Insights from a Google Keywords Analysis about Italian Wine in the US Market

Patrizia de Luca, Giovanna Pegan and Carlos Gonzalo-Penela

Abstract

The international wine industry is characterized by the traditional presence of the old-world wineries and the innovative eruption of new producing countries. Further, the new Industry 4.0 paradigm, with digitization, big data analytics, and so on, is heavily influencing the wine business. Within this new competitive framework, gaining an understanding of online search behavior is becoming a critical challenge for the world's wine industry. Consumers search for information mainly through online search engines such as Google. Therefore, in the wine industry, there is a growing interest in utilizing user-generated data to gain insights into consumer behavior. Further, big data analytics could provide opportunities to develop new knowledge to reshape our understanding of the field and to support decision making in the wine industry. Even though the internet has a great impact on information search behavior, several aspects of online user and consumer search are not yet clear and need further investigation. In order to fill the gap, the aim of this work is to describe and analyze online search for Italian wines by examining user-generated data in the US, the world's largest wine market. Our first results from a qualitative research depict the scenario for the top Italian wines, Prosecco and Moscato, in comparison with the top French and Spanish wines (Champagne and Cava), in the US online

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market, by pointing out to their low visibility from a competitive perspective. Therefore, investment in customer knowledge, by utilizing user-generated data and organic keywords, could be relevant for wineries that need insights into consumer behavior.

Keywords: Wine, US, Google, keywords analysis, user intent.

1. Introduction

Connectivity is the biggest revolution in marketing history (Kotler *et al.*, 2017), and its global diffusion has resulted in an increase in the number of users every day. In 2017, internet users comprised over 50% (4,021 billion) of the world population of over 7.5 trillion, with the penetration rates differing across the many available media (internet, mobile, and social media) and different countries. China ranks first (751 million users, 19%), and is followed by Europe (674 million users, 17%) and the US (287 million users, 7%). Italy (43 million users) accounts for 1% of the total users over the world (WeAreSocial and Hootsuite, 2018). These countries occupy the same relative positions with regard to the number of active social media users, unique mobile users, and active mobile social users (WeAreSocial and Hootsuite, 2018). The technological developments in the field of connectivity has also led to the rapid development of online channels for the purchase of products. Such online channels have created a new and complex customer experience wherein the customer can interact with an integrated system, by means of omnichannel logic, to search for information, find solutions, converse, buy, and comment (Brynjolfsson *et al.*, 2013; Gao and Su, 2017; Ups, 2016).

Recently, the concept of inbound marketing (Halligan and Shah, 2009) was proposed, according to which the aim of marketing should be to gain the interest of potential customers and draw them to the company website, rather than to send out communication to customers and wait for their reaction. Obviously, multiple online channels, such as search engines and social media, have become relevant with regard to gaining the attention of potential customers. However, even though the internet has a great impact on information search behavior, several aspects of online consumer behavior are not yet clear and need further investigation in different industries and markets (Huang *et al.*, 2009; Lemon and Verhoef, 2016; Peterson and Merino, 2003). One such industry that is not studied well in this regard is the Italian wine sector in an international context.

In the international wine industry, currently, there is a juxtaposition of the traditional presence of the old-world wineries and the innovative eruption of new producing countries. These new countries employ innovative strategies in production and marketing that allow them to gain a growing global market share (Maizza *et al.*, 2017; Orth *et al.*, 2007). Understanding online behavior is becoming a critical challenge, especially for traditional players such as Italy, France and Spain that are historically linked to wine production (Cavallo *et al.*, 2016; Dolan *et al.*, 2017; Fuentes Fernàndez *et al.*, 2017; Gebauer and Ginsburg, 2010; Paiano *et al.*, 2013; Scorrano *et al.*, 2015; Szolnoki *et al.*, 2014). Therefore, in the wine industry, there is growing interest in utilizing user-generated data to gain insights into consumer behavior; further, big data analytics has created numerous opportunities to develop new knowledge to re-shape our understanding of the field and to support decision making (Manhika *et al.*, 2011; Mayer-Schonberger and Cukier, 2013). The wine sector is one of the leading branches of the Italian and European food and beverage industry (Federalimentare, 2016). The recent international crisis and growing competitive pressures have led small-medium wineries to invest in customer knowledge, by utilizing user-generated data to obtain insights into consumer behavior. In fact, the underestimation of big data could lead to the erosion of competitive advantages in the case of the Italian and European wine industry.

In this work[1], we try to contribute to knowledge about wine users in a particular geographic area through an analysis of the users' search. The aim is to analyze online searches for Italian wine by examining user-generated data in the US, the world's largest wine market, in order to create new knowledge and to support content marketing and digital strategy decisions of Italian wineries.

2. Background

2.1. Italian wine from a global perspective

In 2017, Italy maintained its international production record (42.5 million hectoliters), which placed it ahead of France and Spain. How-

ever, the sector is fragmented, with about 46 thousand wineries (Ismea, 2018).

As regards exports (Ismea, 2018), Italy is the second largest wine exporting country in the world, concerning to both value (after France) and quantity (after Spain). As regards import markets (Ismea, 2018), Italy ranks first in volume in US, Germany, UK, Swiss, and Canada, and it ranks first in value in Germany, Russia, and Swiss; it ranks second in volume in Russia and second in value in the UK and US; it ranks third in volume and value in Japan; and it ranks fifth in volume and value in China.

Despite its international ranking and significant growth in exports (Ismea, 2018), many companies in the sector, as well as most of the SMEs in the Italian agri-food industry, are not adequately structured. Further, although many promising online initiatives have been undertaken in this sector, some studies have shown that the strategies used by these companies are oriented mainly towards communication rather than online shopping (Carlucci *et al.*, 2014; Fritz *et al.*, 2009). Currently, 50% of Italian companies sell their wines online, directly or through specialized sites, and another 17% intend to use this channel in the coming years. However, wine purchase through e-commerce channels is low within the Italian market, with only 2% of wine purchases being made online. In comparison, it is over 10% in France and the UK, and over 20% in China. However, there has been a rapid growth in online wine sales in Italy (Food, 2018).

A recent research (3rdplace, 2017) has highlighted that the Italian wine is very competitive abroad, and although the degree of knowledge of Italian wine is medium-low, the perception of Italian wine is positive[2]. Over a million digital contents in English speak of wine, but only 66,875 (7%) mention wine made in Italy, with 68% of the contents being positive. The four Italian wines most cited by foreigners online are Prosecco (Veneto), Barolo (Piedmont), Chianti (Tuscany), and Franciacorta (Lombardy). Even if Italian wine is well known, on the major e-commerce platforms in the US, it today covers only 1% of the total wine supply. Italian wine is particularly associated with experience, emotion, history and a model of life that is frequently emulated abroad. In relation to the price ranges that are considered, it appears that over

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[2] These findings are based on scores assigned as follows: the awareness score (degree of awareness on the internet about brand/product/service), the competition score (level of competition in the network about a brand/product/service) and the social reputation score (perception of online users about a brand/product/service).

70% of the mentions refer to a «high» price range, which testifies to the preference for quality products.

Some factors that limit online penetration of Italian wines are the inability to properly use online commercial channels, communication difficulties, legal complexities, and product characteristics (Politecnico Milano and Osservatori.net, 2017). In the age of connectivity, the absence of an online presence could lead to loss of competitiveness. The first step towards improving the ability of Italian wine producers to use online channels would be to gain a deep understanding of online research by consumers.

2.2. Wine consumers: What they search for online and why

Online channels shorten the distance between supply and demand, but it is necessary for suppliers to be present online in an appropriate manner. This requires a new analysis and a re-interpretation of the process of marketing. Today, the release of web 4.0 (Kotler *et al.*, 2017) has led to increasing levels of interaction between sites and users, through blog, forums, wikis, chats, sharing platforms, social networks, and so on. Therefore, the process that customers go through during the evaluation of a product/brand must be rethought. There are various elements in play, such as co-production by the client, the word-by-word, and the new role of virtual communities, among other things. Customers actively connect to each other by building ask-and-advocate relationships (Kaplan and Haenlein, 2012). As a result, the internet has now gained new and different dimensions. On the one hand, it is a huge tank, for customers and companies, from which to draw data and information. On the other hand, the internet is also a space within which one can interact and communicate, even in real time, with other users. The «tank» function of the internet is further enhanced by its interactive function, as the data and information exchanged online by subjects who comment, ask, judge, interact, and leave other traces are now available online for others to peruse. The focus of the present study is on the function of the internet as a tank.

Today, in the internet, we do not search directly, through the URL identifying the site, but mainly through search engines, which become the main tool with which you question the network (Nielsen and Loranger, 2006) and the main sources of traffic for web sites (Jerath *et al.*, 2014; Netmarketshare, 2016). In this context, «tagging» – attributing labels, i.e., keywords, to identify the contents – becomes a fundamental function. The ability to search with the use of keywords, regardless

of the skills possessed by the searcher, has made the internet the most widespread and relevant knowledge tool. From a managerial perspective, a company's success depends heavily on online search, through specific keywords, and on search results that can reflect how effective its website is (Chen *et al*., 2009). The type and amount of data have been growing speedily, as has the emergence of new services (internet of things, social networks, etc.). In this new era, companies have to develop skills to analyze and manage effectively the big amount of information. While companies born digital are already prepared, traditional companies, such as Italian wine SMEs, have to learn how they can gain a competitive advantage from big data (McAfee and Brynjolfsson, 2012).

According to the inbound marketing concept (Halligan and Shah, 2014), it is important to arouse the interest of users and draw them to the company website. This requires the development of high-quality content that has to made available and shared through multiple online channels. Search engines come into play here, as they fulfill the important function of intercepting the searches of potential customers and capturing their attention. Obviously, it is essential to understand the various steps that make up the online customer journey (Lemon and Verhoef, 2016). What do online customers look for? Why and how do they look for it?

In the era of connectivity, data exists, but often, it is not easy to understand. In order to understand the online behavior of users, we should begin by considering the difference between conscious and unconscious search queries. A conscious query is made by an internet user who, in the face of a given problem, seeks a solution on the search engine, irrespective of whether they have knowledge of the products or services of a company. For example, if you want to buy a bottle of wine to give away on a particular occasion (problem), you go on Google to look for the various solutions, you inform yourself, you read customer reviews, you make comparisons between brands and models, and so on. On the other hand, an unconscious question is typically posed by a user who is not seeking a solution to a current problem, but who may have a problem that they are not aware of now but could become aware of at a later time (more or less distant), in the face of new knowledge (which transforms the question from unaware to aware) acquired online without looking for it. For example, on reading an article on wine in antiquity, a user discovers that there is a wine still produced with those ancient techniques, of which they had no knowledge, and he/she then starts seeking consciously first general information and then specific product information. A conscious search query can be intercepted

TABLE 1. *Classification of search intent*

Search intent	Short description of user goal	Examples
Informational	To learn something by reading or viewing web pages	Data, text, documents, multimedia
Navigational	To go to a specific known website	Web page, site or hub site
Transactional	To obtain some specific products or services	Purchase of a product, execution of an online application, downloading multimedia

Source: Adapted from Rose and Levinsson (2004) and Jansen *et al.* (2008).

mainly with search engines (e.g., Google), where it generally starts with a more or less formalized problem or question, while an unconscious query can be more frequently intercepted through social networks (e.g., Facebook), where the interaction between users can highlight unexpected information.

Some studies have proposed a classification of online user intent with regard to web queries (Broder, 2002; Gonzalo-Penela *et al.*, 2015; Jansen *et al.*, 2008; Rose and Levinson, 2004). User intent can be defined as «the affective, cognitive, or situational goal as expressed in an interaction with a web search engine» (Jansen *et al.*, 2008, p. 1255). Here, an intent is similar to a goal, but it is concerned with «how the goal is expressed because the expression determines what type of resource the user desires in order to address their overall goal». In other words, «user expressions to an information searching system are based on affective, cognitive, or situational strata» (Jansen *et al.*, 2008, p. 1255). The query becomes a key component of the expression of intent, that is, an external representation of the need (Pirolli, 2007). It can be said that «web searches reflect a diverse set of underlying user goals» (Rose and Levinson, 2004, p. 13). Based on these previous studies, search intent can be classified as: informational intent, navigational intent, and transactional intent (Table 1).

The aim of a user with informational intent is to locate contents regarding a specific topic in order to address an information need, which could be very precise or very vague. The goal of the user in this case is to learn something by reading or viewing web pages, with the help of their data, texts, documents and multimedia content. Navigational intent refers to the aim to reach a website (a specific web page, site or a hub site). The user may search for a specific website or may simply think that a particular website exists. Transactional intent refers to the goal of using a website to perform a web-mediated activity (purchasing, downloading, playing, etc.).

In order to understand user intent, it is necessary to analyze the keywords with which users try to identify problems and their solutions online. At this stage, several tools can be used (Google Trends, Semrush, AdWords, Keyword.io and so on). The starting point is always the list of words that identify categories of problems or needs and products (goods or services) useful for the purpose. To understand user intent, it is therefore necessary to consider search engine results pages (SERPs). By observing them, in addition to user intent, you can identify the type of content that best meets the needs of the user (text, images, videos, infographics, etc.) and areas not yet covered by the online offer.

In this context, how can knowledge of online customer search be improved in a way that is useful to Italian wine producers? Here, we present insights from a Google keywords analysis.

3. Aims and methods

As mentioned earlier, the US is the world's largest wine market; it is particularly relevant for Italy, as it is the biggest importer in terms of volume and the second one in terms of value (Ismea, 2018). Further, a study on the US wine market (Scorrano *et al.*, 2015) revealed that US consumers had good knowledge of international grape varieties. In the US market also Italian wine is well known. Despite this, Italian wine sales account for only 1% of the total wine sales online in the US (3rd-place, 2017). In order to improve knowledge about and to support the content and inbound marketing of Italian wineries, the purpose of this work is to analyze online searches related to Italian wine by examining user-generated data in the US. To this end, we focus on wine-related information with an explorative and descriptive intent, and propose the following research questions:

- What can user-generated search data tell us about the US wine market?
- How can we interpret Google keywords in order to understand user intent in the US wine market?
- What can the internet tell us about the visibility of Italian wines in the US wine market?

We used a descriptive research approach in order to understand the configurations of online searches for wine-related information in the US. We used the digital methods approach (Rogers, 2015), and data obtained from various search engine optimization (SEO) tools, which

mainly included Google Trends, Google AdWords and Sistrix. Google Trends provides trends on keywords search from January 2004 to the present. This tool is usually used to view long-, medium-, and short-term evolution keywords. Google AdWords provides keywords search statistics for searches over the last 12 months at the national or international level for both general and specific topics. Sistrix offers website visibility reports based on organic keywords, which are the terms that people type into Google in order to find information and solutions to their problems. This tool queries and saves more than 15 million keywords in different Google indexes every week. Its reports list website rankings for these keywords and their evolution.

We considered users' search queries on Google during 2016 in the US, highlighting and analyzing the popular keywords[3]. We developed a research process through three phases (Gonzalo-Penela *et al.*, 2017).

In the first phase, we extracted wine-related search keywords used by US users and their corresponding frequency from the Keyword Planner Tool of Google AdWords. Keyword extraction starts from one or several seed keywords. The main seed keyword was «Wine», which threw up to 800 related terms. However, in order to gather as many more related keywords as possible, we continued using different related seed keywords. In several subsequent iterations, we added Italian wine and its main competitors in Europe, such as Spanish and French wine. Once the combinations of «wine» and «origin» had been exhausted, we expanded the extraction by using as seed, specific names of «grapes» and «denominations of origin» of the three countries, and finally, «complementary goods» associated with wine consumption.

In the second phase, we developed a qualitative content analysis in order to better understand users' search. The qualitative analysis and coding process were developed through an iterative multi-step method (multiple rounds, based on query selection, classification, and characteristics treatment), guided both by data, with an inductive approach, and by theoretical knowledge on the subject under study (Zarantonello and Luomala, 2011). The final codes were decided when inter-coder agreement was reached. Further, we classified those keywords into three classes according to user intention (navigational, informational and transactional).

At the end, in the third phase, we identified keywords that referred to a specific country of origin, which is Italy, but we also included

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[3] According to the definition of SEO, keywords are defined as words and phrases that searchers enter into search engines, also called «search queries», https://moz.com/learn/seo/what-are-keywords (accessed May 25th, 2018).

France and Spain, which are the main competitors for Italian wine in the US market. We extracted the results shown by Google US for 100 keywords for each country, analyzing the Ips of the different pages displayed in the Google result pages.

In the next section, we will synthetize the key findings obtained from these three research phases.

4. Key findings and discussion

As explained above, in order to answer to our research question, in the first phase, we focused on users' search on Google in the US. We extracted US users' wine-related search keywords and their frequency between January and December 2016, with the help of the Keyword Planner Tool, by highlighting and analyzing popular keywords. Based on the wine-related keywords entered by users, we extracted 6,011 wine-related search terms used by US users during 2016, which make up a total of 75,335,160 searches in 2016 (Table 2). In this step, we only considered the terms and the related number of searches. For example, at the top of the list is the term «champagne», with 2,255,000 searches. Next, the top search terms for Italian, French and Spanish wines were identified (Table 3). To better understand the meaning of the figures illustrated in Table 3, we analyzed the composition of the search keywords frequencies, by distinguishing between head keyword frequency (1 keyword) and long-tail keywords frequency (2 or more keywords)[4]. As shown in Table 3, «champagne» is at the top of this list, too, with a frequency of 3,158,180. Prosecco has the highest number of search keywords (How many keywords do US consumers use for searching Prosecco and related terms?). Cava has the highest percentage of searches as the head keyword (How many times was the single term «Cava» used in searching online?).

According to a study on long-tail keywords (Anderson, 2006), it is important to examine keyword demand because it may reveal the presence of a small number of queries that result in larger amounts of traffic alongside the volume of less-searched terms and phrases that could account for the majority of the search referrals (Brynjolfsson *et al.*, 2011). This is evident if we compare the findings for Prosecco and Moscato: Prosecco has the higher number of search keywords (173) but

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[4] We decided to use these numbers (1 for head and 2 or more for long-tail keywords) because the first keyword absorbs the major part of the users' searches.

TABLE 2. *The top 10 keywords for wine-related search terms extracted (US, 2016)*

Ranking	Keyword	Searches
1	Champagne	2,255,000
2	Wine	1,988,000
3	Wine and spirits	1,966,000
4	Prosecco	1,311,500
5	Moscato	1,081,000
6	Bodega	987,000
7	Wine rack	928,000
8	Pinot noir	868,500
9	Cava	751,500
10	Vineyard	701,800
...	...	...
6,011		75,335,160

TABLE 3. *An extract of the findings for the top keywords used for searching Italian, French and Spanish wines (US, 2016)*

Top Italian, French and Spanish wines keywords	No. of search keywords	Search keywords frequency	Head keyword frequency	Long-tail keywords frequency	Long-tail average
Champagne and related keywords	61	3,158,180	2,255,000 (71.4%)	903,180 (28.6%)	15,053
Prosecco and related keywords	173	1,968,576	1,311,500 (66.6%)	657,076 (33.4%)	3,820
Moscato and related keywords	18	1,866,602	1,081,000 (48.0%)	785,400 (42.0%)	46,200
Cava and related keywords	43	857,860	751,500 (87.7%)	106,360 (12.3%)	2,473

a smaller percentage of long-tail keywords (33.4%), with each of the individual keywords within the long tail having a frequency that is lower than the average frequency of long-tail keywords (3,820). On the contrary, Moscato has the higher percentage of long-tail keywords (42%), with only 18 of the individual keywords within the long tails having a frequency that is higher than the average frequency of long-tail keywords for Moscato (46,200). These results could explain the new growing trend of Moscato in the US[5].

The findings also show that searchers use a higher number of keywords when searching for Prosecco than Champagne. Further, they

[5] E.&J. Gallo Winery, one of the biggest wine companies in the US, coined the term «Moscato madness» to point out the rapid growth of this wine in the US market. In 2015, more 20 million people were buying Moscato in the country over a three-month period. Probably, this fruity grape is a gateway to wine for first-time drinkers; indeed, it is popular above all with Millennials. A recent Wine Searcher Article noted also that «the site was rather shocked to see that the year-to-date figure of 273,261 was far in advance of that for Prosecco, which has only reached 128,615 keyword searches in the same period», making Moscato the most searched sparkling wine in the world (The Drink Association, 2017).

TABLE 4. *Example of the output for keywords analysis (US, 2016)*

Ranking	Keyword	Total 2016
7	Moscato	1,081,000
25	Moscato wine	447,600
46	Moscato d'Asti	284,100
631	Moscato wine price	13,580
649	Moscato red wine	13,210
675	Moscato d'Asti wine	12,440
1,062	Vino moscato	5,570
1,454	Elio Perrone moscato	2,740
1,674	Italian moscato wine	1,980
2,155	Moscato Italian wine	1,000
2,306	Moscato wine Italy	840
2,354	Moscato wine price Walmart	790
2,920	Wine moscato price	440
3,073	Italian wine moscato	380
3,445	Moscato red wine price	270
3,873	Moscato di Scanzo	190
4,016	Moscato Italy white wine	170
5,369	Moscato giallo wine	100

use a fewer number of keywords when searching for Moscato than Prosecco, but tend to add more words (as evident from the higher percentage of long-tail keywords) when searching for the former, to specify the purpose of the online search. Table 4 illustrates an example of the output of keywords (terms or phases) for Moscato. The terms added to the head keyword tend to improve the research and pursue the intent of the users' search.

In order to understand these results in depth, in the second phase of this work, we developed a qualitative content analysis by coding the search keywords for each of the considered wines (Prosecco, Moscato, Champagne, and Cava). In particular, the content analysis was conducted on 925 search keywords through ex-ante and ex-post coding. In Table 5, we illustrate our interpretative coding scheme. After a multi-step process of coding, eight codes were agreed upon by all the authors: one code related to wine variants of the specific four categories considered; the next two codes referred to the concept of «country of origin» and to the more specific «place of origin» of the wine analyzed (e.g., Prosecco Treviso); one code was related to «brand»; three codes were related to buying intention, that is, «place of purchase», «price and delivery service», and «gift and related service».

The results of the content analysis indicated that with regard to Champagne, the top wine variety searched in the US market, the searches were mostly all related to «brand» and «gift», while the price did not seem relevant. In the case of Prosecco, keywords related to «brand» and «price and delivery service» were most searched, while

TABLE 5. *Coding and categorization of Google keywords: examples for Italian, French and Spanish top wines in the US market (2016)*

Examples of wine keywords

Codes	Italian top wines				French top wine		Spanish top wine	
	Keywords	Search frequency	Keywords	Search frequency	Keywords	Search frequency	Keywords	Search frequency
Wine variety (Head keyword)	Prosecco	1,311,500	Moscato	1,081,000	Champagne	2,255,000	Cava	751,500
Wine variants	prosecco white winewhite wine prosecco sparkling white wine prosecco red prosecco prosecco red wine	2,500	moscato red wine moscato giallo wine	13,480	–	–	cava sparkling wine brut cava cava rose cava brut champagne	35,930
Country of origin	italian prosecco italian prosecco brands best italian prosecco prosecco italy	5,130	italian moscato wine moscato italian wine italian wine moscato moscato wine italy moscato italy white wine	4,370	french champagne	23,200	spanish cava spanish cava wine spanish cava brands cava spanish sparkling wine …	8,170
Place of origin	prosecco treviso prosecco valdobbiadene colli asolani prosecco prosecco valdobbiadene migliore	3,180	Moscato dAsti moscato d'asti wine Moscato di Scanzo	296,730	–	–	–	–
Brand	Valdo prosecco Zonin prosecco DiCello prosecco Mionetto prosecco prosecco Valdo prosecco Brands	16,103	Elio Perrone Moscato	2,740	Cristal champagne Mumm champagne Taittinger champagne	200,865	–	–

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TABLE 5. *(continued)*

Examples of wine keywords

Codes	Italian top wines				French top wine		Spanish top wine	
	Keywords	Search frequency	Keywords	Search frequency	Keywords	Search frequency	Keywords	Search frequency
Place of purchase	where to buy prosecco where can i buy prosecco buy prosecco buy prosecco online prosecco buy where can I buy prosecco wine ...	3,490	moscato wine price walmart	790	buy champagne online buy champagne	7,960	buy cava	130
Price and delivery service	prosecco price prosecco wine price price of prosecco price of prosecco sparkling wine bottle of prosecco price wine prosecco price best price prosecco best prosecco prices prosecco wine price range ...	37,870	moscato wine price moscato wine price walmart wine moscato price moscato red wine price	15,080	champagne prosecco price champagne wine price	360	cava wine price cava champagne price	1,600
Gift and related service	prosecco gift basket prosecco gifts delivered prosecco delivery gift ...	1,390	–	–	champagne gifts champagne gift baskets champagne gift delivery champagne gift ideas send champagne gift	48,140	–	–

Note: For codes with a high number of keywords, we present in this table examples of keywords (we have indicated such codes with an ellipsis placed at the end of the list).

«place of origin» search terms were not as popular. With regard to Moscato, specific «place of origin» followed by «price and delivery service» were the main searches that emerged. For Cava, the keywords more frequently searched were related to «wine variants» and «country of origin». These results can indicate the relevance of price and service in queries with regard to Italian wine; further they can suggest with regard to Prosecco and Moscato, that brand and origin, respectively, seem to be important. The findings for Champagne were rather different, as the keywords seem to relate mainly to brand and gifting. Thus, it is evidently considered as a premium or luxury product, for which the price is not relevant, and for which therefore, it does not seem to be important to refine the search with other additional terms. For Cava users seem searching specific informational details, such as wine variants and country of origin.

The coding scheme developed here was in line with another classification published in the literature (Rose and Levinsson, 2004; Jansen *et al.*, 2008), which distinguished user intent as being navigational, informational or transactional[6]. In the present case, keywords related to informational intent were coded under the categories «wine variants», «country of origin», «place of origin» and «brand», and keywords related to transactional intent were coded under the categories «place of purchase», «price and delivery service», and «gift and related service». We did not identify any keywords related to navigational intent. This is an interesting finding for wineries, as it means that web users do not often search for a specific wine site, but mostly search to obtain information for purchasing purposes.

We had aimed to highlight transactional keywords for their relevant implications for decision makers, as these types of keywords allow for

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[6] The determination of the user's search intent is based on the wording and the structure of the keyword phrase used by people when they perform a search. Transactional searches contain a modifier, which indicates and supports an intent to purchase, in addition to the core keyword. For example, a keyword modifier such as «cheap», «price», «deliver», «buy», «sale», «deal», or «discount» next to a core keyword would strengthen its transactional intent. Navigational and transactional searches are categorized through specific search keywords, or «search modifiers», of each class. Navigational searches include a core keyword and terms such as «web», «website», and «official website», or letters associated with a top-level domain (Tld), in which the last segment of the domain name is «com», «net», «it», «es», or «fr». The navigational searches can also be composed of the domain name without a top-level domain suffix. In the case of the wine sector, it is possible to recognize domain names in a search query using a database of names of sectorial websites. In this case, during the SERP analysis, we developed a specific database of domain names, firstly, by isolating the websites extracted from the Google results page, and secondly, by eliminating the top-level domain.

the identification of search queries that are made closer to the time of purchase. As shown in Table 5, the codes «Place of purchase», «Price and delivery service», and «Gift and related service» reflect the transactional intent for the considered wines: indeed, they include specific search modifiers such as price, buy, gift, deliver, order, and purchase. Our analysis pointed out that for Prosecco there are 32 transactional keywords with an accumulative frequency of 42,750; for Moscato, 5 transactional keywords with an accumulative frequency of 15,870; for Champagne, 9 transactional keywords with an accumulative frequency of 56,460; for Cava, 3 transactional keywords with an accumulative frequency of 1,730.

In order to better understand the standing of the old wine world in the US online market and the competitive position of Italian wine with French and Spanish wines, we developed the third phase of this study. We identified 2,206 keywords, including European designation of origin (DO) terms with a frequency of 11,634,770: among them, Italian DO terms are the most frequent (1,232), and they are followed by French (495) and Spanish (479) DO terms. We extracted a total of 1,111 keywords that directly mention Italian (473) wine; in comparison, 323 were obtained for Spanish wine and 315 for French wine. This study additionally provides information about the visibility of European wines and vineyards in any US wine market search niche. For example, we can analyze how the European DO sites rank on Google US for any category, or which is the best site in the US to publish or sell a specific blend. In the case of keywords referring to a specific country (Italy, France, Spain), we used the results shown by Google US for the most searched 100 keywords per country. The resulting distribution of national sites based on the Ips shows that regional search results are composed mostly of US and UK sites, whereas the visibility of European sites barely reaches 3%. This finding indicates that the visibility of Italian wine sites, and also other European wine sites, is rather low (Figure 1): only 2.8% Italian websites show up in Italian wine searches; 3.3% French websites show up for French wine searches; and 2.1% Spanish websites show up for Spanish wine searches. This figure shows the countries where the web pages are hosted and displayed in the Google SERPs of the US. Google's ranking algorithm gives prominence to the pages depending on the language in which the web browser is configured and the hosting location. Therefore, for searches made from the US, Google selects pages that match the browser's language, mainly English, and pages hosted on servers in the country within the search is being made, because those pages are considered more relevant. These figures are the results of websites analysis based on the country's Ip
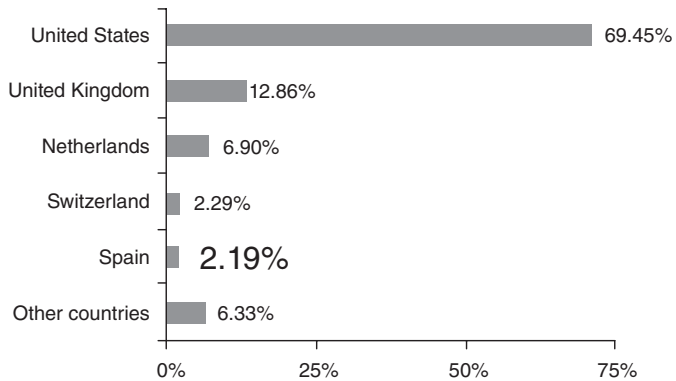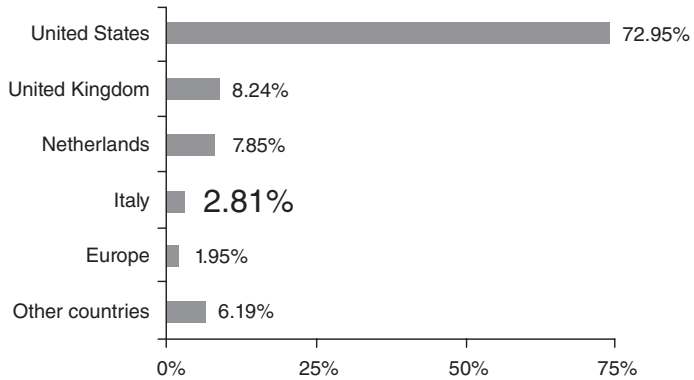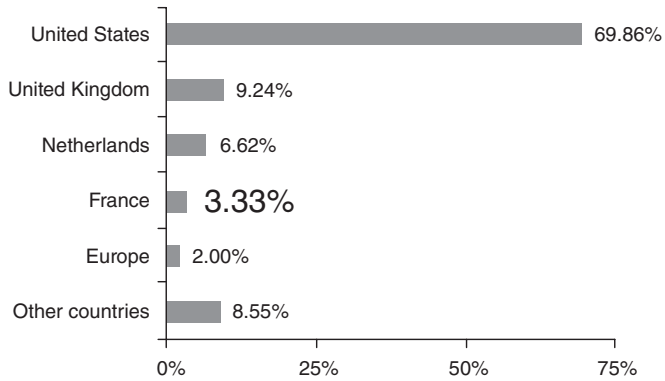
FIGURE 1. Countries where the websites are hosted and displayed in the Google SERPs in the US for Italian, French, and Spanish wines searches.

where they are hosted. As you can see, even though the searches are aimed at finding information about Italian (or French or Spanish) wines, the selection of pages displayed in US SERPs are mostly from the US itself (about 70%), while the pages hosted on European countries comprise an average of 3% or below in the selection made by the Google algorithm. The possibility of European websites ranking high in the US, thus, is limited by the Google algorithm problems described. A further limitation is posed by the existence of already established websites that are very difficult to outrank.

5. Conclusions and implications

This work presents the first set of results from a wider-scale research on European wine in the US market. The entrance of non-traditional producing and consuming countries, and the new Industry 4.0 paradigm, with digitization, big data analytics, and so on (Lenzi, 2013), are heavily influencing the wine business. Therefore, understanding online search behavior is becoming a critical challenge (Gebauer and Ginsburg, 2010) for traditional small wineries.

This paper sought to answer the following research questions through wine-related information: What can user-generated search data tell us about the US wine market? How can we interpret Google keywords in order to understand user intent in the US wine market? What can the internet tell us about the visibility of Italian wines in the US wine market?

This paper uses a descriptive framework to analyze online user search for Italian and other European wines, such as French and Spanish wines, in the US market, following which it offers an interesting cause for reflection on the perspectives in that market. Among Italian wines, the top position of Prosecco and Moscato in the wine-related search keywords extracted in 2016 seems to reflect awareness about these wines in the US market. Our three-step analysis allowed us to highlight the diversity of the new customer journey in the online context for each wine variant considered, and the different roles of traditional levels of differentiation in the wine sector, such as «country of origin». Indeed, by coding and categorizing the keywords, we found out, for example, that in the case of Prosecco, keywords related to «brand» are more frequently searched for compared to the general «country of origin», and that «price» is an important search term. For Moscato, the specific «place of origin» seems to be more relevant. For Champagne, the top wine searched in the US market, users tended to be more in-

terested in specific brands. For Cava, the keywords more frequently searched were related to «wine variants» and «country of origin». These results could suggest that price and service are important queries for Italian wine; in particular, with regard to Prosecco and Moscato, brand and origin, respectively, seem to be important. The findings for Champagne were rather different. In this case the keywords seem to relate mainly to brand and gifting. In this case the price is not relevant because Champagne is considered as a premium or luxury product, and it does not seem to be important to refine the search with other additional terms. For Cava users seem searching prevalently informational details on wine variants and country of origin, without specific brands. In the present case, we found informational intent (keywords under the categories «wine variants», «country of origin», «place of origin» and «brand») and transactional intent (keywords under the categories «place of purchase», «price and delivery service», and «gift and related service»). We did not identify any keywords related to navigational intent. This is an interesting finding for wineries, as it means that web users and consumers do not often search for a specific wine site, but mostly search to obtain information for purchasing purposes.

Further, the weak position of Italian wine in the US market emerges from the third phase of our research, which highlights the low visibility of Italian wine sites, as well as other French and Spanish wine sites.

With regard to the managerial implications of this study, we consider that investment in customer knowledge, by utilizing user-generated data and organic keywords, is relevant for wineries that need insights into consumer behavior. One of the leading factors for success in the online market is on-page keyword optimization. If the keywords that users are searching for do not appear on the firm website, the firms are highly unlikely to rank for those keywords. Therefore, in order to drive traffic using organic search, wineries need to optimize their web content for organic keywords. They need to find the keywords that users actually use when they are looking for Italian wine. In this way, they could optimize their site pages for those organic keywords. The results of this analysis of keywords and long-tail wine-related terms can improve the optimization of digital marketing campaigns. These results indicate that content marketing and inbound marketing strategies of wineries can be improved with the use of contents that correspond to transactional niches, with higher commercial propensity.

A number of important limitations of this work need to be considered. They will be the premise for future research.

First, we used aggregate data, which present an external point of view. To improve our research, it would be useful to consider the anal-

ysis from the perspective of a specific firm. The study of a group of keywords that contain the name of a firm will allow, on the one hand, categorization of all the brand-related keywords and the most popular modifiers/attributes associated with the firm, and on the other hand, detection in Google results of owned contents and third-party earned contents. The detection of these third-party contents can help improve visibility, either through the replication of these contents or through collaboration with these already positioned websites.

A second limitation is that from our analysis, we did not obtain in-depth findings about the reasons for online search. We could improve our analysis through a netnographic research, in order to obtain qualitative data from the wine communities and their online discussions on Italian wine. This research method could reveal what people are really thinking or talking about the products, and this could help managers devise new ways to segment and target correctly international markets and suitable content marketing strategies to obtain the best SEO results and create effective digital communication campaigns about products and brands. Before such a netnographic analysis is conducted, it would be essential to know all the keywords linked to the different categories of our coding scheme. This will allow for the identification of relevant hubs and wine communities through massive extractions of search engine results, and the identification of the weight of qualitative terms in the conversations of the communities through textual analysis.

Since big data is associated with more effective consumer/user perception and behavior on the web, it might be useful to combine Google data with social network analysis and, in particular, with social network sentiment analysis. The combination of Google AdWords and Google Trends could allow companies to analyze short-, medium- and long-term search seasonality, which can be used to increase social media campaigns and interactions during higher frequency search times. Further, given the results obtained and based on established conceptual relationships between the three types of queries considered, we could consider building an ontology that will enable us to work with the search data within a framework that establishes all possible relationships between different types of terms. Therefore, our initial categorization of classes related to wine will facilitate the building of a subclass-superclass taxonomic hierarchy, allowing us to define all concepts in our domain-specific ontology and all possible relations among them. The approach to the search data through an ontology that arranges all the concepts found would allow the generation of more complex combinations that would be useful, both at the level of research and at the practical level, and would eventually help improve the visibility of

wineries on the web. From a marketing perspective, the application of the ontology for the analysis of search terms will provide for a better understanding of the needs of the general audience, by identifying the characteristics of defined buyer personas according to how they search for transactional information. Further, from a managerial point of view, keywords grouped according to the ontology will enable us to calculate the visibility in Google results of any website or brand for a group of keywords. For example, we could measure the aggregate visibility of a vineyard, winery or e-commerce company for any group of transactional or informational keywords defined in the ontology, by calculating its absolute and relative visibility and providing benchmarking of brands competitors. Consequently, these results could define better content marketing strategies for wineries by suggesting relevant content for a specific national market, topic or any transactional niche term with higher commercial propensity, thus improving international brand visibility for specific segments of users.

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