td>-0.071</td>
<td>6.092</td>
</tr>
<tr>
<td>Germany</td>
<td>-0.666</td>
<td>0.081</td>
<td>Australia</td>
<td>0.224***</td>
<td>6.072</td>
</tr>
<tr>
<td>Italy</td>
<td>0.472***</td>
<td>0.064</td>
<td>Chile</td>
<td>0.246***</td>
<td>6.052</td>
</tr>
<tr>
<td>Portugal</td>
<td>1.037***</td>
<td>0.117</td>
<td>New Zealand</td>
<td>-0.282</td>
<td>6.272</td>
</tr>
<tr>
<td>Spain</td>
<td>0.721***</td>
<td>0.061</td>
<td>South-Africa</td>
<td>-0.227***</td>
<td>6.110</td>
</tr>
<tr>
<td>UK</td>
<td>-1.495</td>
<td>2.139</td>
<td>USA</td>
<td>-0.392***</td>
<td>6.124</td>
</tr>
</tbody>
</table>

The major European countries, i.e., France, Italy, Spain and Portugal have significant positive coefficients. In other words, they seem to be engaged in quality competition. Germany and UK do not have significant coefficients for the distance, and hence can be considered neither facing quality nor price competition. These are probably expected results for practitioners of the European wine industry, where the major producing countries have benefitted from a long tradition of production and consumption of large volumes of wines and from a good perceived quality reputation for exporting wine as well. We could discuss the relative magnitude of the coefficients among European countries – we believe again consistent with prior expectations – but we postpone it due to space limitations.

Even more interesting are the results regarding the “new world” countries. Australia and Chile have positive coefficients, i.e., they are engaged in quality competition. On the other hand, South-Africa and the USA have negative coefficients, i.e., they face price competition. And last, Argentina and New Zealand are engaged neither in quality nor in price competition.

We believe that overall these results fit in with our priors that nations with a traditional comparative advantage in wine production and trade should have a higher incidence of quality-type wines in their export mix. On the other hand, new world exporting countries might enter these markets initially with very competitive wines and eventually with a good reputation for quality as well, as seems witnessed by the new world rising stars, that is Australia and Chile. These findings might have interesting policy implications. Old world countries can maintain their competitiveness by further climbing up the quality ladders, bearing in mind that new world competitors might soon enter their turf.

Selected references:

Winners and Losers in the Global Wine Industry
Geoffrey LEWIS, Tatiana ZALAN, Matthew SCHEBELLA
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This paper introduces a new approach to analysing trade statistics to gain insights into the way the major wine producing countries have positioned themselves in the key markets of the U.K., the U.S. and China over the last two decades. We bring a competitive strategy perspective (Ghemawat & Rivkin, 2010) to the issue of competition in international wine markets and are concerned with how, over time, the major wine producing countries have traded off market share and price in an attempt to maximise value creation.

From a competitive strategy perspective, the Total Value, Volume and, importantly, the Unit Value of imported wine is a function of an exporting country’s competitive advantage in a particular market. For this reason, we collected data on imports into key markets of the U.K., U.S. and China, rather than exports, as is customary in wine industry research. The import data was for wine from the ‘New World’ countries (Australia, Argentina, Chile and the U.S.) and ‘Old World’ countries (France, Italy, and Spain). The data (Volume and Value of imports) were collected for the period 1996 to 2012[i]. Total Value and Unit Value were calculated in local currencies to avoid foreign exchange effects. We took a granular approach by breaking down the imports into separate wine categories to differentiate between bottled, bulk and sparkling wine.

CN (Combined Nomenclature – European Commission), HTS (Harmonised Tariff Scheme) and USITC (United States International Trade Commission) codes were explored so as to understand the best way to capture the data to ensure consistency across the three countries. The data extracted were for the years 1996-2012 from USITC (the U.S.), Eurostat (the U.K.) and UN Comtrade (China) using the 6-digit Harmonized Commodity Description and Coding System (HS) codes (220410, 220421, 220429 and 220430) as well as 4-digit HS code of 2204 (which is a summation of the four 6-digit HS codes).

Data on Volume and Total Value was collected (and Unit Value could then be calculated) for:
- All wine HS code 2204
- Bottled wine HS 2204
- Bulk wine HS 220492 (>2 litres)[iii]
- Sparkling wine HS 220410.

Eurostat provides their data in Euros and the UN Comtrade database provides the data in US dollars. The values were converted into the local currency using the Pacific Exchange Rate Service (http://fx.sauder.ubc.ca/data.html), a service designed by Prof. Werner Antweiler, the University of British Columbia Sauder School of Business.

The data was transferred to Google motion charts, which were used to do the analysis (see Figure 1 for an example chart, in this case ‘All wine’ into the U.K. in 2012).
Restaurants and BYOB: What Do Consumers Expect and Who Are They?

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Abstract

While the understanding of, and demand for, wine has been growing, it continues to be a difficult product to market and sell to consumers. Restaurants continually develop new ways to compete for customers, both old and new. With growing consumer wine knowledge and demand, comes more pressure on restaurants to have creative wine lists and knowledgeable staff to present their cellared wines. Given the time and effort restaurant owners put into their wine programs (e.g. wine lists, staff training, investment in wines, etc.), it is understandable why many restaurants are not willing to allow consumers to bring their own wine, especially when consumers just want to bring a "common" bottle of wine, or one that is already represented on the wine list. On the consumer side, not only are customers more versed than they once were, but they have instant access to information on wine, including prices, on their phones or other devices while dining.

That said, to accommodate customer demands, some restaurants allow this practice and charge a fee to open the bottle, provide stemware, ice buckets to chill white and sparkling wines, and to recover some of the income lost when customers do not purchase from the wine list. This fee, commonly known as the "corkage fee", may be sizable in part to discourage the practice or a lower to merely recover the costs associated with providing stemware. In either case, corkage is generally meant as a courtesy for customers.

A complicated situation has been developing in the U.S. market with the growing wine knowledge of consumers and wine offerings of restaurants. One scenario is consumers who desire to bring their own wines to restaurants and some restaurants allow this but charge a corkage fee. Previous research that addresses consumers and their understanding of corkage fees is very limited. This study used a U.S. cross-national online survey to attempt to fill the gap in understanding consumer acceptance (or not) of corkage fees. Additionally it offers insights to wine professionals to ascertain what consumers expect and what they will tolerate in making decisions about restaurant choice and how corkage fees could affect that choice.

This study suggests there are differences in attitudes toward BYOB and corkage fees, and there are differences in attitudes toward acceptable reasons to bring your own wine to a restaurant. Further, different attitude "levels" have different expectations for service when it comes to BYOB as well as what consumers are willing to pay. Next, the corkage fee, itself seems to have an influence on consumers' dining experience, depending on their attitudinal level. Lastly, demographic factors had a significant effect on all areas addressed in the study.

Keywords: Corkage, BYOB

The Profiles of Worldwide Gastronomy

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Abstract

A recent paper (Barrère, Bonnard, Chossat, 2014) has shown that Parisian Gastronomy can be analysed through the existence of diverse profiles of restaurants: from the elitist one (the traditional high class restaurant with its superstar chef) to the almost standard one, i.e. a sort of low-cost cooking taking more and more place in the selection of the Michelin guides through time - the study focuses on sixty years of Parisian Gastronomy produced by the selection of the Michelin Red guide. The question here is to know whether this evolution of the profiles of the Parisian gastronomy (say, a kind of ‘democratisation’) is a heavy trend of the worldwide gastronomy or a specific and geographically limited evolution due to the specific case of Paris, the historical capital of gastronomy. Can we compare the different gastronomic supplies? Are they deriving from the Parisian model of elitist gastronomy? Are there real similarities or the effect of Michelin’s norms? Does heritage, local resources, nature of demand, of tourism... play a role in the determination of the profiles running in a city? In order to sort the analysis out of the facts, we proceed to the study of the Michelin selection (limiting bias) for several big gastronomic cities: New York, San Francisco and Chicago, Berlin, London, Roma, Milano, Firenze, Torino, Barcelona, Madrid, Paris and Lyons. We use descriptive statistics to bring out the structure of gastronomy in the studied cities and a MCA for refining analysis by considering the different profiles they include.

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JEL Code: Z10
Analysis of Consumers' Sensory Preferences of Nanche (byrsonima crassifolia) Liquor in the South of the State of Mexico.

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Abstract

The purpose of this research work is to provide an analysis of consumers' sensory preferences of liquor of a native fruit of the south of the State of Mexico named nanche (byrsonima crassifolia).

Four traditional nanche (Byrsonima crassifolia) liquors from different producers and artisanal and homemade elaboration were sensorially analyzed by three sensorial methods such as 1) hedonic of nine points scale test with consumers, 2) tasting with a specialized panel, and 3) flash profile performed with a previously experienced in sensorial description of alcoholic beverages panel. Specialized and previously experienced panels valued nine characteristics of the samples to conform three phases: visual, olfactory and gustatory. The consumer data was evaluated by means of the HAC (Hierarchical Ascending Classification) in order to find preferences shared among groups of consumers. The evaluation of trained and untrained panel performance was done using PCA (Principal Component Analysis) method and results were interpreted with Preference Mapping technique. The aim of these two panels was to evaluate the characteristics of studied liquor samples. All data was analyzed with XLSTAT 2009.3.02 program. Consumer data analyzed by HAC showed that Tenancingo liquors occupied first and third place in order of preference at hedonic test. Tasting data evaluated by HAC method demonstrated that one Tenancingo liquors was the best qualified by specialized panel. With these results is possible to say that there is not a direct relation between consumer sensory preferences and decrease consumption.

Gastronomic Supply and Touristic Clientele

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Abstract

Gastronomic suppliers observe the development of increasing demand coming from tourists. Today, intangible cultural heritages are specific resources able to attract tourists as they provide « a sense of identity and continuity, thus promoting respect for cultural diversity and human creativity »¹. Within them, culinary and gastronomic heritages have a special value as shown when UNESCO declares “gastronomic meal of the French” world intangible heritage. Fischler (1993) mentions that in popular language people are often designated by the special food they are supposed to like: in France, the Italians are named “macaroni” and the British persons “rosbif” when in England the French are “frogs” or “frog eaters”. Tourists are especially interested in encountering gastronomic heritages as a part of local identities and specificities. For instance, many foreign tourists come to France and Italy to eat in their most famous restaurants; and at the same time, French and Italian restaurants increase their reputation and, sometimes, can export their knowledge, opening possibly abroad new restaurants. Therefore the paper addresses two questions:

1- Is it a polarization of gastronomic supply in the touristic areas? We will study this point by considering the data of the Michelin guide in the case of France.

2- As Barrère, Bonnard and Chossat (2010) have shown, using the data on French restaurants found in the Michelin Guides of the 1950-2010 period, three or four different profiles (according the time) build the structure of gastronomic supply. They depend on two main gastronomic models, an elitarian one and a more popular and more local one. Is, in the touristic areas, a specific structure of the supply? Are some profiles increasing and some others decreasing and can we link this evolution and the development of touristic attendance? A multiple correspondence analysis will be used to give a right answer.

Outline

1 Introduction: Culinary and gastronomic heritages, a source of value for attracting touristic clientele
2 A race towards touristic areas?
3 Two main gastronomic models
4 A change in the supply structure?
5 Concluding remarks

¹ 2003 UNESCO Convention, article 2.1.
Is a Sequential, Profiling Approach useful for Predicting Match Perceptions in Food and Wine?

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Abstract

The relationship between food and wine sensations is based primarily on anecdotal concepts and raises the question: Are food and wine selections that create a sensation of 'match' an art or science? (Harrington et al., 2010; Pettigrew & Charters, 2006). Alternatively, it has been suggested that the concept of food and wine pairing is a scam and that these sensations are individually derived (Jover, Montes, and Fuentes, 2004; Vinography, 2008) or based on physiological characteristics such as taste bud theory (Smith, 2010). Therefore, this study assesses these perspectives by asking the following research question.

- Can a systematic approach to profiling food and wine characteristics be used to accurately predict a sensation of match?

Sample and Procedures

The testing instrument was from Harrington (2008) and included four phases: 1) wine profile based on taste components, texture and flavor, 2) food profile based on taste components, texture and flavor, 3) weighting scheme to assess predicted match based on 12 food and wine rules, and 4) perception of match based on an actual mixed tasting of each food and wine combination. Participants were asked to taste and evaluate each wine for level of each taste component (sweetness, acidity, and effervescence level), texture element (tannin, alcohol and body level), and flavor element (flavor type, spiciness, intensity and persistency) using a 0 to 10 line scale. For the food items, participants were asked to taste and evaluate each food item for level of each taste component (sweetness, acidity, saltiness and bitterness), texture element (fattiness and body level), and flavor element (flavor type, spiciness, intensity and persistency) using a 0 to 10 line scale. All participants had undergone 15 weeks of training on the use of the instruments, value bands, scales and the meaning of the descriptor terms.

Wines were evaluated with each food in order of lightest to fullest style (Riesling, Chardonnay, Pinot Noir and Shiraz). The wines were served in 25cl INAO tasting glasses, and participants were provided with 1 ounce of wine for each evaluation. The wine temperatures were as follows: 9 degrees Celsius for the Riesling and Chardonnay and 16-17 degrees Celsius for the Pinot Noir and Shiraz. The wines were served in 25cl INAO tasting glasses, and participants were provided with 1 ounce of wine for each evaluation. The wine temperatures were as follows: 9 degrees Celsius for the Riesling and Chardonnay and 16-17 degrees Celsius for the Pinot Noir and Shiraz. The Riesling (Seaglass 2011), Chardonnay (BV Carneros 2010), and Pinot Noir (Garnet 2010) wines were produced in California; the Shiraz (Penfolds Thomas Hyland) in Australia. The wines ranged in retail price from about $10 to $20. The two food items variety by protein type (chicken and pork) but were made using the same preparation and ingredients including chicken or pork with mushrooms, onions, spices, and cream backed in the oven until gold brown. This is a classic German dish called Geschnetzeltes and was served with rice.

After each wine was tasted and evaluated and each food item was tasted and evaluated, participants were asked to quantify the predicted level of match using an evaluation tool by Harrington (2008: 255-256). This tool is based on the "Wine and Food Pairing Decision Tree" concept (Harrington, 2008: 254) using 12 decision (yes/no) points based on key proposed match combinations for food and wine (p. 230).

After evaluating each wine and food item individually and completing a predicted level of match, the participants were instructed to complete a mixed food and wine tasting (tasting each wine and food combination together) and evaluation addressing the basic question: What is your perception of match sensation? The match level used a 0 to 10 line scale that included descriptive anchors (0 = no match, 5-6 = average match level, 10 = synergistic or ideal match). Participants were asked to cleanse their palate with water, crackers and were given a short break between pairings.

Data Analysis

Data analysis was performed using ANOVA and paired t tests to test for significant differences in match levels comparing predicted match and actual match levels for each food and wine combination (2 X 4 = 8).

Results

Table 1 provides the mean and standard deviation for predicted match level for each food and wine combination prior to a mixed tasted of the food and wine together (Predicted Match Combinations) as well as the mean and standard deviation for perceived match when each food and wine combination was tasted together by the participants. Interestingly, the highest and lowest means for all match combinations were for the same two combinations whether tasted together or predicted using a profile of perceived key elements in the food and wine. Riesling and chicken had the highest mean and Chardonnay and pork had the lowest mean.

Table 1. Descriptive Statistics and Paired T-Tests comparing Predicted vs. Actual Match Approaches

<table>
<thead>
<tr>
<th>Combinations</th>
<th>Predicted Match Mean (SD)</th>
<th>Actual Match Mean (SD)</th>
<th>Mean Difference</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Riesling and Chicken</td>
<td>6.89 (1.66)</td>
<td>6.32 (1.95)</td>
<td>-.57</td>
<td>26</td>
<td>.22</td>
</tr>
<tr>
<td>Riesling and Pork</td>
<td>6.11 (1.76)</td>
<td>5.67 (2.13)</td>
<td>-.83</td>
<td>26</td>
<td>.08</td>
</tr>
<tr>
<td>Chardonnay and Chicken</td>
<td>5.90 (1.95)</td>
<td>5.08 (2.51)</td>
<td>-.17</td>
<td>26</td>
<td>.08</td>
</tr>
<tr>
<td>Chardonnay and Pork</td>
<td>5.49 (1.96)</td>
<td>4.42 (2.65)</td>
<td>1.85</td>
<td>25</td>
<td>.001</td>
</tr>
<tr>
<td>Pinot Noir and Chicken</td>
<td>6.65 (2.14)</td>
<td>5.54 (2.53)</td>
<td>-.17</td>
<td>26</td>
<td>.25</td>
</tr>
<tr>
<td>Pinot Noir and Pork</td>
<td>6.26 (2.20)</td>
<td>5.50 (2.31)</td>
<td>-.09</td>
<td>26</td>
<td>.05</td>
</tr>
<tr>
<td>Shiraz and Chicken</td>
<td>6.45 (2.09)</td>
<td>4.58 (2.74)</td>
<td>-1.37</td>
<td>25</td>
<td>.14</td>
</tr>
<tr>
<td>Shiraz and Pork</td>
<td>6.52 (2.33)</td>
<td>5.25 (2.12)</td>
<td>-1.27</td>
<td>25</td>
<td>.04</td>
</tr>
</tbody>
</table>

In Table 1, results for paired t tests assessing significant differences between predicted match levels and actual perceived match levels were performed. These results indicated the majority of food and wine matches were non-significant between the profiling approach and actual mixed tasting (5 of the 8 combinations) and three were significantly different. The Shiraz and chicken combination had the highest mean difference of all eight combinations with a mean difference of -1.85 (actual minus predicted); thus, the actual perceived match level was significantly lower than the predicted match using profiling (p < .001). Chardonnay and Pork had the lowest mean difference of -0.85.

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and pork and Shiraz and pork were also significantly perceived as a lower match when tasted together than the profile method predicted (mean difference = -1.06, p = .05; mean difference = -1.10, p = .04 [respectively]).

Discussion, Conclusions and Implications

When considering the first research question, “Can a systematic approach to profiling food and wine characteristics be used to accurately predict a sensation of match?” the results of this study suggest that in fact consumers can accurately predict a match of food and wine. For example, when asked to predict the match of the Riesling wine and chicken Geschnetzeltes (M = 6.89), there was no significant difference when the participants actually tasted the food and wine together (M = 6.32), p = .22. The practical significance of these results suggest when consumers are confronted with wine and food pairing suggestions in restaurants, food and wine magazines, that there is a connection and assessment made by consumers that validates this conceptual match. It also suggests, that accuracy of the conceptual predictions needs to be thoroughly thought through to maintain the reputation of the restaurant and food and wine magazine.

Keywords: Wine, Perceptions, Food Pairings
JEL-Code: M31 Marketing

Thursday June 5th, 2014
14:00 – 16:00

SESSION 3a

WINE PRODUCTION & Markets in Wine Value Chain

Chaired by:

Comparison of Selected Determinants of Chosen European Wine Markets
Helena CHLÁDKOVÁ, Sylvie FORMÁNKOVÁ, Pavel TOMŠÍK Mendel Univ. in Brno, CZ p. 43

Unperceived Costs: A Dilemma for French Wine-Growers
Joëlle BROUARD, Benoît LECAT School of Wine and Spirits Business & ESC Dijon/Burgundy School of Business, FR p. 47

Etudier l’adaptation aux changements climatiques des vignobles français: une analyse par les Systèmes d’Innovation
James BOYER, Jean-Marc TOUZARD INRA, UMR Innovation Montpellier, FR p. 48

Characterization of Chilean Bottled Wine Market
Miguel A. FIERRO, Rodrigo ROMO Universidad del Bío-Bío, CL p. 50

Producer Single Commodity Transfer: A Comparison of Policy Intervention between Wine and others European Agriculture Products
Davide GAETA, Paola CORSINOVI Department of Business Administration, Univ. Verona, IT p. 52

www.vdqs.net
Abstract

This paper compares the selected factors of viticulture and winemaking among chosen European countries. Global wine production in 2010 has declined by 11.2 million hectoliters to about 264 million hectoliters. The wine is currently produced in about sixty countries. Nevertheless, most of them produce it in small to very small amounts. A dozen largest producers of last year produced about 230 million hectoliters of wine, i.e., 87% of global volume. The European Union (EU) is the world leader in wine production, with almost half of the world’s total vine-growing area and 60% percent of production wine volume. Within the EU, France, Italy, and Spain represent about 80% percent of total production. Other important EU producers include Germany, Portugal, Romania, Greece, and Hungary. Total production in the EU-27 was estimated at 156 million hectoliters in 2010. Portugal was the only producer among European countries that increased the production. A slight decrease was recorded in the EU, Spain and France, it was pronounced in Italy, Germany, Austria and Romania. Global wine consumption has stabilized in the last year, two years before it fell (according to a report of the International Organisation of Vine and Wine (OIV)). However, declining production of wine and vineyards continues in this trend. Last year, their total acreage decreased by 65 thousand ha of the total 7 586 thousand hectares. The largest decrease (64 thousand hectares) recorded the European Union, especially Spain (31 thousand hectares) followed by Italy (14 thousand hectares) and France (12 thousand hectares).

Chosen countries were compared to a similar size and population. The subject of the analysis is secondary information utilizable for the characteristics of supply and demand development of wine in chosen countries in 2000-2010 period. The information is compared to the results of several researches in professional publications. The data were completed with face-to-face interviews, method of observation and deduction.

Keywords: wine market, acreage of vineyards, wine production, wine consumption per capita
Adaptation to Climate Change in the French Vineyards:
An Innovation System Approach
James BOYER, Jean-Marc TOUZARD
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Abstract

The wine industry, more than any other crop industry, will be dramatically impacted by climate change. In France, these impacts are already significant on the vine phenology and wine quality: advancing of harvest dates, strongest water stresses in Mediterranean vineyards, better grape maturity in northern vineyards, higher alcohol rate, lower acidity in wine, more contrasting vintages (Ollat, Touzard, 2013)... These effects are expected to intensify, leading to change not only the wine production and the vine localization (Hannah, Roehrdanz et al. 2013), but also the rules and institutions that frame the wine economy, such as the system of Protected Geographical Indications (AOP).

Two kinds of actions are considered: mitigation and adaptation.

The wine Industry is concerned by greenhouse gas emissions (GHG) and thus by mitigation (reduction of inputs with high carbon print, optimization of logistic...). However, mitigation depends on cooperative games at the international level, which remains uncertain. Moreover, beyond the failure of international negotiation on GHG reduction, climate conditions will change anyway. The main issue is then to limit the extent and speed of these changes.

Adaptation to climate change has become necessary and has been recently explored by research on wine industry (Jones, 2010). Wine appears as a model to study adaptation due to many reasons: high sensitivity to climate change; combination of different horizons of decision; links between innovations, location strategies and institutional changes, impact on the competition between firms, and between wine regions...

The paper provides a review on the “adaptation issue” in the wine industry. It gives an analytical framework referring to evolutionary and innovation economics (Lundvall 1992; Malerba 2002; Doloreux and Parto 2005). The Innovation System approach allows to analyse innovation as a levier of adaptation, by taking into account its cognitive, spatial and institutional conditions (Foray 2010, Giuliani & Bell 2005). We use this approach on the wine industry, discussing how can be combined and assessed (cost/benefit) actions characterized by three main dimensions:

- Domain of action: technical innovation, location strategy, institutional change, knowledge building;
- Temporality of action: short, medium or long term;
- Scale of the action: plot, farm, small area, region, national and international;

The research focuses on three French vineyards (Aquitaine, Languedoc, Champagne). For each of these wine regions we present:

- The specific issue of climate change, given by interviews and outcomes of the Inra Laccave project;
- The characterization of engaged or possible adaptation actions, referring to the three dimensions: domain, scales and temporalit (outcomes from exploratory work in these regions)
- The type of actors and institutions involved in the adaptation process, and the specific role that could play researchers and “innovation brokers” (interviews with researchers in each region).

Our paper is organized as follows:

In the first part we present the literature review on “economics of adaptation” and their possible links with evolutionary works on Innovation Systems. It leads us to propose an analytical framework in order to explore adaptation strategies in the French vineyards.

Our first results are presented in the second section. Information from interviews and focus groups in three French vineyards provide an overview of concrete actions that can shape global adaptation process in each wine region. This information also helps us to characterize the innovation system built around the climate change issue, highlighting the key role of research and innovation.

Finally we discuss from an economic point of view how costs and benefits of adaptation actions (to climate change) can be assessed, and how these actions can modify the competitiveness of regional wine industries.

Keywords: wine, climate Change, Innovation System, Adaptation, competitiveness, evolutionary economics

Bibliography

Characterization of Chilean Bottled Wine Market
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Abstract

Chile is the seventh largest wine producer in the world with 1,285 million liters, and the second largest producer of the producers called of the "New World". Also ranks fifth in wine exporting countries with 662.3 million liters, positioning Chile as a market of great interest to analyze. This important prominence acquired by Chile in the wine production is mainly due to two factors: i) the reputation reached by Chilean wines in the international market and ii) good relationship from quality and price that has wine , reaching compete on equal terms with wines from the world's leading producers such as France, Spain and Italy.

Domestic production of wines in Chile is divided into three categories: i) wines with denomination of origin, ii) without denomination of origin and iii) table wines, only the wines with denomination of origin can adopt mentions of quality accepted by the Chilean legislation (e.g. Reserve, Special Reserve , Private Reserve , Grand Reserve). Wines with denomination of origin are those most commonly occur in the country with 1,078 million liters, with the 83.9 % of the total production of the country. There is also an internationally accepted quality rating given by the Dutch Rabobank in 1999 and ranks the wines into five categories: i) icon ii) ultra premium iii) super premium iv) premium and, v) basic. However, it notes that the domestic production of wine a duality exists when a classification by the different vineyards. Some vineyards classified a wine with a quality mention if they consider that the most relevant market in which the wine is positioned domestically. If the target market is international, some companies choose to use a complementary quality mention that better position of the product.

In Chile there are several studies on wine, which are mostly focused on the productive. The studies focused on analyzing the wine market in Chile are rather scarce in the literature, and there made an analysis from the perspective of the consumer. Given this, the objective of this study, at this first stage, is to characterize the wines produced in Chile considering some variables that are considered relevant in the market. To perform this study was compiled a database of wines produced in Chile, for which the wines produced by vineyards belonging to the main trade associations in the country (e.g. Viñas de Chile A.G., Corporación Chilena del Vino A.G. and Viñas de Colchagua A.G.), identifying each wine producing by vineyard and the attributes that are indicated on their labels. Within the latter having variety, vintage, denomination of origin, complementary quality mention and alcohol content. And subsequently searched each of the wines in the major wine magazine in Chile, Revista La CAV, recording in each case ranking tasting score for freshness, body, sweetness and astringency, besides the price tag.

In relation to the results obtained, a total of 1,661 wines were founded, which are mainly wine red wines 1,239 (74.6 %) and 422 white wine (25.4 %). Among the most strains have produced Cabernet Sauvignon with 288 wines (17.3 %), red blend with 242 wines (14.6 %), Carmenere with 225 wines (13.5 %), Sauvignon Blanc with 182 wines (11.0 %) and Chardonnay with 175 wines (10.5 %). Respect to appellation origin, a total of 1,521 wines

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Producer Single Commodity Transfer: A Comparison of Policy Intervention between Wine and others European Agriculture Products

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Abstract

The objective of this work is to analyze the wine policy intervention through the evolution of support percentage dedicated from 1986 to 2012 using the Producer Single Commodity Transfer (PSTC) dataset.

In details, the works focus on the different between wine and others three agricultural PSTC: common wheat, milk and rise. The choice of comparing different agricultural products is to highlight the high difference support. All of them were supported by the Common Agricultural Policy (CAP). Until the Mac Sharry reform (1992), common wheat and rice were sustained through “coupled” payments to the quantity produced. The decoupling introduced by the reform market the passage from price support to direct income, which translated into a transfer of costs from consumers to the Community budget.

The CAP still retains its position as the largest component of European Union (EU) expenditure, accounting for approximately 39% of the total EU budget for the period 2014-2020.

The wine system is regulated by the Common Market Organization (CMO). Under the framework of the CAP in 1962, the CMO was created in order to enable a gradual convergence of prices and the elimination of customs barriers, with the aim of establishing a single market for products with one common customs tariff for the rest of the world. From 2007 all the agriculture products were governed by the Single CMO (Reg. 1234/2007). It replaced all 21 CMOs created between 1962 and 1971. The wine has been included in the single CMO in 2009, after the 2008 reform.

The CMO wine has gradually been established with the aim of improving productivity and quality, supporting the income of wine producers, and maintaining a balance between supply and demand. In 1970 were published two formal CMO wine regulations relating table wine, with the goal of market intervention to regulated the wine surplus a rules concerning supply and demand. In 1970 were published two formal CMO wine regulations relating table wine, with the goal of market intervention to regulated the wine surplus.

In 1981 and 2012, the level of European wine stocks grew steadily from vintage 1964/1985 and 1998/99. Graph 1 clearly shows how inefficient the measures thus far adopted had not provided any solution. For all these interventions the result was the increase of the EU cost for support this system.

Despite the fact that the overarching aim of all the reforms had been to control supply and reduce spending, the gap between surplus and demand had become unsustainable and the measures adopted had not provided any solution. For all these interventions the result was the increase of the EU cost for support this system.

The following graph (Graph. 1) demonstrate that wine stocks have continued to rise despite multiple policy interventions to attempt to control them since 1962.

Between 1981 and 2012, the level of European wine stocks grew steadily from vintage 1964/1985 and 1998/99. Graph 1 clearly shows how inefficient the measures thus far adopted by the Commission had become at the end of the 20th century and beginning of the 21st century. In 2002/2003, wine stock levels were progressively increased to 30 million hectoliters compared to 1992/93. From 2008-2013, the stocks progressively decreased probably as a consequence of glutting up system (2009-2011), abolition of distillation measures from 2012.

Graph 1: Evolution of opening wine stocks by vintage year (1,000 hl)

Source: Authors’ own creation from European Commission

To confirm this, the estimate from OEC (Economic Cooperation and Development) on the Producer Single Commodity Transfer (PSTC) could be an interesting tool of this analysis.

PSCT represents the value of gross transfers from consumer and taxpayers to agricultural producers at farm-gate level, arising from policy measures directly linked to the production of a single commodity that the producer must produce with the intention of receiving the transfer (OECD, PSE manual 2008).

The data was collected and estimate from the OECD database. PSCT is calculated by adding market price support (MPS) and the sum of the value of budgetary and other transfers.

Graph. 2: The percentage value of wine, milk, rice and common wheat PSTC from 1986 to 2012
Looking graphic 2, EU transfers to wine producers went from around 7.21% in 1986 to 9.40% in 1991, were 5.05% in 2001 and 0.21% in 2012.

Milk however, showed values almost ten times higher. In 1986 EU transfers to milk producers were around 72%; whereas they were 48.18% in 1991, 28.35% in 2001 and 1.90% in 2012. Analyzing the rice support, the value seems to be even higher than that of common wheat. However, from 1988 to 1995 and from 2004 to 2014 the percentage values are higher than milk. In details, in 1986 EU transfers to rice producers were around 55.92% while 51.40% for common wheat; whereas they were 54.87% in 1991, for rice and 51.79% for wheat 28.35% in 2001 and almost zero for both in 2012.

It is important to show the reader that at least for wine the value is lower than what one would expect. These probably because, the ∑ of the value of budgetary and other transfers do not include: the incentive for the grubbing-up scheme, the premium for abandonment area, aid for the use of must, National Support Programs, buying-in alcohol from compulsory distillation (considered within the classification of payments based on non-commodity criteria) and general service support estimates. Distillation measures adopted in the past effectively resulted in transferring the structural surplus issue from the wine sector to the alcohol sector at huge cost. The problem persisted as distilleries continued to produce the alcohol because of the profit margin involved. The main beneficiaries of the aid were in fact the distilleries, which were receiving a subsidy to cover the costs of the distillation.

In this ∑ the OECD excludes all distillation and promotion measures, as they are not considered to be specific support to wine producers. However, within the subsidies, the OECD does take into consideration the CSE - Consumer Support Estimate - (Gaeta and Corsinovi, 2014).

In any case, the reduction of PSCT values, especially for the others productions (milk, common wheat and rice), is probably also due to negotiations in the WTO, which required a reduction in protection.

Keywords: wine, CMO, Common Agricultural Policy, PSTC

JEL-Code: F13, Q18.
Are Today’s Consumers Ready to Buy the Wines of Tomorrow?
Alejandro FUENTES, Eric GIRAUD-HERAUD, Stéphanie PERES, Alexandre PONS, Sophie TEMPERE, Philippe DARRIET
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Many recent contributions have considered an important climate change impact on the wines offered to consumers (Jones et al. 2005; Mira de Orduña 2010; Fraga et al. 2013). However, due to some strategic choices of producers, these changes in characteristics can be found in part in a large number of wines already available on the market (Alston et al, 2013). This paper proposes an experimental design involving sensory analysis and experimental auction to test the consumers’ admissibility and the willingness to buy these different wines. After selecting different wines within a unique geographical indication from Bordeaux and using the original classification method of Balinski and Laraki (2013) we propose to characterize the hedonic scores and consumers’ willingness to pay, according to different informational situations of intrinsic and extrinsic characteristics of wines. The results are interpreted using a more detailed analysis at the sensory level, measuring the heterogeneity of the recognition by consumers of specific attributes potentially related to climate change and showing the influence of repeated consumption of these wines.

References:
Mira de Orduña, R. (2010), "Climate change associated effects on grape and wine quality and production." Food Research International, 43(7): 1844-1855.

The Impact of General Public Wine Education Courses on Consumer Perception
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(Condensed)
Are wine education courses a value driver for the wine category?
Can education create, restore or unlock value and engage the wine consumer in a socially responsible manner?
Our findings show that the perceptions, behavior and commitment towards the category changed after having taken a wine course. Economic value was created for the proponent of the courses (the retailer) as the majority of surveyed students declared spending more afterwards. Value was also created for the students as they declared an increase in involvement, a sense of empowerment, an increase in frequency of usage of the product but not in the intensity.

Abstract
Although it is very difficult to find any research that has been devoted to establish the value of wine education courses on consumers, gatekeepers are pinning a lot of hope on wine education to create or restore value. The purpose of this research was to investigate if wine courses lead to any changes in perception, consumption pattern and modify the consumer’s degree of involvement for the category.
New wine course students in Montreal, Québec, Canada were submitted to the same survey at different: prior to their first class and at the end of the course five weeks later; followed up by two questionnaires after three and twenty-four months. All survey questions were assessed in a five-point Likert type scale and the outcomes were statistically treated using t-student test.

The results obtained imply that the perceptions, behavior and commitment towards the category changes after having followed a wine course. An economic value was created for the proponent of the courses (the retailer) as the majority of students declared spending more afterwards. In addition, value was also created for the students as they declare an increase in involvement, a sense of empowerment, an increase in frequency of usage of the product but not in the intensity.

Keywords: student, wine education, economic value, empowerment
Contributions of Experimentation in the Study of Reception in Communication Science: The Case of Wine Labels
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Abstract

Within an interdisciplinary perspective, this paper aims at examining a communication space (restricted to a wine label), by the simultaneous use of an experimental method and of a socio-semiotic approach. The purpose is to isolate and to measure, in an objective way, subjective variables from the symbolic and figurative area of the wine label. The innovative interdisciplinary design will help understanding the contribution of each measured parameter (for instance codes, attitudes, beliefs and their associated valorization) to the global individual interpretation.

Keywords: socio-semiotics, experimental economics, label, wine.

Controlling for Price Endogeneity: A Case Study on Chinese Wine Preferences
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Abstract

Identifying the most effective way in presenting important information to consumers has always been of great importance to marketing managers. This article focuses on measuring the importance of wine information sources that influence the wine choice of Macedonian young adults purchasing wine in wine shops. Our goal tried to identify significant differences in the use of information sources across wine knowledge, involvement and gender-demographic subgroups within the sample, in order to give marketing managers a means to develop more efficient marketing strategies. Most marketing researchers use rating scales to understand consumer preferences. These have a range of problems, which can be improved using the new technique, best-worst scaling (BWS). The best-worst scaling method was applied to measure the level of importance to a list of most commonly used wine information sources. The sources of information used for this study were selected on a base of qualitative interviews with Macedonian wine marketers and confirmed after literature review of the articles published in the most important wine marketing journals. A total of 123 Macedonian young consumers between the age of 25 and 34 purchasing wine in wine shops participated in a face-to-face interview preformed in three wine stores in Skopje and one in Bitola. The study results show that young urban adults in selection of their wines give more importance to information obtain by tasting the wine, recommendation from family members, and recommendation from friends and colleagues. The information sources less preferred were radio, television, billboards and printed media. Moreover, the study showed that specific differences exist in the preferences of information sources of males and females and between different knowledge and involvement segments.

Keywords: Young adults, external sources of wine information, knowledge, involvement, best-worst scaling, Republic of Macedonia
Abstract

Identifying the most effective way in presenting important information to consumers has always been of great importance to marketing managers. This article focuses on measuring the importance of wine information sources that influence the wine choice of Macedonian young adults purchasing wine in wine shops. Our goal tried to identify significant differences in the use of information sources across wine knowledge, involvement and gender-demographic subgroups within the sample, in order to give marketing managers a means to develop more efficient marketing strategies. Most marketing researchers use rating scales to understand consumer preferences. These have a range of problems, which can be improved using the new technique, best-worst scaling (BWS). The best-worst scaling method was applied to measure the level of importance to a list of most commonly used wine information sources. The sources of information used for this study were selected on a base of qualitative interviews with Macedonian wine marketers and confirmed after literature review of the articles published in the most important wine marketing journals. A total of 123 Macedonian young consumers between the age of 25 and 34 purchasing wine in wine shops participated in a face-to-face interview preformed in three wine stores in Skopje and one in Bitola. The study results show that young urban adults in selection of their wines give more importance to information obtain by tasting the wine, recommendation from family members, and recommendation from friends and colleagues. The information sources less preferred were radio, television, billboards and printed media. Moreover, the study showed that specific differences exist in the preferences of information sources of males and females and between different knowledge and involvement segments.

Keywords: Young adults, external sources of wine information, knowledge, involvement, best-worst scaling, Republic of Macedonia

Fine wines challenge the consumer to know them and form a meaningful willingness to pay (WTP) for them. Recognizing the challenge to the wine consumer’s knowledge of what she is buying, researchers have turned to Nelson’s (1970) idea of “experience goods”—goods that must be “experienced” before they can be accurately evaluated—and measured the relationship between price and measures of quality such as expert opinion as vicarious experience: if unable to know the wine before buying it, consumers use such information to guide their WTP. However, while this information may influence WTP, it does little to improve the consumer’s knowledge: the evidence of correlation is weak. This paper questions whether fine wine is an experience good and whether it can be known vicariously through expert ratings. The idea that one can know a type of fine wine by buying one—like knowing a refrigerator by buying one as suggested by Nelson—seems misplaced, and the experience of others is of limited value. The paper considers and critiques the kinds of information available to the wine consumer, especially experts’ opinions, as well as other factors that complicate the consumer’s knowing what s/he will find in the bottle. The paper closes with a re-characterization of the consumer’s wine purchase decision.

Keywords: wine markets, consumer, quality, fine wine, experience goods, knowledge, expert rating

JEL Code: D12, D83
The Need for Information of the Wine Consumer after the Purchase of the Wine
Frédéric COURET, Alvaro CUYA
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Abstract:
The consumer behavior literature distinguished information directed toward the purchase and another, ongoing research, about the satisfaction of the need for knowledge, reinsurance, curiosity and pleasure. After the purchase, the consumer can increase its level of satisfaction in seeking further information on products, which becomes an experience, both cognitive and emotional, to which the consumer will spend time.

The experiential approach currently seems best suited to post-purchase information needs analysis. The consumer experience is understood as the totality of events lived in its relationship to products. The consumer is not only consumer, it is in search for meaning and hedonistic benefits provided by the experience of consumption.

The wine is a complex and involving product, where searching for information and expertise play an important role. Wine is also a lively and user-friendly product, an art of living, symbol of civilization, gastronomy and good taste. The wine is so experiential product by excellence inducing some consumers a need for very important information, especially after the purchase of the wine.

The development of the QR codes, allowing thanks to a smart phone or a mobile phone to access very detailed information on wines via a link to a web site, provide to a certain category of consumers further information on wines they have bought. This information becomes a base of knowledge that they can use later.

On the basis of a survey of 440 consumer of wines, our research is designed to verify experimentally a number of assumptions regarding the need for information and the process of searching for this information, either before or after the purchase:
- What are the goals of this search for information?
- What types of consumers are concerned?
- What informative content is expected?
- What is the link between information and experiential consumption?
Archeological records sign the presence of vineyards in Durog region since the Roman times. However, the emergence of the present Demarcated Durog Region (DDR) dates from 1756, when it was recognized as one of the first demarcated region in the world, with a legislative framework similar to that currently applied in the most famous traditional wine regions. Viticulture is the economic base of DDR, covering area of 250,000 ha, of which about 18% (almost 45,000 ha) are occupied by vineyards. According to CERVIM is the largest and most heterogeneous viticultural region of the world. In 2001, located in deep valleys and steep slopes along the Durog River and its tributaries, 24,600 ha of the DDR were included by UNESCO in the list of the World Heritage sites, as a cultural and evolving landscape, illustrating an example of a traditional European wine-producing region and reflecting the evolution of the human activity over the time.

A cluster analysis of this region, developed by Rebelo and Caldas (2013), allowing us to conclude that DDR is characterized by the terroir model and fits the organized cluster, as happens in the other traditional and famous European wine regions. The main economic activities of DDR are wine and tourism (Andresen and Rebelo, 2013). Both activities have witnessed deep and structural changes along the last three decades, with influence on the present socio-economic performance of the region.

The main objective of this paper is to analyze the evolution, in the last decade, of the: (a) DDR wine filiere, taking special attention to the structure and multi-functionality of the vineyard, the wine production and marketing and the regional socio-economic dynamics; (b) tourism phenomenon, particularly observing the main changes occurred within the political and institutional spectrum, looking at the region as a tourist destination, and examining the behavior of supply and demand.

To achieve that goal the paper will include, in addition to the introduction and the conclusion, a literature review on the topic (wine cluster analysis and tourism), and a discussion on the Durog wine filiere and tourism.

Keywords: Wine region, world heritage, wine and tourism

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pleasure in life and, ironically, death. The Heurigen songs are said to express the “... whole
sweet carefree Viennese love of life and at the same time a deep despair to have to die some
time” (Sinhuber, 1996, p. 195). Moreover, the Viennese Heuriger, comparable to the
traditional English pub, can be seen as a “social institution” where people share a table and
eat and drink together regardless of social class or wealth (Kopsitich, 2008). However,
changing life styles, can be seen as a changing consumer patterns, in particular, seem to be affecting
the Heurigen and its culture. According to the provincial chamber of agriculture, Vienna
counted more than 500 wine-taverns in the 1960s, in the 1980s a little more than 250, and in
2011 “only” 125 (Landwirtschaftskammer Wien, 2011, p. 32).

Research Goals:
The aim of this study is to investigate whether or not changing ways of consumption
play a role in the decrease of Heurigen wine-taverns in Vienna. Moreover, we want to find out
which issues are of importance for the Heurigen to survive and flourish in the 21st century.

Approach:
To find answers to our research questions a qualitative research design was chosen.
Therefore the present paper will be based on the study of the existing research literature
about the so called traditional Viennese Heuriger and on interviews undertaken with different
actors and at different places in Vienna. Specifically, problem-centred interviews following
Wittzel’s model (1982, 1996) were carried out. The interviews focus on how wine-tavern
owners and/or managers may or may not meet new challenges connected with changing
consumption patterns. Between November 2012 and May 2013, eight semi-structured
interviews were conducted with both Viennese wine growers and owners of wine taverns, as
well as with the project leader for wine- and fruit growing at the Agricultural Chamber of
Vienna (Landwirtschaftskammer Wien) (who is also a wine grower and owner of a wine tavern
himself), managers of the Vienna Tourist Board (Wien Tourismus), the official destination
marketing agency of Vienna, and an Austrian wine specialist, who organized a Heuriger tour
for us. To get a clear overview, it was imperative to visit wine taverns located in diverse
districts, and various types of taverns in the Austrian capital. Therefore, the interviews with
Heurigen owners led us to the districts Neustift am Walde, Döbling, Grinzing and
Stammersdorf. Visits included a small family business, some larger wine taverns, and taverns
focused on bus tourists. The combination of traditional taverns with Heuriger considered
innovative, and of conventional taverns dedicated to package holiday tours and tavern
proprietors trying to attract younger consumers will help us to better perceive the differences
and the changes. Two interviews were carried out with the Vienna Tourist Board, emphasizing
marketing strategies for Austrian and foreign tourists, and measures undertaken to defy
potential risks and to promote the Viennese wine culture. The meeting with the project leader
of the Agricultural Chamber provided information about the role of the city of Vienna with
regard to its vineyard, wine growers and Heurigen owners, and the development of the
selection in the Austrian capital. The discussion with one of the best known young Viennese
wine growers using innovative growing methods completed the enquiries.

The interviews lasted between one and three hours and were all transcribed. They
followed general guidelines concerning questions about the current situation, new challenges
for wine growers and Heurigen owners, adapting to and anticipating current ways of
consumption and measures undertaken to face the changing consumer demand.

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**Consumers’ Intentions to Purchase Greek Bottled Wine**

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**Abstract**

This study will investigate and seek to determine Greek consumers’ perceptions of Greek wine. During the last twenty years, there has been a remarkable change in the production of quality Greek wines that reach both home and international consumers. New small producers emerge on a regular basis with wine products that include both indigenous and international wine varieties, either in interesting blends or in single variety wines. The wine scene in Greece is evolving rapidly and the Greek consumers have begun to have an increasingly positive attitude towards the consumption of high quality Greek wine. However, despite growing attention to Greek wine, we believe that the majority of Greek consumers prefer to consume lower-quality non-bottled wine. If this behavior is not altered then this poses a threat to the Greek wine production; since the domestic market, apart from the exports, plays a significant role in the consumption of products and the development of markets.

The current study examines the intention of Greek consumers towards bottled wine. The study will utilise Ajzen’s (1990) theory of planned behavior (TPB). A total of 300 questionnaires will be distributed using convenience and quota sampling techniques. Also, exploratory factor analysis and structural equation modelling will be employed to test the TPB model, predicting wine purchase intentions.

We expect to find results that help us understand better the profile of Greek wine consumers. Also, the study might direct us to specific variables that can be used for segmentation and selective marketing, together with recommendations for policy makers, researchers and stakeholders involved in the Greek wine market; and other nations facing similar issues of development of niche and segmented regional markets in the context of globalizing sectors such as for wine.

Keywords: Greek Wine Consumption, Theory of Planned Behaviour, Structural Equation Modelling

JEL-Code: M31, L66

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**'Dry Enough to Wash your Hands in': The English Taste for Champagne, 1860-1914**

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**Abstract**

In the nineteenth century, the English market dominated the French champagne trade. First, more was sold in the United Kingdom than in other markets with sales almost doubling in 15 years from 1860. Second, the English taste for drier, preferably vintage-dated champagnes that could be drunk right through the meal (rather than just as a sweet accompaniment to dessert) established the template for the champagne that we drink today – despite resistance from many of the French champagne houses.

What drove this explosive growth? Why and how did these changes in taste occur? Who led them and how was this new taste spread through both existing elite consumers and the ‘new men and women’ of late Victorian and early Edwardian England? What made champagne the perfect wine for the Victorian era?

This paper, based both on English and French records, examines largely unexplored history of Victorian and Edwardian champagne.
Liastos Oinos Siatistis: Where the Enthusiastic Present Meets the Glorious Past
Georgios MERKOUROPOULOS, E BATIANIS
CERTH (Center for Research & Technology), Western Macedonia, GR
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Abstract
Western Macedonia is a mountainous area. The variety of the rocky and hilly terrain creates many local microenvironments some of which hosted geographically isolated communities during the past centuries. Microclimates range from cold continental with relatively cool summers in the mountainous areas to soft winters and hot summers in the coastal region around the lake Polifitou. In this region grapevine was traditionally cultivated on the marginally infertile hill slopes producing low yield of high quality features wine. Siatista, a small town perched on the steep slopes of mount Velia, has been known in the 18th and 19th centuries as the production place of the famous sweet wine “Liastos Oinos Siatistis” produced by sun dried grapes. Among the many local varieties that have been cultivated traditionally in this area, the Xinomavro, Moschomavro and Nigrikiotiko were particularly used for the Liastos Oinos.

After many decades of neglect during the 20th century, viticulture flourishes again in the area around Siatista. Small, modern, family based wineries have been established aiming to revive local viticulture to the contemporary standards and qualities partly relying on the cultivation of the numerous local vitis varieties, such as the Xinomavro, Moschomavro, Nigrikiotiko, Bulgarian, Sklithro, Alepouora, various Kokkinouskes, Muscat (white and black), Nerontempeia, Valantovo, Chondromavro, Vapsa, Korithi (white and red), Chavouzali, Stavroto, Zalovitiko, Kostarazno, Alpitsa, Pitsiara (Pitsiariko), and Tsapournakos.

Here, we present a brief guide of the local wineries and the cluster of open to the public cellars that produce the Liastos Oinos.

Seatbelt Use Following Stricter Drunk Driving Regulations
Scott ADAMS, Chad COTTI, Nathan TEFFT
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Abstract
We present evidence from the Fatality Analysis Reporting System and Behavioral Risk Factor Surveillance System that shows increased seatbelt use following the concurrent presence of stricter BAC thresholds and primarily enforced seatbelt laws. This suggests that inebriated drivers may use their seatbelts more judiciously to avoid being identified as a drunk driver by law enforcement. The interactive effect of stricter drunk driving laws and primary seatbelt laws are also shown to be more effective than either law passed in isolation in terms of reducing traffic fatalities.

Keywords: seatbelts, drunk driving
JES Code: K4, I18

Friday June 6th, 2014
8:30 – 10:15
SESSION 4b
WINE MARKETING selected aspects

Retail Channel Selection on Wine by Households in Argentina
Gustavo ROSSINI, Rodrigo GARCIA ARANCIBIA, Edith DEPETRIS
Universidad Nacional del Litoral, AR

Vinsseaux Traditionel: The Branding of Canadian Sparkling Wine
Doris MICULAN BRADLEY, Donna LEE ROSEN
George Brown College, CA

The Consumer Trail: Applying best-worst Scaling to Classical Wine Attributes
Fernando NUNES, Teresa MADUREIRA, José Vidal OLIVEIRA
Instituto Politécnico de Viana do Castelo & Instituto Politécnico de Lisboa, PT

Les présentations packaging des vins de qualité: Analyse sémiotique des bouteilles du top 100 du "Wine Spectator" de 2008 à 2012
François BOBRIE
Maison des Sciences de l’Homme et de la Société-Poitiers; Laboratoire CEREGE, FR

Difference of Representation and Choice of Burgundy Red Wines from the Upstream vs Downstream Actors of the Wine Sector
Monia SAIDI, Georges GIRAUD
UMR CESAAE INRA - AgroSup Dijon, FR

Wine Distribution Channel Systems in Mature and Newly Growing Markets: Germany versus China
Tatiana BOUZDINE-CHAMEEVA, Wenxiao ZHANG, Jon H. HANF
KEDGE Business School, FR & Geisenheim Univ., DE

Attitudes towards M-Wine Purchasing. A Cross-Country Study
Jean-Eric PELET, Benoit LECAT, Jashim KHAN, Linda W. LEE, Debbie VIGAR-ELLIS, Marianne MC GARRY WOLF, Sharyn RUNDLE-THIELE, Niki KAVOURA, Vicky KATSONI
Univ. Nantes, ESC Dijon, FR; Auckland, NZ; KTH Royal Institute of Technology, SE; Univ. KwaZulu-Natal, ZA; California Polytechnic State Univ., US; Griffith Univ., AU; Technological Educational Institute of Athens, GR
Retail Channel Selection on Wine by Households in Argentina
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Abstract
Household choice of outlet retail channels over another in wine, depends on several factors and it is directly related to the variety of products offered, quality, prices, proximity to home, payment method, and ability to buy other consumer goods at the same location, among the most important.

There are two main channels of purchase by household in Argentina. On the one hand, supermarkets and hypermarkets offer a wide variety of wines, and on other business specializing in the sale of alcoholic beverages. Consumers choose any of these sales channels or both according to their convenience.

While there are some works in Argentina that characterize the attributes of channels and consumers with the choice of purchasing channels in wines, all of them performed descriptive by graphs or tables based on survey data. There are more interesting models related to consumer choice for estimating the impact of household traits on the probability of choosing retail channels.

In consequence, the objective of this study is to know and quantify the effect of demographic and socioeconomic factors of Argentine households in choosing outlet retail for wines.

A Multinomial Logit Model was used to explain consumer outlet selection and to calculate marginal effect of the variables included in the model. Data from the National Household Consumption Survey 2004-05 was used to estimate the model.

Results show that wines are purchased principally en two retail channels: supermarket-hypermarket and liquor store. Considering both channels, 96.45% of the households chose one of them or both for buying wines.

Table 2. Purchasing Channels on Wines by Households

<table>
<thead>
<tr>
<th>Retail Channel</th>
<th>Frequency (Obs)</th>
<th>Percentage (%)</th>
<th>Cumulated Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hyper-Supermarkets</td>
<td>2,104</td>
<td>31.24</td>
<td>31.24</td>
</tr>
<tr>
<td>Liquor Store</td>
<td>3,971</td>
<td>58.97</td>
<td>90.21</td>
</tr>
<tr>
<td>iHyper-Supermarkets and Liquor Store</td>
<td>420</td>
<td>6.24</td>
<td>96.45</td>
</tr>
<tr>
<td>Others</td>
<td>239</td>
<td>3.55</td>
<td>100</td>
</tr>
</tbody>
</table>

Many of demographic and socioeconomic variables are important on deciding the retail channel by households, such as education, and gender of the household head, method of payment, total income of household, total expenditure in wines, and wine prices. The probability of buying in liquor store increases when household head is man, wine price increases, household is situated in an urban area, and total quantity of wines purchased by a household increases. On the contrary, household tend to purchase wines in supermarkets and hypermarkets when method of payment is through credit or debit card, the education level of the household head is medium or high, and wine price decreases.

Keywords: Wines; Argentina; Household Retail Channel Selection.
JEL Code: D12, C25

Vinsseaux Traditionel. The Branding of Canadian Sparkling Wine
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Abstract
Rationale: The globalization of the wine industry has created a market for long-established methods of wine production, regional and endemic areas of viticulture, a need to preserve traditional customs in viniculture.

Objectives: This study was conducted to determine to necessity of creating a distinct and unique label based on a foundation of specific prerequisites for Sparkling Wine produced in Canada

Methods: The diversity of Terroir creating a unique opportunity for viticulture and the frequency Sparkling Wine produced in comparison to Still Wine was investigated. The opportunity for Destination Travel Marketing was explored.

Results: As of 2012, Canada hosts over five hundred commercial wine producers and grape growers yielding grades on a soil diversity including heavy clay soils, deep organic soils such a bog soil, limestone and granite. According to the Government of Canada 2012, thirty-five million visitors travelled to Canada which included wine tourism. An overall increase to viniculture expenditure of 12.4% per annum is evident. The research team is proposing the suggestion of creating a distinct label protecting Canadian Sparkling Wine with the term Vinsseaux Traditionnel as a consideration of creating a globally recognized Wine and Destination Travel Region featuring Canadian Sparkling Wine with the inclusion of local culinary and regional etiquette

Conclusions: The wine industry depends on the environment of nature and the disposition of marketing for its survival. Recipe, methods of cultivation, the increase of homogenization within the industry itself requires the support of distinct preservation mandated by a governing body including distinct product labelling.
The Consumer Trail: Applying best-worst Scaling to Classical Wine Attributes
Fernando Nunes, Teresa Madureira, José Vidal Oliveira, Gustavo Ferreira

Abstract
The main goal of this study is to better understand the buying behavior of wine consumers in Portugal. More specifically, the study identifies the extrinsic attributes influencing consumers' wine purchases choices in a retail store, and for a special occasion. Using eighteen reference attributes, the authors use the best-worst scaling method for designing, implementing and analyzing responses to a survey carried out amongst 250 wine buyers. Results reveal that the most influential attribute is whether consumers had tasted the wine previously. These findings for Portugal are in accordance with what has been observed in other Western countries. The second most important attribute - recommended by friends/relatives - does not gather the same unanimity and therefore differentiates national consumers. The use of an ordinal regression model shows that the classification variables Level of consumption and Level of involvement contribute significantly to explain the behavior of the first two attributes. Using a latent class analysis authors also suggests a useful segmentation for national wine consumers.

Keywords: wine attributes; consumer choice; off-premise setting; best-worst scaling; country base study

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Abstract
This communication is a synthesis of five years analysis of bottles selected by the contest TOP 100 Wine Spectator, which have been published annually in the Annals "Wine and markets " (2009, 2010, 2011, 2012, 2013 ).

From this presentation of packaging quality wines, it was the objectif to identify the rules of construction of a semiotic "story like" wine, which manifests itself in all producing countries, represented in charts (between 12 and 15 years depending on the country ), and which consequently codifies the information published on the world wine market.

The semiotic analysis is based on the principle that the packaging is the medium of a story of bottled wine. This story is "set" by the text resulting from the labeling system but also the forms and decoration of the bottle. This enunciation is called "syncretic" because it combines inseparably verbal and non-verbal elements displayed on the labels seen by consumers.

Each identified in this packaging language is analyzed using the method of "language level", introduced by Hjelmslev (1943), which extends the Saussurean concepts of signifiers and signified to the example of language texts, both verbal and nonverbal .

This paper shows how all of these packaging- "stories", apparently very diverse in their construction and illustrative style, can be categorized into two main types of accounts:
(a) those who prefer to tell the story of the wine (the story telling) based on the skills of the market director,
(b) those who prefer to tell about the wine based on promises of rewards for the taster.

The Communication explains the semiotic reasons for choosing these narrative logic and their distributions in the different origins and with different characteristics narrated wines.

The paper examines longitudinally the evolution of the two types of stories in the corpus between 2008 and 2012. And speculates on the reasons for these changes.

Finally, this paper proposes using these results " built conceptual " that can be qualitative and quantitative tests later

Bibliographie


Abstract

During their decision-making process, the consumers have to adapt their choice according to the range of supplied products. We will focus on the criteria used by the stakeholders to make their own choice before providing wines for the consumers.

The present study was carried out in Burgundy (France). Two stakeholders’ categories of the Burgundian wine-producing sector were surveyed: the upstream and the downstream ones. The aim is to study their degree of consensus or disagreement among their representation of Burgundy red wines. Sensory tests and questionnaire related to their commercial activities were carried-out in order to measure their typicality judgment.

Forty Burgundy red wines of entry and medium range, pinot noir, vintage 2010, illustrating the diversity of the supply and stemming from diverse vine culture and oenological practices, were presented to both panels. Forty persons participated: 20 upstream stakeholders (those who make the wine) an 20 downstream ones (those who market the wine).

Questionnaire on their practices and representations toward Burgundy red wines were filled-in with the participants to better understand the choice of wines to be integrated into their supply and to analyse the diversity of the vocabulary used to describe their representation of this category of wine. Finally, a conjoint analysis was used to measure the importance of the extrinsic attributes (price, brand name, label) for the stakeholders in the differentiation and the commercial positioning of such wines.

The results show that according to their position along the supply chain, the stakeholders use different descriptors to elicit their representation of Burgundy red wines. Some of them (the up-stream ones) have a richer vocabulary compared to the others. Both categories do not use the same extrinsic attributes when choosing their wines. The results of conjoint analysis show that the brand is the most important attribute for the stakeholders, and price sensitivity is higher for downstream stakeholders.

Keywords: red wines, upstream/ downstream stakeholders, typicality judgment, conjoint analysis, Burgundy

JEL Code: M3
restaurants; hotel...). However, it also becomes clear that the evolution of channels in emerging markets generates certain bottlenecks, the auto regulation promotes transparency and the development of other channels comes into view, in particular those channels which are favored in mature markets.

More detailed results, including graphical comparison of responses and an in-depth analysis to demonstrate statistical significant will be presented at the conference, along with implications.

Keywords: wine distribution channel, mature market, emerging market, Germany, China, French wines
South Africa. Participants from France and Germany differ in their ownership and use of Smartphone types except classic phones. These differences are statistically significant. The percentage of participants who owned iPhone also differ between South Africa and the U.S. The percentage of participants from Greece and South Africa differ in their ownership and use of Blackberry Smartphone and classic model and Smartphone Windows

(3) Mobile phone bills and payment

For French participants mobile phone contract type was split: 37% reported that they have pre-paid contract, 60% had monthly contract and less than 5% reported to have annual contract. German participants preferred monthly contract types than any other form of contract. Majority of South African, Greek and the U.S. participants reported monthly plan. Similar 40/60 for Pre-paid and monthly plan was noticed for Canada

(4) Cross country comparison of mobile phone bills

Tukey's multiple comparison shows that Canadian and German participants differ significantly with French counterpart and the mean difference was significant at the .05 level. This means that the U.S. and Canadian mobile phone bill differ significantly with the French, German and Greeks in US dollar. The U.S. and Canadian participant spent more on smart phone bills than French, German and Greece participants. The average phone bill spent across the sample was $60 per month and the average hours of talk time on smart phone per week was 13 hours. We found a significant difference in mobile phone bill per month between France, Germany and Greece and the U.S. and Canada. The rest other countries did not reveal significant difference in Smartphone bill.

(5) Wine purchase and consumption

When asked how many bottles of wine purchased in a typical month, the mean difference is significant between countries. Thirty-eight percent of French respondents within the drinking age reported buying no wine and the remainder reported buying only one bottle of wine per month. Sixty percent of respondents in Germany mentioned buying one bottle of wine and the remaining 40% bought two bottles of wine per month. Greek respondents varied in wine purchases per month: 37% bought two bottles, whereas 58% reported buying three to four bottles of wine per month. South African respondents bought more wine compared to the other six countries with 34.8% reporting they purchased four bottles; 48% reported five bottles; and 17.2% bought six bottles of wine per month. 9.8% of all respondents from the US mentioned they bought more than 7 bottles of wine per month. Interestingly all respondents from Canada reported that they did not buy wine despite being in legal drinking age. When participants were asked to reveal glass of wine consumed during a week 80% said they drink 0-5 glass, 14% mentioned drinking 6-10 glass of wine/ week, 26% revealed drinking 11-15 glass of wine, 1.5% said would drink 16-20 glass per week and another 1.5% drink more than 20 glass of wine per week. In terms of drinking of wine per week South African respondents reported drinking more wine than France, Germany, and Greece.

(6) Wine and mobile

The majority of wine was purchased in supermarkets, accounting for 56% of total responses. Twenty-one percent reported buying wine from hypermarkets, and 12% chose wine shops to purchase wine and only 2% reported to buy wine via mobile apps and 3% used laptop/desktop –Internet to purchase wine. To investigate mobile wine purchasing, respondents were asked to state what types of product/services were purchased via a smart phone: 11% (clothes), 10% (books), 9% (travel product) and only 2% reported buying wine using Internet enabled smart phone.
The Market Structure-Performance Relationship applied to the Canadian Wine Industry
J. François OUTREVILLE
HEC Montréal, CA

Wineries’ Performance, Response to a Crisis Period
Juan Sebastian CASTILLO-VALERO, Katrin SIMON-ELORZ, Ma Carmen GARCIA-CORTIJO
Universidad de Castilla la Mancha & Universidad Pública de Navarra, ES

Quality Improvements and International Positioning of Chilean and Argentine Wines
Fulvia FARINELLI
UNCTAD, CH

Winegrower or Winemaker? Influence on Business Efficiency in Burgundy
Georges GIRAUD
AgroSup Dijon, FR

Wine: To Drink or to Invest? A Study of Wine as a Financial Asset in a French Portfolio Context?
Beysül AYTAC, Thi Hong Van HOANG, Cyrille MANDOU
Groupe Sup de Co Montpellier Business School, FR

Terroir and Sustainability: The Role of Terroir in Sustainable Wine Standards
Shana SABBADO FLORES
Instituto Federal do Rio Grande do Sul, BR

Abstract
The purpose of this research is to examine the relationship between market structure and performance in the wine sector using data from two Canadian provinces. Investigation is conducted on the Structure-Conduct-Performance (SCP) hypothesis and the Relative-Market-Power (RMP) hypothesis. The number of awards gained by wineries rather than the usual financial performance measures performance. Using regression analysis, we find support to the RMP hypothesis. The empirical findings suggest that more research should be done on the efficiency structure of wineries in their respective markets.

Keywords: Wine industry, market structure, performance

JEL Code: L11, L66, D40

Preliminary version; Comments are very welcome
Wineries’ Performance, Response to a Crisis Period
Juan Sebastian CASTILLO-VALERO, Katrin SIMON-ELORZ, Ma Carmen GARCIA-CORTIJO
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Objectives
This study investigates the key variables to explain the crisis effect in the performance index of the wineries in CLM (Castilla La Mancha – Spain), according of the accounting variable. At the core of the discrepancies lies the difference between the performance variable used to measure the wineries and, in turn, the impact upon the existing asymmetry between the consequence of the commercial and financial strategies adopted.

On one hand, the study will analyze the presence of similarities and differences in the whole period; on the other, we will study the differences of the performance variables between the two periods: growth and crisis.

In this paper, the hypotheses about performance measures are tested with Panel Data Analysis.

Design/methodology/approach
The data needed to carry out the analysis include the wineries operating in CLM (Spain), from 2004 to 2010. This period corresponds, firstly to a growth economic cycle (2004-2006) and secondly a crisis period 2007-2010.

Our database arises from financial statements filed at the Register of Companies (SABI Database). All the enterprises whose data have been analyzed in the paper include two financial statements: Balance-Sheet and Profit and Loss, which permit to calculate the performance measures. Our database is an unbalanced data for the period 2004-2010. As the average sector, our database includes the micro-firms (< 10 workers) which represent the 73% of the database and the SMEs the 98%.

Measures of managerial performance comprise index of Value Added (VA), EBITDA (Earnings before Interest, Taxes Depreciation and Amortization), ROA (Return of Assets), ROI (Return of Income) and Total Solvency.

Using Pooled Cross Section Time series, we test a model that includes environmental variables (age and size); commercial variables (growth of sales, market share, market orientation and export); financial variables (negotiation power of suppliers and customers; leverage and cash-flow); and special events in the period (economic crisis and legal variables).

Findings
The main finding highlights some strong differentiators between the economic cycle and the path chosen by the wineries to maintain the index of enterprise performance.

Our interest therefore focuses on testing the main hypothesis of the traditional economic theory that performance differences between the companies are mainly due to their distinct strategies and to their corresponding different ways of managing measures of performance and size.

According to the economics literature, performance measures vary according to the common objective function of all firms, which regardless of size is profit maximization, while small firms focus primarily on survival and stability.

The wineries manage performance variables in terms of expenditure levels of the intermediate variables. The difference between VA and EBITDA is consequence of personnel expenditures; and the variation between EBITDA and Profit before Interest and Taxes is consequence of amortization and provisions. With a final Profit, the companies are cushion between economic performance measures. The choice of different performance measures can lead a different results and recommendations. The crisis period transforms the sign of the performance measures and also can invalidate some of them like as ROI and we propose the use of a different measure, Total Solvency.

Originality/value
The analysis deals with the problem of the performance measures and economic cycle of the wineries and the ability of them to sustain competitiveness in this special period.

The analysis of the whole sample and the two subsamples was moved of the independent variables that explain the performance measures.

In the growth stage, the relevance is in the commercial variables, while in the period of crisis, moves to the financial variables, both short term and long term.

Keywords: Performance Measures, Business cycle, Wine business, Strategies, Castilla La Mancha (Spain)
Quality Improvements and International Positioning of Chile and Argentine Wines

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Abstract

This paper looks briefly at the historical background of the Chilean and Argentine wine industries from their origins and at the impact of political changes, regulatory framework reforms and improved macroeconomic conditions in facilitating the development of the wine industry in both countries. It addresses a number of key questions: for example, what can explain the fact that the wine export boom unfolded only in the 1980s in Chile and in the 1990s in Argentina and not earlier, as, for example, in California and Australia? Is there evidence to suggest that Chilean and Argentine wine exports have been characterized by an increase in quality and value-added contents over time? Are the (internal and external) conditions under which the Chilean and Argentine wine industries compete at the global scale any different from those that, in other industries, led to repeated failures in the past?

After having acknowledged the natural assets and competitive cost structure underlying the successful export performance of the Argentine and Chilean wine industries as mere conditions of departure, the paper assesses the quality improvements introduced in the Chilean and Argentine wine industries over time and analyzes the extent to which these have been accompanied by equal improvements of their positioning in the international market. It also looks at the potential role of Chilean and Argentine local consumers in stimulating and accelerating the drive towards high-quality wines. These issues are important for understanding whether the large improvements characterizing both the Chilean and Argentine wines – as shown by their increased quality, enhanced international ranking and rising export unit value – are incidental or sustainable over time.

Winegrower or Winemaker? Influence on Business Efficiency in Burgundy

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Abstract

In the French vineyard of Burgundy, the share of harvest sold as fresh grapes, grape must or juice has increased from 10% to 16% from 2000 to 2010. This trend of outsourcing pertains on the core stage of business for wineries: the wine-making process. The present research explores the strategies of the wine stakeholders with respect to outsourcing versus integration of the wine-making process by analyzing original and recent data issued from the 3,430 wine estates located in Burgundy in 2011.

Summary

The paper presents first the range and limits of outsourcing vs. integrating in the wine industry. Then, a principal component analysis highlights the latent variables explaining the different strategies of stakeholders in Burgundy, with a special insight between the viticulturists and the winemakers. The results show that the choice of the business model is moreover under the influence of the level of the appellation applied for selling wine.

Even though outsourcing is considered by literature on management science as a useful trait for efficient business everywhere by reducing the agency costs, it was found that, most often, the stakeholders who process top quality products are prone to integrate the stages of working out. Other factors taken into consideration are the risks of loss of core knowledge and increased costs. The main raison of the integration is the quality control from raw material to process and sales, which is a key factor for addressing the expectations of the market’s premium segment. In the wine industry, both figures occur in various countries and vineyards, however, recent publications found that the profitability increases with vertical integration.

The results obtained through data analysis indicate that important differences exist between the winegrowers: most of them are winemakers whereas some are viticulturists. The business model chosen between outsourcing vs. integration, matters for business efficiency more than the size. The magnitude of efficiency is comparable between the business models and the size categories among the same business. Those who integrate all the stages of wine-making process are likely to be more profitable.

Instead of finding the best way to make profitable business in the wine sector in Burgundy, our study highlights the diverse ways of doing so, indicating that the diversity of wines, the mosaic of small and large companies are not limiting factors for making excellent wines and providing good business in the same time. Inside this diversity, the appellation, i.e. the terroir of origin, is a key issue. More prestigious the wine is, and higher the price, better integrated is the wine-making process. This indicates that outsourcing is not a way for business efficiency into the French wine sector, at least for top quality wines such as Burgundy ones.

Keywords: Wine industry, business model, outsourcing, Burgundy
JEL: L66, Q13, D23, D81
Abstract

Wine is first of all a consumption good. Most of people buy wine to drink or to offer. In this paper, we are interested in wine as a financial asset. This face of wine was analyzed by academics for the first time in the article of Krasker (1979) published in the Journal of Political Economy. In 1981, Jaeger commented this article and proposed new methods to study the rate of return of investments in wine. Only 12 years later, in 1993, another article about wine investments’ return was written by Weil. In 1998, Sokolin wrote a book about investments in wine. From 2001, the number of articles about investments in wine has increased significantly: Burton and Jacobsen (2001), Fogarty (2007), Fogarty and Sadler (2007), Kourtis et al. (2012), Sanning et al. (2008), Coffman and Nance (2009), Fogarty (2010), Masset and Henderson (2010), Masset and Weisskopf (2010), Jiang (2012), Storchmann (2012)… In the literature, some authors used data on the London wine exchange (the London International Vintners Exchange, called Liv-ex). We have not found any study using French wine price indexes. That’s why, in this paper, we will study the profitability of investing in wines using French data. With this objective, beside 4 indexes from the Liv-ex2, we also use 4 wine price indexes from the French market. These latter are calculated by an online platform to invest in wines in France3 which is iDealwine. To constitute different portfolios, we use also other French and international data on stocks (CAC 40, MSCI Europe, MSCI Euro and MSCI World), bonds (EMTX index, TMO and TME) and risk-free asset (Euribor 1 month). The periodicity of our data is monthly and the studied period4 is from January 2007 to July 2013.

Recently, and mostly from recent financial crisis, the role of gold as an alternative asset is also interested by both researchers and professionals (see for example Baur and Lucey 2010 or Hoang et al. 2013). Moreover, to our knowledge, there is no any study comparing gold and wines as alternative investments. In this article, we will compare the profitability of gold and wine as an individual asset and a portfolio diversifier. In France, the gold asset the most representative is the Napoleon coin. That’s why we use monthly prices of this coin for our empirical study.

To study the profitability of investments in wine and gold, we use the following methods. Firstly, we measure the rate of return and the risk of each asset. Secondly, we measure the correlation between wines (or gold) and other financial assets. Thirdly, we compare the performance of portfolios before and after including wines (or gold) in using Sharpe ratio, modified Sharpe ratio, Jensen index and Treynor index. Fourthly, we will employ Sharpe ratio, modified Sharpe ratio, Jensen index and Treynor index. Fourthly, we will use the mean-variance-skewness approach proposed by Lucey et al. (2006) with gold assets in order to complete the misspecifications of the mean-variance Markowitz approach.

Our first results show that from 2007 to 2013, French wine indexes are the most profitable with almost a 10% annual rate of return. This is followed by Liv-ex indexes at about 9% per year. Bordeaux wine indexes are always the most profitable (over Bourgogne or Rhone). The rate of return of stocks indexes (both French and international ones) is negative during this period. The one of bonds is around 4% and of the risk-free asset is around 1.5%. About the risk, measured by the standard-deviation, very surprisingly, the one of French wine indexes is the lowest (around 5% per year) despite its highest rate of return. The one of Liv-ex indexes is very high (around 12% per year). This is not far from stock indexes for which the volatility is around 18% per year. Gold is the most profitable (more than 11% per year) but also the most risky (more than 25%). For bonds and the risk-free asset, the risk is very low (less than 1% per year, except for the EMTX index which is about 4%). These results show that investments in wines are the most profitable because its rate of return is almost as high as the one of gold and is significantly higher than stocks, bonds and the risk-free asset. However, its risk is lower than both stocks and gold.

The results on correlation coefficients show that only French wine indexes are not correlated with stock indexes (CAC 40 and MSCI). However, this is not the case for wine indexes from Liv-ex. Wines are not correlated with bonds and the risk-free asset (except for wine indexes from Liv-ex and the EMTX index). The Napoleon coin is not correlated with wines, bonds, risk-free asset and negatively correlated with stocks. These results show that only French wine indexes can be good to diversify stock portfolios.

Keywords: wine, gold, alternative investment, risk-return, portfolio diversification

JEL-Code: G11
Terroir and Sustainability: The Role of Terroir in Sustainable Wine Standards
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Abstract

Sustainability can be understood as a search for equilibrium: a balance between current and future needs, tradition and technology, stakeholders’ expectations and viability or the classical tripod based on environmental, economical and social aspects. In another way, sustainability is a synonym of resilience, the capacity of a system to regenerate and adapt itself in order to survive despite external interventions and changes. Besides this theoretical approach, standards, tools and methodologies have been created with the objective of guiding the implementation of sustainable principles in different sectors.

Simply defining sustainable development is not enough to establish required or basic conditions to reach it, nor to measure sustainability. It is therefore clear that the definition of rules and indicators is directly related to the approach of sustainability chosen. From an economic point of view, we can distinguish the concepts of weak and strong sustainability to evaluate natural capital. The first, weak sustainability, highlights neoclassical economy and the theory of capital in order to propose the maintenance of growth, based on technological improvement and the substitution of resources to ensure natural capital levels. Conversely, strong sustainability is conservationist, it considers the specificity of natural resources and the precautionary principle; in its more conservative version, this vision is similar to the approach of deep ecology. Beyond this, sustainable development also has to consider other aspects to be aligned with this original definition, like economic capital, human capital and, more recently, social capital.

In the wine world, this discussion becomes more complex with the introduction of other “ingredients”, mixing the valorization of agronomical factors and immaterial/cultural issues. In this sense, the concept of terroir represents this relation between humans (and their social reproductions) and nature. The description adopted by the OIV explains that “vitivinicultural terroir is a concept which refers to an area in which collective knowledge of the interactions between the identifiable physical and biological environment and applied vitivinicultural practices develops, providing distinctive characteristics for the products originating from this area. Terroir includes specific soil, topography, climate, landscape characteristics and biodiversity features.” (Resolution CST 333/2010). In other views, terroir also involves economic and institutional considerations.

Sustainable viticulture is defined by the OIV as a “global strategy on the scale of the grape production and processing systems, incorporating at the same time the economic sustainability of structures and territories, producing quality products, considering requirements of precision in sustainable viticulture, risks to the environment, product safety and consumer health and valuing of heritage, historical, cultural, ecological and aesthetic aspects” (Resolution CST 1/2008). In this concept, sustainable viticulture is understood in a large sense and it can be noted that enhancing terroir is also one measure of sustainability.

In this sense, we examine how the present standards and certifications “read” sustainable viticulture. What is the role of terroir in this discussion? To analyze these questions, the main standards currently applied in viticulture will be considered in two groups: (1) sustainable agricultural systems and (2) sustainable wine frameworks. These standards are analyzed in relation to the concepts of sustainability and terroir. This paper is based on a literature review and on documentary research, complemented by discussions with experts and technical visits.

In the world of viticulture, the main sustainable agricultural systems are: integrated farming, organic farming and biodynamic agriculture. The concept of integrated farming (in French “agriculture raisonnée”) aims to reduce the negative impacts from agriculture and the use of chemicals – to reduce but not to eliminate them. In France, the scope of this system is supported by legal texts that provide overall specifications, including waste and water management, landscape and biodiversity. Organic farming is a set of methods that excludes the use of synthetic chemicals and GMOs and limits the use of inputs. Today, grape production represents 17% of the total organic surface in the EU. Finally, the biodynamic system is a type of organic farming developed by Rudolf Steiner in 1924 that searches for a natural equilibrium in the ecosystem by means of a method that can be considered a kind of deep ecology. Organic and biodynamic agriculture are strong sustainability methods to the extent that they attack the heart of the issue. On the other hand, integrated production occupies an intermediate position. It is important to observe however that these systems do not directly address social or economic aspects related to wine production. In addition, the evaluation of terroir is considered in terms of natural aspects, with reference to biodiversity or landscapes; the official texts do not directly present terroir or other keywords related to the theme, like collective knowledge or typicity.

The sustainable wine frameworks analyzed here are from South Africa, Australia and New Zealand, Chile, the US (California) and France (TerraVitis and Champagne). First of all, it is important to emphasize that, in this case, the sustainable framework is not synonymous with sustainable agriculture; in this sense, the standards above do not include organic farming techniques. These frameworks include a form of certification or guidelines applied to viticulture. However, a trend to include more social and terroir aspects can be identified. Another question is that these standards are more flexible than the first one and allows a step-by-step implementation. In South Africa, for example, the label “integrity and sustainability” can be complemented by the BWI label, for biodiversity and the conservation of natural surfaces. In Chile, the code has three axes, vineyard, winery and society (community and social responsibility). For new producers, these certifications are important tools in the export market. Moreover, these frameworks act as a tool to distinguish the terroirs like

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7 According to European Commission of Agricultural and Rural Development (2013).
“sustainable” from the customer’s point of view. These standards expand the understanding of sustainability, but they remain weak or medium intensity because of their flexibility in terms of core issues. The two approaches from France analyzed here consider terroir at a higher level, including the notions of landscape and patrimony.

Based on these considerations, we can wonder if the analysis of wine sustainability is simply an ecological/environmental subject. In general, it is easier to evaluate and situate environmental issues, such as pollution or water quality, which allow for objective measures. Ecological issues represent the origin of the discussion about sustainable development. On the other hand, social and territorial issues are more qualitative notions, often based on subjective concepts, and thus more difficult to translate by means of indicators. Indeed, social and environmental issues are closely related and it is important to recall that sustainability is also ensuring the conditions for the reproduction of identity. In this sense, terroir is a notion that could be integrated into wine sustainability frameworks and indicators, helping to understand and situate important issues to the wine regions like cultural dialogue with actors, institutional arrangements and the conservation of diversity in terms of history, culture, landscape and patrimony.

Keywords: sustainable viticulture, terroir, sustainability standards
JEL Code: Q01, Q15, Q56
The Importance of Wine Region and Consumer’s Involvement Level in the Decision Making Process
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Abstract

The purpose of this presentation is to identify and understand the relevant attributes, both extrinsic and intrinsic, that Portuguese consumers value and are relevant in the decision process for choosing wine.

Further, the study aims to check possible differences in the valued attributes regarding consumer’s involvement level and wine Region Origin.

The research was designed to identify relevant wine attributes and measure their importance when choosing a wine. In order to achieve this objective and match it with consumers’ involvement and wine region of origin, 30 Focus Groups were performed, involving 171 consumers from five Portuguese regions of origin.

We can conclude that the region of origin is the attribute that triggers the process of choosing a wine. Label/back label, price, bottle, brand, and wine varieties are also important clues, nevertheless differently valorized according to consumers’ involvement level. The less relevant attributes are winemaker/producer information, medals/awards, and overall design. Their importance varies with the degree of consumers’ involvement and the wine region of origin. Wine balance, freshness, acidity, colour and body have different perceptions, depending on the regions of origin. Alcohol content and gas are the least valued attributes.

The obtained results and further conclusions allow an extended perspective about the process of buying wine, matching the importance of the relevant attributes with consumers’ involvement level and region of origin. The study can contribute to an accurate market-orientation perspective.

Keywords: Portugal, Wines, Decision making, Consumer behaviour, Product attributes, Wine extrinsic and intrinsic attributes, Consumer decision process, Wine business, Market orientation

We Should Drink no Wine before its Time
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Abstract

Since the path breaking work of Arrow and Debreu, a unique set of attributes, including quality characteristics, as well as the location and timing of sales and consumption, defines a unique consumption good. Quality attributes generically are defined per unit quantity, as are market prices. This inextricably bundles quantity, quality, and price in the marketplace, and leads to a host of interesting economic issues. An important and widely accepted result is known as the Alchian-Allen effect; an excise tax tends to increase the quality of a good because it is a tax specifically on quantity (Alchian and Allen). However, when the quality of a good accrues with age, such as cellerable red wine, aged cheese, cultured pearls, or prime beef in a finishing feedlot, the dynamics of aging leads to a host of interesting and new economic relationships between tax systems, quantity, and quality in a market equilibrium.

We develop a competitive market model for the production, consumption, and quality of goods like fine red wines that increase in value during the storage and aging process following the initial production stage. The model is a rational expectations dynamic equilibrium of the Arrow-Debreu flavor wherein consumers are dynamic life cycle utility maximizers, firms are perfectly competitive wealth maximizers subject to efficient capital markets, and the government collects lump sum taxes and provides public good sand services efficiently and is subject to a balanced budget constraint in the long-run.

We first consider the provision of quantity and quality in the private market equilibrium without wine specific taxes and analyze when (if ever) an unfettered competitive market would provide the efficient (first best) quantity and quality of cellerable red wine. A new result is that the answer is affirmative if all consumers have preferences for quality that satisfy “weak complementarity”, as defined for non-market valuation (Maler; Larson). Conversely, if consumers have “weakly neutral” preferences (Neil), then a private perfectly competitive market is likely to undersupply quality and oversupply quantity.

We then analyze several tax systems commonly observed in the market for wine throughout producing and consuming countries in the world, and compare and contrast these to what is a first-best optimal tax system in our model setup using parameter values for demand, production and supply, and competitive storage costs for cellerable wine gleaned from the relevant literature on the world market for wine.
The Effect of Wine Culture on the Relationship between Price, Consumption and Alcohol-Related Problems

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Abstract

Since the early 1980s, a growing number of economists have examined the impact of the price of alcoholic beverages on alcohol consumption and alcohol-related problems (Chaloupka et. al., 2002). On the one hand, to describe the sensitivity of consumption to changes in monetary price, a large literature attempts to estimate the price elasticity of demand for alcohol (see Fogarty, 2004 and Gallet, 2007 for meta-analysis).

On the other hand, some studies have evaluated the effects of price on various outcomes related to alcohol consumption, including nonfatal and fatal motor vehicle crashes and other injuries, liver cirrhosis and other alcohol-related mortality, and violence and other crime (Chaloupka et. al., 2002, Bentzen and Smith, 2011, and Farrell et. al., 2003).

This research, which has used a wide variety of data, generally has concluded that increases in the prices of alcoholic beverages lead to reductions in drinking and heavy drinking as well as in the consequences of alcohol use and abuse. Since the price of alcohol can be manipulated through excise tax policies, the findings regarding the relationship between alcohol price and alcohol consumption clearly are relevant for policymakers interested in reducing alcohol consumption and its adverse consequences. Indeed, Federal, State, and local governments have implemented many policies to combat alcohol abuse in the past two decades.

However, behavioral theorists see background or underlying cultural values as one of the most meaningful determinants of consumer behavior. The motivations for drinking wine, the consumption occasions, and the general knowledge about wines, reflected by an awareness of wine quality and characteristics, are important components characterizing this cultural background. Hence, they should be taken into account when attempting any identification of wine consumption pattern, as the intensity of the consumers’ responses to price variations are likely to vary according to the consumer’s cultural approach towards wine drinking (Demossier, 2010; Gual & Colom, 1997; Hall et. al., 1997; Ritchie, 2007).

For instance, considering wine amateurs or consumers having some oenological knowledge, a decrease in price might not lead to an increase of the consumption, but to higher quality purchases (substitution), or simply to pocket the reduction in prices.

Wine culture can be outlined by several types of consumption habits, from a tradition of regular wine drinking during meals, binge-drinking, the importance of other alcohol beverages, and the type of social drinking (after-work drinking in pubs in UK and Ireland, bistros in France, etc.). The extent of conformity to religious prescriptions towards alcohol may also represent an important cultural component. Youth education towards wine drinking and alcohol-related problems is also expected to be influenced by this general wine culture, emphasizing the importance of responsible drinking, inculturating at an early age the distinction between tasting and drinking, and placing wine consumption into a broader gastronomic and historical context. Hence, results focusing on one country cannot necessarily be generalized to others.

As some stylized facts, we can consider the correlation coefficients between the price of wine and other variables across a set of countries shown in Table 1. As expected, there is a negative correlation between price and consumption. However, this correlation is much lower when Central and Eastern European (CEE) countries are excluded. For the relation between prices and road traffic accidents involving alcohol, the coefficient correlation for Europe is positive, as expected, but again much lower when CEE countries are omitted. This tends to show that consumption patterns in Western European countries are somewhat less influenced by the average level of price. However, the relation between price and accidents becomes negative for all countries, contrary to the expectation that higher prices will lead to lower consumption level and, therefore, lower accidents. Again, the correlation between price and alcoholic psychosis incidences has a negative coefficient in all cases.

<table>
<thead>
<tr>
<th>Table 1: Correlation coefficient: relationship between price of wine and effects</th>
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<tr>
<td><strong>All countries (world)</strong></td>
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<tr>
<td>Price-Consumption</td>
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<td>Price-Psychosis</td>
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<td>Price-Road accidents</td>
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- Price: Average prices of a 750 mls bottle of table wine, deflated using the Big Mac Index (in US$ - 2008).
- Consumption: Recorded adult (15+ years) per capita consumption of wine (in litres of pure alcohol) in 2008
- Psychosis: Alcoholic psychosis incidence per 100,000 persons, in 2006
- Road accidents: Road traffic accidents involving alcohol, per 100,000, annual average 2006-2009.

Source: World Health Organization

Likewise the above European evidence, we expect to observe heterogeneous patterns of consumption also across US, our present field of interest, depending on the State’s culture towards wine. In detail, this paper aims to test the hypotheses that culture is a moderating factor in the relationship between the price and the consumption of wine, and between the price of wine and alcohol-related problems. We focus on wine assuming that it, among all types of alcohols, is probably the beverage most related to culture at international level.

Based on the methodology used in prior studies, and using panel data for American States, we estimate two relationships: the price elasticity for wine consumption and the effect of price variations on alcohol-related problems. Taking into account variables measuring...
culture is quite tricky. Hofstede’s cultural scores are wildly used in studies investigating cultural differences, but these indexes are weakly related to wine culture. Instead, we rely on two approaches. First, we make use of the fixed effect estimator in the State dimension. The fixed effect estimator will capture consumption behaviors that are constant in time, and therefore that should not be affected by price variations. Since a State general culture does not evolve much in a short period, the fixed effect will take into account this cultural component, bringing forth a novel interpretation of the fixed effects in the context of estimating wine consumption patterns. Second, we include in the econometric regressions some variables that might characterize the State culture and knowledge towards wine. The past level of wine consumption per capita, a dummy variable indicating if the State is a major producer of wine, the share of immigrants coming from wine producing countries, weather characteristics, etc.

Data on the price of wine across American States from 1990 to 2009 are taken from the Cost of living Index compiled by the Council for Community and Economic Research (C2ER), while data on consumption and alcohol-related problems are provided by the National Institute on Alcohol Abuse and Alcoholism.

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**Abstract**

The main purpose of this research is to use the Best-Worst Scaling (BWS) approach as an alternative/most appropriate method in segmenting wine consumers for the Greek case. Also, a comparison of the obtained results with results from other studies for 11 wine consuming/producing countries will help understand Greece’s position in the global wine market.

Research on segmentation is heavily focused on surveys used to measure buyers’ attitudes towards various products, promotions, or practices. There is a hidden assumption that the numeric methods used in this kind of researches, produce reliable and valid measurements, which can then be used for comparing different countries and draw conclusions based on them. However, in reality there are several reasons why much of marketing measurement is not accurate and the conclusions based on unreliable measurements.

The current research addresses some of these problematic issues and uses a different methodology to segment Greek wine consumers that overcomes this problem. The empirical methodology used in the statistical analysis involves exploratory factor analysis and cluster analysis. The BWS method used here is similar to that used from the Australian Grape and Wine Research and Development Corporation (AGWRDC). The obtained results are then compared among 11 countries that were examined from previous similar empirical research.

The paper reveals the main reasons that drive consumers to buy wine and compares them among a set of different countries, yielding some useful results for policy makers, researchers and stakeholders that deal with the Greek wine market.

**Keywords:** Segmentation, Greek Wine Consumers, Best-Worst Scaling Method

**JEL-Code:** L66
A Comparative Study of Demand for Local and Foreign Wines in Bulgaria
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We use a semantic differential based instrument to assess the main factors in wine demand attitudes of Bulgarian customers. We aim to find out whether specific marketing techniques could alter the demand for such a traditional product as wine in Bulgaria.

Given the fact that Bulgarian customers only recently received the possibility to taste imported wines, we find that foreign wines are evaluated mainly through the prejudice of past knowledge, not linked to the actual product. We discover a rigidity in such a prejudice and, adhering to "standard" definitions of "prestige" and quality of wines. Most likely the demand for wine in Bulgaria will continue to be focused on local products.

Keywords: Demand for wine, Semantic differential, Bulgarian wines

JEL Code: D12, M31, Q17
History and Rational Market Values of French Vineyards,
Optimal Financing of the Vineyard in the Major Countries of the Euro Zone
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Abstract

The article [Dallot, Bulletin de l'OIV avril 2013] supported the assumption – backed up by the data for 2010 – that mature vineyards’ market value (demand wise) for Champagne, Bourgogne and Bordeaux wines tended toward its embedded value (close to a 1 to 1 ratio), whereas other vineyards’ market value turned out to be substantially lower than its embedded value, with a ratio that ranged from 1-2 to 1-14.

The first part of today’s article highlights the same type of experience with the observation period being extended to these last 22 years – the objective is to put the said hypothesis to the test by comparing the different French vineyards’ market value with its embedded value. What clearly comes out of it is the explicit confirmation of the theory that had been established according to the figures for 2010. The notion of “embedded value” applied to vineyards is thus put into perspective by proving it reflects the vineyards’ “maximum and reasonable value”. It is also proven that a vineyard’s embedded value tends to equal its limit value, which put the stress on the two main variables of such a value. One is endogenous (average per hectare results) while the other is exogenous as it depends on the national and the international macroeconomic situation (interest rate i).

The confirmation of this theory brings about the second part of today’s article which deals with one derived aspect that matters to wine markers: that is, the financing of the vineyard whether it be loan-assisted or not.

The result – as important as it is to wine markers – turns out to be paradoxical:

*The best moment to fund a vineyard (with or without a loan) whose market value bends toward its embedded value is when interest rates at a peak.*

The third part of the articles focuses on one of the two key variables of the embedded value: that is, interest rates and their fluctuation. A major attention will be paid to the evolution of these interest rates inside the eurozone where 4 out of the World’s 10 biggest wine producing countries are located (Italy, Germany, France and Spain). Interest rates in the main wine making countries of the eurozone that were observed from 1999 to 2007 abruptly skyrocketed as a result of the 2007 subprime crisis, with a ratio ranging 1 to 2 to 1 to 10.

Keywords: mature vineyard, vineyards’ embedded value and vineyards’ market value, financing of the vineyard, interest rates

Prospect (Perspective) of a Strategic Option of Developing and Boosting the Algerian Vineyard
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Abstract

Since the 1970s, the sector vitivinicole underwent transfers (transformations), new strategic glance of this speculation to be repositioned for a better contribution on the national level and that international.

It is about a work of land registry to update and see again (revise) the arrangements (developments) of the plate on a potential exist around 100.000 ha and among which of the disturbances at the level of her(it) under sector(network) vineyard(vine) of tank to allow to reactivate the zones of naming which are among 07 and which underwent a recording with the WIPO.

Also, It is a question of keeping (guarding) the component varieties existence and of making alterations (retouch) on the subject considering the ethnic niches which are familiarized and estimate (appreciate) by this population.

To develop the dessert grapes the opportunities of which are favorable for the export (premature or late season).

Keywords: positioning, contribution, development, appellation, registers with the land registry
Wine as a Cultural Good: Stakes of a Recognition

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Abstract

Land of wine tradition, France is the scene of recurrent law proposals suggesting to associate wine with the concept of cultural and gastronomic heritage. Such an institutional validation could have a direct consequence: wine would become a cultural good, probably submitted to "exception culturelle". Several examples confirm relevance of that topic. Since 2003, a Spanish law states wine and vine are linked together with Spanish culture. So the question has been already decided in Spain: wine is a cultural good there. Further the "gastronomic meal of the French" was registered by the UNESCO in Nov. 2010 into the intangible cultural heritage list. The text dealing with the reasons of the registration underlines wine as a component of the French meal and sanctions explicitly the art of well-drinking and also the relevant marriage between meals and wines as decisive criteria. Moreover, the registration of vineyard landscapes to the same intangible cultural heritage list (e.g. Jurisdiction of Saint-Emilion (France), Alto Douro wine region (Portugal)) emphasises how wine and culture look embedded. Therefore exploring involvements of the recognition of the cultural dimension of wine is not devoid of interest.

If the idea contents immediate and future stakes, it nevertheless evocates a very old past: Noah, the famous patriarch, has legated to us not only the wine, but also a certain conception of heritage. In fact, the Ark event allows seeing heritage as a kind of testimony which the present generation tries to preserve and transmit to future ones. Therefore, after more than seven thousand years, we have to examine the link between wine and cultural heritage and to look for economical, sociological, legal and political stakes of such an association of ideas, in France indeed, but also around the world.

Consequently, determining and carrying out a cultural heritage around wine could be a means to resist to wine globalization by reinforcing identity and differentiation between products. Globalization, leading for some authors to "Mcdonaldisation", "cocacolanisation" and especially for wines to "parkerisation", expresses a general trend entailing standardization of products and behaviours. In reaction to globalisation in 2006 French Parliament raised the foie gras to the range of cultural gastronomic French products. The law proposals concerning wine and cited above are based upon the same logic and corroborate -among other things-that today taste is no longer aside from "noble" senses as hearing or sight, but may join the cultural area.

What are the involvements of recognizing to wine a cultural dimension? Why such a statute should be given to wine? Should we assign this statute to all wines without making a distinction or should we institute discrimination between vine products and, in this case, what kind of distinctions would it be? Questions are numerous and domains involved are transverse.

This paper aims to show that the question is not only to honour wine as a cultural good, but to protect a certain kind of wines, say those endowed with a label of origin (appellation d’origine contrôlée). By giving them a cultural dimension, one attaches them to heritage and then protects them from standardized wines. As a matter of fact, business...

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Abstract

One of the most important attributes associated to red wine quality is astringency. The perception of this stimulus depends mainly on the interaction between the wine tannins and salivary proteins. The astringency produces a sensation of dryness and contraction of the mucus. Regarding the antoncianos, there are few studies of its influence on the perception of astringency and bitter taste, these indicate that they have a direct effect. However, as the anthocyanins interact with tannins and other co-pigmentation reactions leading to complex pigmented, presumably to reduce the perception of astringency of red wines in an indirect way.

This study evaluated the influence of anthocyanins in the precipitation of salivary proteins by condensed tannins. Diffusion assays were used and protein precipitation on cellulose membranes. Besides sensory tests with a trained panel, were carried out with "time intensity" methodology; the intensity and time of perceived astringency in wines was determined with different concentrations of anthocyanins. It was observed a clear tendency in the reduction of protein precipitation in aqueous solution by increasing the concentration of anthocyanins. Also, it was showed a decrease of astringency perception by the presence of anthocyanins in red wines.

Keywords: Flavanols; Salivary proteins; Precipitation and Diffusion; Sensory evaluation
We use the Heckman (1979) selection model, where the possibility of such certain extent defines the total compensation associated to the land block. Labor Contracts. The Journal of Political Economy, 89(5), pp.841–864.


We estimate that the qualitative performance of land plots, thus grower’s effort, is going to be dependent of their initial choice of contract. We test the efficiency of such a mechanism on a wine cooperative’s traceability database or, more precisely, on information regarding land blocks from the 2008 harvest. Our results confirms that the tournament mechanism built by the cooperative aims at achieving two objectives: (i) providing incentives in presence of common shock that may affect all the growers; (ii) reducing the heterogeneity among the growers embedded in the same contest that may reduce the incentives provided by the tournament compensation scheme.

Keywords: Wine grape supply contracts, quality, tournament, cooperative

JEL-Code: L14, D82, Q13

References


Enometrics XXI

Interest of Italian Consumers for a Sustainable Wine
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Abstract

In recent years farmers and producers seem interested and involved in changing wine production towards a more sustainable way. Although not considered as dirty as other sectors, the wine business has been increasingly driven by several factors to assess and reduce the impacts of their products on the environment. This interest for sustainability has arisen particularly in Countries belonging to the New Wine World - Australia, New Zealand and California, but Italy has now also stepped up to the challenge: the most consistent sign of interest for sustainability in the wine sector in Italy can be considered the wide range of sustainability programs launched in recent years by private producers and consortiums. Although the big interest shown by the Italian wine sector towards sustainability, few studies have been conducted about consumer perception and the possible market for sustainable wine.

The purpose of this paper is twofold: first of all, to understand consumers’ interest for sustainable wine; secondly, to explore their perception about a sustainability label and/or certification. The impact of communicating sustainability, indeed, is still not really clear, particularly for what concern the wine sector. Episodes of wineries committed in sustainability but refusing to put the certification seal on their bottles have been noticed, due to their fear of consumers’ negative perception of sustainability as negative impacting on the quality and/or safety of the products. Hence, in this study, consumers’ interest for a label and its effects on the product’s quality and safety have been also explored.

Methodology: A web-based survey was used in order to collect answers and to ensure a good spread of the questionnaire. The questionnaire was composed by 18 questions, divided in three sections: a first one aimed to define the profile of our respondents according to their beliefs on topics as environment protection, life style etc. The second one was dedicated to the sustainability label (perception and interest in), and the final part to the socio-demographic aspects. A short introduction, at the beginning of the survey, explained very briefly the object of the questionnaire and the definition of “Sustainable Development” (definition provided by the World Commission on Environment and Development in 1987). A qualifying question was used to ensure that all the respondents use to drink wine: people answering they never consume wine were redirected to the end of questionnaire. Data were collected from more than 500 wine drinkers in Italy, from different areas and background (age, education, sex, etc.). Respondents indicated their level of agreement with each of the statement presented in the questionnaire.

Results: the frequency analysis has revealed first of all that consumers believe that nowadays information about the sustainability and the impact of the food they purchase are still not available. Focusing on wine, they have a good perception of environmental labels and they would like to see a sustainability label on a bottle of wine. According to the results, this label could be useful to enhance their awareness about the topic of sustainable development in the wine sector and it could be also useful to make sustainability become a more influencing parameter on the choice of a wine. Consumers also feel confident about their
understanding and comprehension about the label, and finally they would be available to pay a higher price for a label with a sustainability certification provided by the third party in which they trust more (Research Center, University, Trade Association, Public Institution, etc.). Finally, with the use of a logit regression model, it has been seen that being female and with a high education background increase the probability of buying a sustainable labelled wine. However, it is necessary to consider that a sustainability label is not perceived as a warranty for food safety and quality. This is coherent with a part of the literature, and suggest us that communication strategies of sustainability should be properly studied in order to convey the correct messages to the final consumers.

Conclusions: the presence of sustainability labels on food, particularly on wine, is still quite unclear. This study would like to offer a contribute to better understand the perception of sustainability label applied on wine from Italian consumers and the results could be useful to wineries and farmers committed in sustainability programs, suggesting them possible communication strategies, particularly through the adoption of sustainability labels and certifications.

Keywords: Sustainability; Wine; Consumers’ attitude; Logit model

Institutional Drives of the Success of the New Wine World
Factors Influencing Technical Efficiency of Wine Production and its Relation with Wine Exports Growth
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Abstract

The emergence of the New Wine World wine producing countries in the recent 15-20 years rearranged the market situation to a great extent. These countries have dramatically increased their exports and their market share in European markets.

Previously, we have found evidence that that there is a significant difference between main Old and New Wine World states in terms of technical efficiency. Here, we show that this factor can really be a drive of the success described above as there is a significant relation between technical inefficiency and the evolution of wine exports.

We extended our previous investigation to a panel of 21 countries over the period of 1995-2007, including 14 countries of the Old and 7 of the New Wine World. We have considered a country to be main wine producing one if the average annual wine production was more than 1 million hectolitres during the first decade of the new Millennium. Due to lack of data, two countries were excluded from the sample.

We used a two stage investigation to estimate the technical inefficiency and to reveal its relation to certain instrumental factors. In the first stage we applied panel data stochastic frontier analysis based on a Cobb-Douglas production function by regressing wine production against three inputs: land (area of vineyards), capital (agricultural capital stock) and labour force (employment in agriculture). The sources of data were statistics of the FAO, the OIV (International Organisation of Vine and Wine) and the World Bank. We used agricultural capital stock and agricultural employment as proxies for capital stock and employment in the wine sector as more detailed data were not available.

Assuming a half normal distribution for the inefficiency term, our stochastic frontier model showed robust results. The estimation of the inefficiency terms verified our assumption on the nature of half normal scattering.

The results show that the quantity of wine production is in significant and positive relation with the surface of vineyards and capital stock. However, the relation between the production and employment is negative. Hence we think that this input was probably not used in an efficient way.
An Analysis of Alcohol Demands in Japan

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Abstract

This paper examines the alcohol beverage demand systems in Japan utilising data from 1948 to 2011. The previous study on alcohol tax policy suggests significant effects of tax on production and consumption of alcoholic beverages. At the same time, it was suggest that income and price elasticities of demand likely vary with alcohol types. As liquor tax as well as sales tax is currently invisible to consumers, being already inclusive in the price of alcohols, we investigate the impact of price change on alcohol expenditures. In particular, the expenditure and price elasticities of demand for alcoholic beverages is estimated applying double-log and demand system equations (AIDS and its several variants) for five alcoholic beverage types, with annual household expenditure data available for 1963-2011. The results suggest that all alcoholic beverages, except for shōchu, are normal goods with positive expenditure elasticities. Although the results suggest that shōchu may be the safest taxable subject in a Ramsey sense, the own-price elasticity estimates provide less coherent results depending on the model applied.

Wine and Women: A Focus on Feminine Consumption of Wine

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Introduction

Continuous evolution of modern society provides changes in lifestyle and consumption habits, consequently reflecting on food consumption, where we can include the wine.

In this context, even for wine there have been changes from the past to today, driving more and more consumers to think about this product less and less as a beverage and an more as a hedonistic and refined product. Relationship with wine changed also at generational and social level and women become interested and passionate consumers, aware of its quality; often also with a great role in the wine world choosing jobs like wine-sellers, producers, sommeliers or oenologist.

Wine by the feminine side means the pleasure of enjoying in a conscious way and to get to know its characteristics and match them correctly to the food. Women appreciate and consume wines with a different attitude from that of men: more attention to details, matching with food and locations.

Object

The aim of this paper is to study the characteristics of feminine consumption of wine, highlighting preferred types of wine (white, red or sparkling wine), the most popular varieties and labels considered more attractive in the choice of a wine. In addition, considering that the training and knowledge about the wines could lead to more conscious preferences, we wanted to measure, also, the level of information about wines of women interviewed and compare the differences in opinions between women expert in wines and other less experienced.

Materials and Methods

We have preliminarily stratified female consumers of wine depending on age, income and employment, and we subsequently extracted (using a rational-stratified sampling with random selection from each stratum), a sample of 100 female consumers in Sicily (Southern Italy) to whom we asked to complete a questionnaire. The questionnaire was structured into several sections, with closed-ended questions, in order to learn about aspects related to feminine purchase and consumption habits, sociological characteristics, willingness to pay (hedonic prices), motivational and emotional factors in purchasing process and knowledge about wines (information and awareness).

Results and discussion

The results show what is now the current development trend of wine consumption in the world of women. Women of a more mature age are "frequent consumers" and prefer to drink wine daily with meals, while younger generations are more likely to occasional consumption linked to
particular events and prefer to drink wine in wine-bar or lounge-bar. For all age strata, unlike what we have always believed, women prefer red wine to white wines, full-bodied and structured wines, with a particular penchant for local varieties. In all strata, homogeneous for age, income and occupation, we observed different behavior and preferences depending on the level of knowledge about wines of respondents. It highlighted that consumers make different choices (as regards of type of wine, white or red, variety, price paid, etc.) according to their level of information about wines. A higher culture and information drives preferences towards high-quality wines, while label design or lower prices become less important.

**Conclusion**

For the same favorites grape varieties or types of wine, quality is overall the factor with the most higher influence on preferences for women with a medium-high culture about wines, followed by the visual appearance of labels. While, the first motivation, for the less informed female consumers, is mainly price, followed by labels. The brand name or reputation of the winery or producer are other factors affecting the choice of buying, but these are related to a prior tasting of the product and a careful evaluation of the information shown in labels, considered very important.

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A SPECIAL Thanks to our Partners for Providing Support to this Event

VDQS

The VDQS [Vineyard Data Quantification Society] founded in 1991, is a non profit association to:
- promote the exchange of research in theoretical and applied enometrics
- promote relationships between its members
- encourage teaching and research
- establish contacts with individuals and groups who have similar interests

The Association wishes to gather all the European specialists, and the world’s best specialists about wine. It also host economist, statisticians, econometricians, lawyers (wine & law) and physicians (health & wine) into its ranks as well as geographers, historians, and of course wine lovers ...

The European Association of Wine Economists – EuAWE is our main department.

The Association has expanded (in 2005) its activities to gastronomy with a new department the "Society for Quantification in Gastronomy" - SQG

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