



## Does social media usage affect online purchasing intention for wine? The moderating role of subjective and objective knowledge

This is the peer reviewed version of the following article:

*Original:*

Pucci, T., Casprini, E., Nosi, C., Zanni, L. (2019). Does social media usage affect online purchasing intention for wine? The moderating role of subjective and objective knowledge. BRITISH FOOD JOURNAL, 121(2), 275-288 [10.1108/BFJ-06-2018-0400].

*Availability:*

This version is available <http://hdl.handle.net/11365/1070070> since 2021-03-24T13:08:09Z

*Published:*

DOI:10.1108/BFJ-06-2018-0400

*Terms of use:*

Open Access

The terms and conditions for the reuse of this version of the manuscript are specified in the publishing policy. Works made available under a Creative Commons license can be used according to the terms and conditions of said license.

For all terms of use and more information see the publisher's website.

(Article begins on next page)

**Does social media usage affect online purchasing intention for of wine? The moderating role of subjective and objective knowledge**

Tommaso Pucci, Ph.D.

Department of Business and Law, University of Siena, piazza San Francesco 7, 53100 Siena (Italy), +39 0577232607, [tommaso.pucci@unisi.it](mailto:tommaso.pucci@unisi.it)

Elena Casprini, Ph.D.

Department of Business and Law, University of Siena, piazza San Francesco 7, 53100 Siena (Italy), +39 0577232607, [elena.casprini@unisi.it](mailto:elena.casprini@unisi.it)

Costanza Nosi, Associate Professor

Dipartimento di Scienze Umane – Comunicazione, Formazione, Psicologia, LUMSA University, Piazza delle Vaschette, 101, 00193 Roma (Italy) [c.nosi@lumsa.it](mailto:c.nosi@lumsa.it)

Lorenzo Zanni, Full Professor \*

Department of Business and Law, University of Siena, piazza San Francesco 7, 53100 Siena (Italy), +39 0577232607 [lorenzo.zanni@unisi.it](mailto:lorenzo.zanni@unisi.it)

This is the accepted version of a paper forthcoming in British Food Journal.  
This paper has been peer-reviewed but does not include the final publisher proof-corrections or journal pagination.

\* Corresponding author

## Does social media usage affect online purchasing intention for wine? The moderating role of subjective and objective knowledge

### Abstract

**Purpose** –The purpose of this paper was to investigate the influence that social media usage has on online purchases of wine and to examine whether objective and subjective knowledge moderates this relationship.

**Design/methodology/approach** – A structured questionnaire was completed by a sample of 2,597 Italian wine consumers. A multinomial logistic model was used to assess how the investigated variables influenced online purchasing behavior.

**Findings** – Social media usage was found to be positively related to online wine buying and consumer's objective and subjective knowledge moderates the relationship between social media usage and online wine purchasing.

**Research limitations/implications** – Wineries should acknowledge the relevance of social media in favoring online wine buying and adopt integrated multi-channel marketing strategies. Given that knowledge moderates the relationship between social media usage and online wine buying, in order to optimize the channel management, wineries should segment customers and prospects based on subjective and objective product knowledge.

**Originality/value** – The study represents one of the first attempts to investigate social media use and online wine purchasing behavior in Italy. In addition, it sheds light on previous research on the influence that objective and subjective knowledge has on consumer behavior.

**Keywords** Online wine buying propensity, social media, consumer knowledge, Italy.

**Paper type** Research paper

### Introduction

In the last two decades, the Internet has turned from a mere source of information into a highly participated and interactive digital ecosystem that communication experts have labeled the "social Web" (Kim *et al.*, 2010). Social media are defined as "a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of User Generated Content" (Kaplan and Haenlein, 2010: 61). They embrace a vast array of contact methods such as multimedia sites, social networks, blogs, company-owned websites, interactive applications, aggregating channels, and discussion forums. Social media technologies have been swiftly adopted by both companies and individuals (Nair, 2011; Melanthiou *et al.*, 2015), and have changed the nature of interactions, enabling businesses to communicate with consumers and create intense, active loyalty relationships, as well as enhance brand equity (Keller, 2009). Social media development has given rise to network-based co-production systems (Kozinets *et al.*, 2010). In these systems consumers are influenced by online marketing strategies and at the same time are able to

1  
2  
3 influence the conduct of other individuals (Kozinets *et al.*, 2010; Kietzmann *et al.*, 2011). This  
4 interaction allows companies to create value by increasing the popularity of brands, enhancing  
5 positive word of mouth, boosting sales, and generating engagement (Hajli, 2014), and even  
6 influencing end-user entrepreneurship (Cuomo *et al.*, 2017).  
7

8  
9 Social media influence the consumer path to purchase and specifically impact the online  
10 decision buying process: they represent a quick manner for gathering and processing information  
11 (Fiore *et al.*, 2016; Heinonen 2011), and “enable consumers to incorporate the dimension of peer-to-peer  
12 information sharing into the information search process” (Jang and Rosenbloom, 2014: 355). The  
13 research shows that social media represent a supporting channel where businesses build  
14 awareness, consideration, and intent earlier in the purchasing funnel. Most online shoppers in  
15 fact use social media to search for product- and brand-related information and social media  
16 usage affects consumer buying intention (Chung and Muk, 2017).  
17  
18

19 One sector in which social media has had a large impact is wine due to the product’s  
20 characteristics (Kolb and Thach, 2016). It has long been known (e.g. Nosi, 2009) that, since wine  
21 is an experience good, wine consumers rely considerably on cues to make their quality  
22 judgment. When there is imperfect information about product quality, i.e. when consumers do  
23 not know what to expect from a wine before they consume it, wine drinkers rely on extrinsic,  
24 information-based cues, including advice from experts and recommendations from peers,  
25 friends and acquaintances who are often gathered online through social media (Forbes *et al.*,  
26 2015).  
27  
28  
29

30 Despite this, wineries have been relatively slow to adopt social media marketing strategies  
31 and those that have adopted social media seem to be unable to effectively fit these tools within  
32 their overall marketing strategy (Dolan *et al.*, 2013). Furthermore, whereas most wineries are  
33 aware of the popularity of social media, few realize how they could be exploited in marketing  
34 strategies (Laverie *et al.*, 2011).  
35

36 This paper thus provides evidence on the relationship between social media usage by  
37 consumers and the intention to buy wine online. We reveal the influence that social media use  
38 has on consumer online wine buying propensity. In addition, due to the importance of  
39 consumer knowledge in wine settings, this study investigates the role that knowledge has in  
40 moderating this relationship.  
41  
42

43 On the basis of the typology proposed by Vigar-Ellis *et al.* (2015b), we distinguish between  
44 four groups of consumers on the basis of their level of objective and subjective knowledge  
45 (neophyte, expert, modest and snob). Given that social media provide wine marketers with tools  
46 for interacting with consumers and integrating them into brands, understanding how social  
47 media influence consumer wine buying behavior is a compelling challenge for marketers  
48 seeking a competitive edge.  
49  
50

51 The article is structured as follows. First, an overview on wine-related studies investigating  
52 social media adoption on the part of wineries and consumers is provided. The section also  
53 includes the proposed conceptual model. Then, the empirical setting of the study, the adopted  
54 methodology and obtained results are illustrated. The final section discusses the results, draws  
55 conclusions and suggests possible areas for future research.  
56  
57  
58  
59  
60

## Theoretical background

### *Social media use and online buying in the wine business*

Social media represent an important tool through which companies can interact with their consumers in new ways (Alonso et al., 2013; Papasolomou and Melanthiou, 2012). Consumer social media usage and online buying in the wine business have been only marginally explored in the literature therefore leaving room for possible investigations aimed at clarifying these topics. A fairly recent literature review on wine consumer behavior (Lockshin and Corsi, 2012) shows that the influence of the Internet and social media on wine consumer behavior represents a research area that needs further investigation.

Several studies have analyzed social media use from the company viewpoint, investigating how wineries use social media for their business interests. One pioneering study (Thach, 2009) analyzed Web 2.0 practices of US wineries and discovered that whereas 61% provided e-commerce through their websites, only 11% used vlogs (video) and 2% used blogs, with the aim of enhancing brand awareness. At that time social network usage, such as Facebook was uncommon on winery sites. More recently, a cross-country analysis (Australia, Canada, Italy, New Zealand, Spain, South Africa, and the United States) carried out in the wine tourism field (Alonso *et al.*, 2013) found that 35% of wineries use social media as the main vehicle for communicating with clients about events at the estate, and promoting wines. A study conducted on the adoption of Web 2.0 components (blog, video, Facebook, Twitter and Pinterest) by German wineries (Kolb and Thach, 2016) showed that in general companies show a low adoption of online applications and that the size of the winery influences the adoption rate (the bigger the company, the higher the adoption). Conflicting with these results, Szolnoki *et al.* (2014) found that 60% of German wineries communicate with their customers via social media and that the most used platforms are Facebook, Twitter and YouTube.

A recent international comparative analysis between Australia and New Zealand (Forbes *et al.*, 2015) claims that the level of social media adoption by wineries is around 65% across both countries, with Facebook and Twitter being the most adopted social networks. In addition, Szolnoki *et al.* (2018) point out that social media adoption differs between Old World and New World countries, although Facebook remains the most commonly used platform.

Wineries mainly use social media to send current clients information about forthcoming events, as well as to advertise to prospects. Very few studies have been conducted in Italy (Begalli *et al.*, 2009) and are generally focused on specific geographical areas. In Apulia (Fiore *et al.*, 2016), winery adoption of social media is deemed useful for product improvement through the sharing of consumer ideas and suggestions. In Sicily (Galati *et al.*, 2017), wineries show a limited social media adoption, with smaller wineries being more engaged in social media than larger wineries. Social media are claimed to open up opportunities for Italian wineries, which can be enhanced for company and wine branding strategies, i.e. using variables collected through social media as an innovative basis for market segmentation (Cuomo *et al.* 2016), exploiting downloadable applications, such as mobile commerce (Pelet and Lecat, 2014), and/or using other software to collect further relevant information on the market (Scorrano *et al.*, 2015).

1  
2  
3 Of those papers that analyze social media from the consumer viewpoint, Breslin (2013)  
4 claims that 90% of wine drinkers use Facebook for at least 6.2 hours per week. Social media are  
5 said to play an important role in selling wine because word of mouth, in the form of  
6 recommendations from peers, friends, colleagues, etc. is effective in orienting buying behavior  
7 Leigon (2011). Wilson and Quinton (2012) argue that Twitter can enhance the generation of soft  
8 value (sharing feelings and perceptions about a brand or a winery) on the part of wine  
9 consumers, but not hard value (sales stemming from the use of a particular social medium).  
10 Szolnoki *et al.* (2014) instead demonstrate that Facebook fans of a brand show greater purchase  
11 intentions than those who do not use Facebook. Laverie *et al.* (2011) claim that social media  
12 represent an important alternative to search engines in terms of consumers searching for wine-  
13 related information on the Web. Consumers using Facebook want to find product information,  
14 images, and wish to be told by wineries about interesting events and upcoming promotions  
15 (Dolan and Goodman, 2017). With regard to Millennials, Atkin and Thach (2012) reveal that the  
16 usage of social media is aimed at learning about wine brands and reducing the risks associated  
17 with purchases. A recent study on Italian wine drinkers (Sogari *et al.*, 2017) found that social  
18 media use influences consumer buying behavior online and encourages consumers to pay  
19 higher prices for a bottle of wine.  
20  
21  
22  
23  
24  
25

### 26 27 *A distinction between objective and subjective wine knowledge*

28 A study of the literature dedicated to marketing by wineries reveals that the role that knowledge  
29 can play in the relationship between the use of social media on the part of wine drinkers and  
30 the propensity to buy wine online has not yet been investigated. This is despite the fact that in  
31 the literature on consumer behavior and marketing in general, knowledge has long been  
32 recognized as a variable that influences an individual's purchasing behavior (e.g. Brucks, 1985;  
33 Aurier and N'gobo, 1999; Festa *et al.*, 2016).  
34  
35

36 Previous studies have distinguished between objective and subjective knowledge (Aurier  
37 and N'gobo, 1999; Brucks, 1985; Dodd *et al.*, 2005; Jang and Rosenbloom, 2014; Johnson and  
38 Bastian, 2007; Perrouty *et al.*, 2008). Objective knowledge refers to what a consumer actually  
39 knows (Johnson and Bastian, 2007), whereas subjective knowledge refers to how much a person  
40 thinks he/she knows about a product" (Johnson and Bastian, 2007). Both objective and  
41 subjective knowledge can influence the way people search for and use information about  
42 products and wineries, as well as their overall decision buying behavior (Nosi, 2009; 2012).  
43  
44  
45

46 Being an expert or a novice influences the use of specific cues such as quality, brand and  
47 country of origin (D'Alessandro and Pecotich, 2013), and broadly the use of intrinsic or extrinsic  
48 cues (Bruwer *et al.*, 2017), but also consumption and expenditure. For example, Johnson and  
49 Bastian (2007) combine objective and subjective knowledge in determining whether a consumer  
50 is an expert or not. They find that expert consumers consume and spend more on wine than  
51 consumers with low level of expertise. However, it is also important to distinguish between  
52 different knowledge types. In investigating the willingness to pay of wine consumers, Pucci *et al.*  
53 (2017) found that the knowledge impact differs across countries, thus the consumer's country  
54 of origin is a key factor. Vigar-Ellis *et al.* (2015b) identify a product knowledge grid  
55  
56  
57  
58  
59  
60

1  
2  
3 differentiating between whether objective knowledge and subjective knowledge are low or  
4 high. Specifically, they provide a typology: (i) "Neophyte": possesses low levels of both objective  
5 and subjective knowledge, (ii) "Expert": scores high for types of knowledge, (iii) "Modest": has  
6 high objective and low subjective knowledge of wine, and (iv) "Snob": with low objective but  
7 high subjective knowledge.  
8  
9

### 10 11 *Framework and research questions*

12 Based on the analysis of the literature above, the objective of the present study is to understand  
13 if and how the use of social media on the part of wine drinkers influences the propensity to buy  
14 wine online, and in particular if the product-related objective and subjective knowledge of  
15 consumers represents a moderating variable influencing the relationship between social media  
16 use and online wine purchase propensity. Since it has already been claimed by the literature  
17 (e.g. Dolan and Goodman, 2017; Kolb and Thach, 2016) that the effect of social media on  
18 consumer purchasing of wine is particularly relevant in the information search phase, we  
19 focused on the influence that social media usage in gathering information on wine has on  
20 consumer buying propensity. We hypothesized that at this stage of the consumer decision  
21 process knowledge plays a decisive role in the propensity to purchase.  
22  
23

24 The proposed conceptual model (Figure 1) is based on the following assumptions:  
25  
26

27  
28 *Hp. 1: Social media use in the search for wine-related information is positively associated*  
29 *with propensity for online wine buying.*  
30  
31

32  
33 *Hp. 2: Objective and subjective knowledge of wine moderates the relationship between social*  
34 *media use and propensity for online wine buying.*  
35  
36

37 -----  
38 Insert Figure 1  
39 about here  
40 -----

### 41 42 **Empirical setting and methodology**

43 This study is based on the data collected through a survey administered to a convenience  
44 sample of Italian wine drinkers between January and June 2016. The analyzed sample accounts  
45 for 2,597 wine consumers: 2,202 respondents filled in the questionnaires online, while 395  
46 questionnaires were submitted face-to-face in order to obtain a control sub-sample.  
47

48 The dependent variable was operationalized using a five-point scale representing the  
49 frequency of online wine purchasing (never; less than once a month; occasionally: 3 or 4 times  
50 a month; regularly: more than once a week, but not every day; every day).  
51

52 The main independent variable was assessed by a four-item, five-point Likert scale  
53 measuring the degree of social media use in the search for wine-related information. The  
54 construct was developed based on the works of Bruwer and Wood (2005), Chen *et al.* (2011),  
55  
56  
57  
58  
59  
60

1  
2  
3 Quinton and Harridge-March (2008), Thach (2009), Reyneke *et al.* (2011), and Wilson and  
4 Quinton (2012).  
5

6 The moderating variable includes both objective and subjective knowledge. The former  
7 was detected by asking five technical questions about the wine product, the latter was assessed  
8 by a multi-item construct based on a five-point Likert scale derived from Vigar-Ellis *et al.* (2015a)  
9 (three items) and from Dodd *et al.* (2005) (one item).  
10

11 For both multi-item constructs, internal reliability, discriminating validity and converging  
12 validity were evaluated. Internal reliability was examined through the Cronbach  $\alpha$ . All constructs  
13 have an alpha value greater than 0.7, highlighting a high level of internal consistency.  
14 Standardized factor loadings vary between 0.72 and 0.92, all higher than the 0.5 threshold  
15 suggested by the literature (Chin, 1988). Discriminating validity was examined using the square  
16 root of the mean extracted variance (AVE) and the cross-loadings: the square root values of the  
17 AVE for each construct are all higher than the highest correlation between the construct and  
18 each other (Fornell and Larcker, 1981). Factor loadings are also all greater than cross-loadings,  
19 suggesting a satisfactory discriminated validity. Finally, convergent validity is ensured by the  
20 values of the AVE for each construct higher than the 0.5 accepted in the literature (Fornell and  
21 Larcker, 1981).  
22

23 Similarly to Vigar-Ellis *et al.* (2015b), the use of the two variables in relation to knowledge  
24 enabled us to implement a clustering procedure in order to divide the sample into four types  
25 of respondents (Table I) depending on whether their objective and subjective knowledge was  
26 higher or lower than the average value (corresponding to four dichotomous variables). We  
27 labelled the four types using the same names identified by Vigar-Ellis *et al.* (2015b): Neophyte,  
28 Expert, Modest and Snob.  
29  
30  
31  
32  
33

34  
35 -----  
36 Insert Table I  
37 about here  
38 -----  
39

40  
41  
42 Finally, some control variables were checked for: age, gender, income, education,  
43 frequency of online purchasing (not necessarily of wine), frequency of wine consumption,  
44 frequency of wine buying, and average price paid for a 0.75 liter bottle of wine.  
45

46 Table II. shows the descriptive statistics of the variables used, their correlation and two  
47 multi-collinearity indicators (VIF and tolerance).  
48  
49

50  
51 -----  
52 Insert Table II  
53 about here  
54 -----  
55

## 56 Findings

57  
58  
59  
60



To evaluate the effect of the various covariates on the propensity to buy a bottle of wine online, we used a multinomial logistic model that estimates the probability of choosing different outcomes. Table III shows the results of the statistical analysis. For the sake of clarity, the results of the interactions are not shown in Table III but are available on request.

This model was chosen because it was not possible to use a classic ordinal logistic model given that the parallel regression assumption was violated. Table III shows only three outcomes because the first one is the basis while the fifth "every day" online purchasing of wine was not selected by any respondent.

-----  
Insert Table III  
about here  
-----

The results show that social media use has a positive and increasing effect on the propensity to buy wine online, thus confirming Hypothesis 1. Hypothesis 2 is also confirmed. Figure 2 section b) shows the cumulative probability of purchasing wine online at least once a month. The most marked effect relates to Expert consumers (high objective and high subjective knowledge) while the least effect relates to Neophyte consumers (low objective and low subjective knowledge). The higher the level of possessed (objective and/or subjective) knowledge, the higher the influence of social media use on online wine purchase propensity, thus denoting a moderating effect exerted by the knowledge variable.

Finally, a post-hoc analysis was carried out testing the interaction between various control variables and the level of social media use in the search for information on wine. Figure 2 section a) shows that the relationship between social media use and the propensity to buy wine online is stronger for individuals who buy bottles of an increasing average price. Figure 3 shows that age has a quadratic effect on the response variable and that this effect is stronger for consumers who use social media the most.

-----  
Insert Figure 2  
about here  
-----

-----  
Insert Figure 3  
about here  
-----

## Discussion and conclusions

1  
2  
3 Social media are increasingly important in the wine sector. Consumers may be influenced by  
4 several sources of information that may span from social networking websites to specialized  
5 magazines, blogs and apps. In Italy, in addition to the social networking profiles (e.g. Facebook,  
6 Twitter) of individual wineries, consumers can consult other sources, for example WineryLovers  
7 – a community followed by thousands of people, or Vivino – an app used by 31 million users.  
8 All these social media are increasingly used for finding information, exchanging opinions,  
9 staying updated about wines and, as recent evidence suggests, they may also affect end-user  
10 entrepreneurship (Cuomo *et al.*, 2017). However, very little is known about the role of social  
11 media on driving wine consumer behavior, and in particular their online buying intention.  
12  
13

14  
15 Our results confirm that consumers who claim to use social media more intensively in the  
16 phase of collecting information about wine show a greater propensity to buy wine online. Our  
17 study thus corroborates previous findings (e.g. Atkin and Thach, 2012; Leigon, 2011)  
18 demonstrating that also in Italy social media usage has a positive effect on the propensity for  
19 online wine buying. The wine sector thus seems to reflect business-consumer interactions  
20 (Lemon and Verhoef, 2016), i.e. customers now interact with firms through countless  
21 touchpoints in multiple channels and media, and these touchpoints influence each other. As  
22 with other industries (Beck and Rygl, 2015), wine purchase decision processes are seamless  
23 across channels (Neslin *et al.*, 2006) customer contact points or media through which the firm  
24 and the customer interact, and channel integration represents one of the major strategic  
25 challenges for wineries.  
26  
27  
28  
29

30 Furthermore, our results extend Vigar-Ellis *et al.* (2015b) by highlighting that different  
31 levels of subjective and objective knowledge are associated with different levels of online  
32 buying propensity. In particular, being an Expert consumer, i.e. possessing high objective and  
33 high subjective knowledge, increases the propensity for online wine buying. In terms of  
34 consumer characteristics the significance of the investigated moderating variables, i.e.  
35 knowledge and average price of wine purchased, suggests that wine drinkers who are more  
36 likely to buy wine online are expert consumers, looking for medium-high or high quality  
37 products. Similar to findings revealed in a pioneering study comparing online and in-store  
38 buying for wine that found that online wine purchases were of higher priced wines (Stening and  
39 Lockshin, 2001), our results indicate that online purchases would seem to focus on expensive  
40 and hard-to-find wines. Given their expertise, knowledgeable consumers may in fact perceive  
41 less risk associated with online wine purchase due to less information asymmetry and use online  
42 channels to find bottles that are not available in physical stores.  
43  
44  
45  
46  
47  
48

### 49 ***Managerial implications***

50 The study highlights that wineries need to acknowledge that social media represent an  
51 important touchpoint in the decision buying process of consumers and that managing the  
52 media effectively can increase online wine sales, and thus the related return of investment. In  
53 order to optimize social media marketing strategies, wineries should segment their prospects,  
54 taking into account the level and type of knowledge that consumers have. Targeting expert  
55 consumers first may represent an effective way to increase online sales in the short term and  
56  
57  
58  
59  
60

1  
2  
3 favor the spread of positive word of mouth among less expert consumers in order to increase  
4 brand awareness and engagement, which then might turn into actual sales in the long run.  
5  
6 At the same time, messages conveyed by social media should be aimed at increasing consumer  
7 knowledge, by combining emotional communications, such as storytelling, with more technical  
8 information in order to reduce the risk perceived by less expert consumers with regard to wine  
9 purchases online.  
10

11 This study may also have implications for the wider context of local tourism and  
12 hospitality. Social media are important both for consumers and suppliers (for a review on social  
13 media and local tourism see Leung *et al.*, 2013). Specifically, the use of social media may be very  
14 important in Italy where better Wine Routes (Bregoli *et al.*, 2016) and initiatives such as Open  
15 Cellars (Colombini 2015; Festa *et al.*, 2017), which have the potential to attract both Italian and  
16 international tourists. A widespread and integrated use of social media by wineries and the  
17 several stakeholders involved, such as tour operators and hotels, could thus influence wine  
18 consumer behavior as well as enhance the broader local economy. In fact, as the cases of Napa  
19 Valley (USA) and Marlborough (New Zealand) show, the use of websites and social media by  
20 tourism agencies and wineries "*are not only targeting the promotion of wine and wine tourism,*  
21 *but also local and regional events [...], including concerts, festivals, local art and crafts, and other*  
22 *food sectors (e.g. olives)*" (Alonso *et al.*, 2013: 231).  
23  
24  
25  
26  
27

### 28 **Limitations and future research**

29  
30 Given that the present study relies on single country (Italy) data, future research could benefit  
31 by enlarging the scope of the analysis investigating the phenomenon in other geographical  
32 contexts. In fact, very recent research has shown that there is variety in social media use and  
33 adoption in Old World and New World countries (Szolnoki *et al.*, 2018). With specific reference  
34 to the investigated variables, it could be interesting to ascertain whether the positive  
35 relationship found in the present study between wine knowledge, social media usage and online  
36 wine buying propensity holds true also in other cultural and social contexts. Whereas in many  
37 studies age is considered as a control variable, the present research revealed that the effect of  
38 age on online wine buying is not linear but quadratic and is greater for consumers who use  
39 social media more intensively to search for information on wines. Future studies could  
40 investigate the relationship between age, social media and online purchasing behavior more  
41 extensively. Finally, we suggest that future research should also investigate the impact of social  
42 media when they are used in the broader context of wine tourism, such as by Wine Consortia  
43 and Wine Routes. For example, what is the influence of social media on consumer purchasing  
44 behavior when such media are used at an institutional, rather than single winery, level? In  
45 conclusion, research on social media and knowledge is not only an interesting field of research  
46 at the consumer and firm level, but might also be appealing at a more macro-level, thus  
47 consider, for example, wine institutions and local initiatives.  
48  
49  
50  
51  
52  
53  
54  
55

### 56 **References**

57  
58  
59  
60

- 1  
2  
3  
4  
5 Alonso A.D., Bressan A., O'Shea M., and Krajsic V. (2013), "Website and social media usage:  
6 Developments of wine tourism, hospitality and the wine sector", *Tourism Planning and*  
7 *Development*, Vol. 25 No. 3, pp. 229-248.
- 8  
9 Atkin T. and Thach L. (2012), "Millennial wine consumers: risk perception and information  
10 search", *Wine Economics and Policy*, Vol. 1 No. 1, pp. 54-62.
- 11  
12 Aurier P. and N'Gobo P. (1999), "Assessment of consumer knowledge and its consequences: a  
13 multi-component approach" in Scott L. and Arnould E. (eds), *Advances in Consumer*  
14 *Research*. 26th ed., Association for Consumer Research, Provo, UT, pp. 569-75.
- 15  
16 Beck, N. and Rygl, D. (2015), "Categorization of multiple channel retailing in multi-, cross-, and  
17 omni-channel retailing for retailers and retailing", *Journal of Retailing and Consumer*  
18 *Services*, Vol. 27, pp. 170-178.
- 19  
20 Begalli, D., Codurri, S. and Gaeta, D. (2009), "Wine and web marketing strategies: The case study  
21 of Italian speciality wineries", *British Food Journal*, Vol. 111 No. 6, pp. 598-619.
- 22  
23 Bregoli, I., Hingley, M., Del Chiappa, G. and Sodano, V. (2016), "Challenges in Italian wine routes:  
24 managing stakeholder networks", *Qualitative market Research: an International Journal*, Vol 19 No.  
25 2, pp. 204-224.
- 26  
27 Breslin, K. (2013), *Presentation on constellation digital marketing in 2013*, San Francisco, CA.
- 28  
29 Brucks M. (1985), "The effects of product class knowledge on information search behaviour",  
30 *Journal of Consumer Research*, Vol. 12 No. 1, pp. 1-16.
- 31  
32 Bruwer J. and Wood G. (2005), "The Australian online wine-buying consumer: motivational and  
33 behavioural perspectives", *Journal of Wine Research*, Vol. 16 No. 3, pp. 193-211.
- 34  
35 Bruwer, J., Chrysochou, P., and Lesschaeve, I. (2017), "Consumer involvement and knowledge  
36 influence on wine choice cue utilisation", *British Food Journal*, Vol. 119 No. 4, pp. 830-844.
- 37  
38 Chen Y., Fay S. and Wang Q. (2011), "The role of marketing in social media: how online consumer  
39 reviews evolve", *Journal of Interactive Marketing*, Vol. 25, No. 2, pp. 85-94.
- 40  
41 Chin W.W. (1988), "The partial least squares approach to structural equation modeling", in  
42 Marcoulides G.A. (Ed.) *Modern Methods for Business Research*, Lawrence Erlbaum, New  
43 Jersey, pp. 295-336.
- 44  
45 Chung, C. and Muk, A. (2017), "Online shoppers' social media usage and shopping behavior", in  
46 Campbell, C.L. (Ed.), *The Customer Is NOT Always Right? Marketing Orientations in a*  
47 *Dynamic Business World*, Springer International Publishing, Cham. pp. 133
- 48  
49 Colombini, D.C. (2015), "Wine tourism in Italy", *International Journal of Wine Research*, Vol. 7  
50 No. 1, pp. 29-35.
- 51  
52 Cuomo, M.T., Tortora, T., Festa, G., Giordano, A., Metallo, G. (2016), "Exploring consumer insights  
53 in wine marketing: an ethnographic research on #Winelovers", *Psychology & Marketing*,  
54 Vol. 33, pp. 1082-1090.
- 55  
56 Cuomo, M.T., Tortora, D., Festa, G., Giordano, A. and Metallo G. (2017), "Enablers for end-user  
57 entrepreneurship: An investigation on Italian food bloggers", *Journal of Psychology &*  
58 *Marketing*, Vol. 34 No. 12, pp. 1109-1118.
- 59  
60 D'Alessandro, S. and Pecotich, A. (2013), "Evaluation of wine by expert and novice consumers in  
the presence of variations in quality, brand and country of origin cues", *Food Quality and*

- 1  
2  
3 *Preference*, Vol. 28 No. 1, pp. 287-303.
- 4 Dodd T.H., Laverie D.A., Wilcox J.F., and Duhan D.D. (2005), "Differential effects of experience,  
5 subjective knowledge, and objective knowledge on sources of information used in  
6 consumer wine purchasing", *Journal of Hospitality and Tourism Research*, Vol. 29 No. 1, pp.  
7 3-19.
- 8  
9  
10 Dolan, R. and Goodman, S. (2017), "Succeeding on social media: Exploring communication  
11 strategies for wine marketing", *Journal of Hospitality and Tourism Management*, Vol. 33, pp.  
12 23-30.
- 13  
14 Festa, G., Cuomo, M.T., Metallo, G. and Festa, A. (2016), "The (r)evolution of wine marketing mix:  
15 From the 4Ps to the 4Es", *Journal of Business Research*, Vol. 69 No. 5, pp. 1550-1555.
- 16 Festa, G., Vrontis, D., Thrassou, A., and Ciasullo, M.V. (2017), "A value co-creation model for wine  
17 tourism", *International Journal of Management Practice*, Vol. 8 No. 3, pp. 247-267.
- 18 Fiore, M., Vrontis, D., Silvestri, R. and Contò, F. (2016), "Social Media and Societal Marketing: A  
19 Path for a Better Wine?", *Journal of Promotion Management*, Vol. 22 No. 2, pp. 268-279.
- 20 Forbes, S.L., Goodman, S. and Dolan, R. (2015), "Adoption of Social Media in the Australian and  
21 New Zealand Wine Industries", *Journal of New Business Ideas & Trends*, Vol. 13 No. 2, pp.  
22 1-14.
- 23  
24  
25 Fornell C., Larcker D.F. (1981), "Evaluating structural equation models with unobservable  
26 variables and measurement error", *Journal of Marketing Research*, Vol. 18 No. 1, pp. 39-50.
- 27 Galati, A., Crescimanno, M., Tinervia, S. and Fagnani, F. (2017), "Social media as a strategic  
28 marketing tool in the Sicilian wine industry: Evidence from Facebook", *Wine Economics and  
29 Policy*, Vol. 6 No. 1, pp. 40-47.
- 30 Hajli, M.N. (2014), "A study of the impact of social media on consumers", *International Journal  
31 of Market Research*, Vol. 56 No. 3, pp. 387-404.
- 32  
33  
34 Heinonen K. (2011), "Consumer activity in social media: managerial approaches to consumers'  
35 social media behavior", *Journal of Consumer Behaviour*, Vol. 2, pp. 356-364.
- 36 Jang, P., and Ronsebloom B. (2014), "Consumer knowledge and external pre-purchase  
37 information search: a meta-analysis of the evidence", in Belk R.W., Price L., and Penaloza L.  
38 (eds.) *Consumer Culture Theory (Research in Consumer Behavior, Vol. 15)*, Emeral Group  
39 Publishing Limited, pp. 353-389.
- 40  
41  
42 Johnson, T.E. and Bastian, S.E.P. (2007), "A preliminary study of the relationship between  
43 Australian wine consumers' wine expertise and their wine purchasing and consumption  
44 behaviour", *Australian Journal of Grape and Wine Research*, Vol. 13, pp. 186-197.
- 45 Kaplan, A.M. and Haenlein, M. (2010), "Users of the world, unite! The challenges and  
46 opportunities of Social Media", *Business Horizons*, Vol. 53 No. 1, pp. 59-68.
- 47  
48  
49 Keller, K.L. (2009), "Building strong brands in a modern marketing communications  
50 environment", *Journal of Marketing Communications*, Vol. 15 No. 2-3, pp. 139-155.
- 51 Kietzmann, J.H., Hermkens, K., McCarthy, I.P. and Silvestre, B.S. (2011), "Social media? Get  
52 serious! Understanding the functional building blocks of social media", *Business Horizons*,  
53 Vol. 54 No. 3, pp. 241-251.
- 54  
55  
56 Kim, W., Jeong, O.R. and Lee, S.W. (2010), "On social Web sites", *Information Systems*, Vol. 35  
57  
58  
59  
60

No. 2, pp. 215–236.

- Kolb, D. and Thach, L. (2016), "Analyzing German winery adoption of Web 2.0 and social media", *Journal of Wine Research*, Vol. 27 No. 3, pp. 226–241.
- Kozinets, R.V., Valck, K., De Wijnicki, A.C. and Wilner S.J.S. (2010), "Networked Narratives: Understanding Word-of-Mouth", *Journal of Marketing*, Vol. 74, pp. 71-89.
- Laverie, D.A., Humphrey Jr, W.F., Velikova, N., Dodd, T.H. and Wilcox, J.B. (2011), "Building wine brand communities with the use of social media: A conceptual model", *6th AWBR International Conference*, pp. 1–12.
- Leigon, B. (2011), "Grape/wine marketing with new media and return of the boomer", *Practical Winery & Vineyard Journal*, Winter. Retrieved March 22, 2012, from <http://www.practicalwinery.com/winter2011/marketing1.htm>.
- Lemon, K.N. and Verhoef, P.C. (2016), "Understanding customer experience throughout the customer journey", *Journal of Marketing*, Vol. 80 No. November, pp. 69–96.
- Leung, D., Law, R., van Hoof, H. and Buhalis, D. (2013), "Social media in tourism and hospitality: a literature review", *Journal of Travel & Tourism Marketing*, Vol. 30, pp. 3–22.
- Lockshin, L. and Corsi, A.M. (2012), "Consumer behaviour for wine 2.0: a review since 200 and future directions", *Wine Economics and Policy*, Vol. 1, pp. 2-23
- Melanthiou, Y., Pappasolomou, I. and Komodromos, M. (2015), "Social Media uptake in Cyprus - or is it just a new fad?", *International Journal of Technology Marketing*, Vol. 10 No. 3, pp. 312-325.
- Nair, M. (2011), "Understanding and measuring the value of social media", *Journal of Corporate Accounting & Finance*, Vol. 22 No. 3, pp. 45–51.
- Neslin, S.A., Grewal, D., Leghorn, R., Shankar, V., Teerling, M.L., Thomas, J.S. and Verhoef, P.C. (2006), "Challenges and opportunities in multichannel customer management", *Journal of Service Research*, Vol. 9 No. 2, pp. 95–112.
- Nosi, C. (2009), "The Aussie value innovation: how Australia escaped the Red Queen of the global wine business", *Mercati & Competitività*, Vol. 4, pp. 45-70.
- Nosi C. (2012), *Il vino fra produzione e mercato. Dinamiche, struttura e processi di un settore globale nelle fasce premium*, Rubbettino editore, Catanzaro.
- Pappasolomou, I. and Melanthiou, Y. (2012), "Social media: marketing public relations' new best friend", *Journal of Promotion Management*, Vol. 18 No. 3, pp. 319-328.
- Pelet, J.-E- and Lecat, B. (2014), "Smartphones and wine consumers: a study of Gen-Y", *International Journal of Wine Business Research*, Vol. 26 No. 3, pp. 188-207.
- Perrouty, J.P., d'Hauteville, F. and Lockshin, L. (2006), "The Influence of Wine Attributes on Region of Origin Equity: An Analysis of the Moderating Effect of Consumer's Perceived Expertise", *Agribusiness*, Vol. 22 No. 3, pp. 323-341.
- Pucci, T., Casprini, E., Rabino, S. and Zanni, L. (2017), "Place branding - exploring knowledge and positioning choices across national boundaries: the case of an Italian superbrand wine", *British Food Journal*, Vol. 119 No. 8, pp. 1915-1932.
- Quinton, S., and Harridge-March, S. (2008), "Trust and online wine purchasing: insights into UK consumer behaviour", *International Journal of Wine Business Research*, Vol. 20 No. 1, pp.

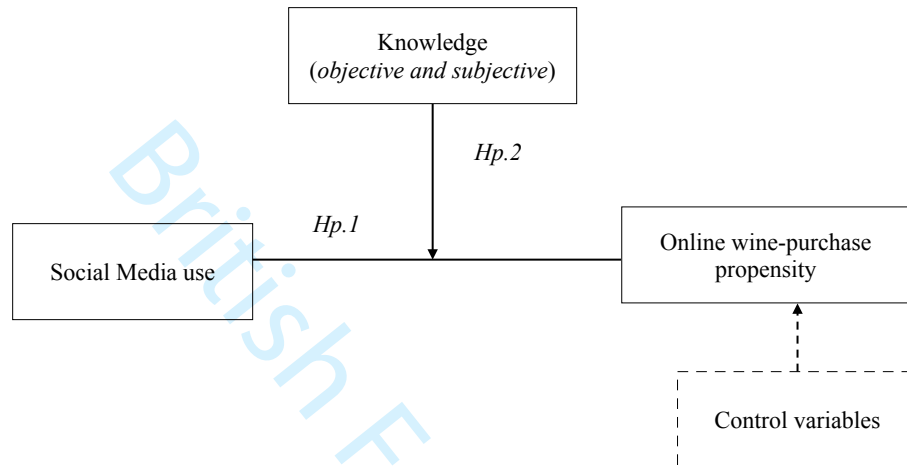
- 1  
2  
3 68–85.
- 4 Reyneke, M., Pitt, L., and Berthon, P.R. (2011), "Luxury wine brand visibility in social media: an  
5 exploratory study", *International Journal of Wine Business Research*, Vol. 23 No. 1, pp. 21-  
6 35.
- 7  
8 Scorano, P., Fait, M. and Maizza, A. (2015), "The relationship between unstructured information  
9 and marketing knowledge: an experiment in the US wine market", *International Journal of  
10 Management Practice*, Vol. 8 No. 3, pp. 232-246.
- 11  
12 Sogari, G., Pucci, T., Aquilani, B. and Zanni, L. (2017), "Millennials generation and environmental  
13 sustainability: the role of social media in the consumer purchasing behavior for wine",  
14 *Sustainability*, Vol. 9 No. 10, pp. 1911-1927.
- 15  
16 Stening, S. and Lockshin, L. (2001), "A comparison of on-line and in-store customers in the wine  
17 retail sector", *Australian and New Zealand Wine Industry Journal*, Vol. 16 No. 6, pp. 138-  
18 144.
- 19  
20 Szolnoki, G., Dolan, R., Forbes, S., Thach, L. and Goodman, S. (2018), "Using social media for  
21 consumer interaction: an international comparison of winery adoption and activity", *Wine  
22 Economics and Policy*, <https://doi.org/10.1016/j.wep.2018.07.001>
- 23  
24 Szolnoki, G., Taits, D., Nagel, M., and Fortunato, A. (2014), "Using social media in the wine  
25 business", *International Journal of Wine Business Research*, Vol. 26 No. 2, pp. 80-96.
- 26  
27 Thach, L., 2009. "Wine 2.0—the next phase of wine marketing? Exploring us winery adoption of  
28 wine 2.0 components", *Journal of Wine Research*, Vol. 20 No. 2, pp. 143–157.
- 29  
30 Vigar-Ellis D., Leyland P., and Caruana, A. (2015a), "Knowledge effects on the exploratory  
31 acquisition of wine", *International Journal of Wine Business Research*, Vol. 27 No. 2, pp. 84-  
32 102.
- 33  
34 Vigar-Ellis D., Pitt L. and Berthon L. (2015b), "Knowing what they know: a managerial perspective  
35 on consumer knowledge", *Business Horizons*, Vol. 58 No. 6, pp. 679-685.
- 36  
37 Wilson, D. and Quinton, S. (2012), "Let's talk about wine: does Twitter have value?", *International  
38 Journal of Wine Business Research*, Vol. 24 No. 4, pp. 271-286.
- 39  
40 WineNews (2018), "Italian wine companies, social networks and digital", available at:  
41 [https://winenews.it/en/italian-wine-companies-social-networks-and-  
42 digital\\_366878/?utm\\_source=newsletter&utm\\_medium=email&utm\\_campaign=winenews  
43 -1&utm\\_content=italian-weekly](https://winenews.it/en/italian-wine-companies-social-networks-and-digital_366878/?utm_source=newsletter&utm_medium=email&utm_campaign=winenews-1&utm_content=italian-weekly) (accessed 26 June 2018)
- 44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

-----  
Insert Appendix  
about here  
-----

## Does social media usage affect online purchasing behavior for wine? The moderating role of subjective and objective knowledge

### Figures

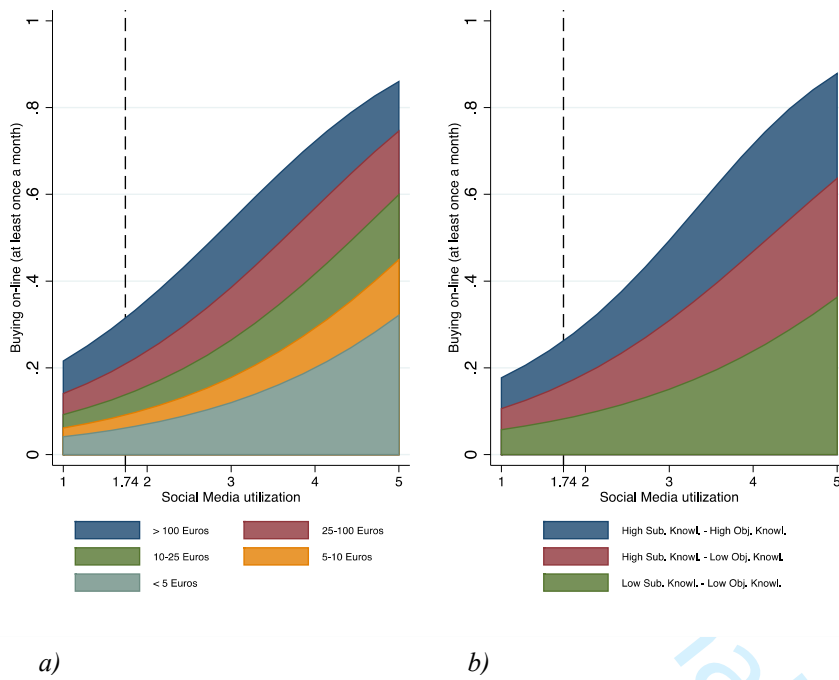
Figure 1 – The conceptual model





1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

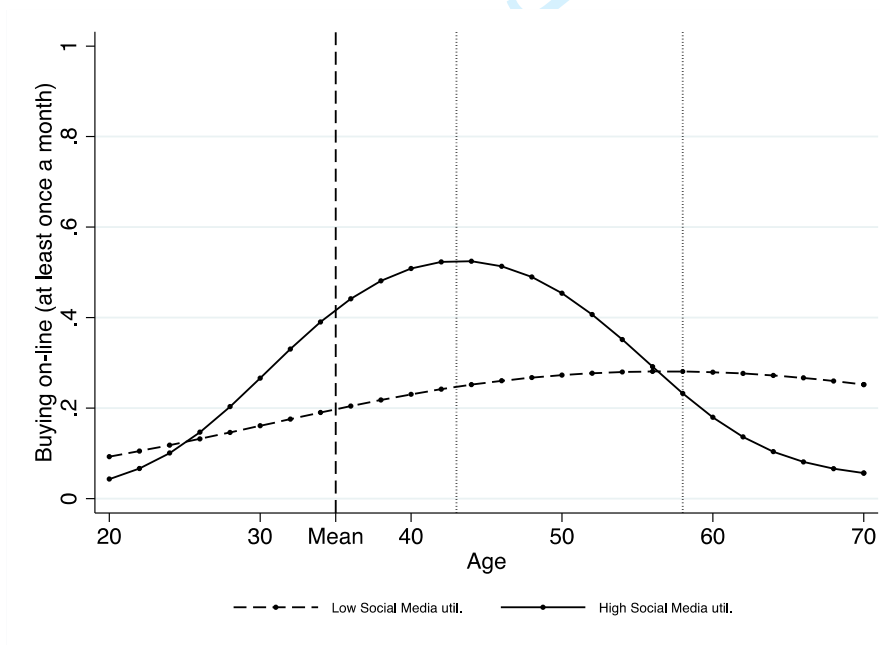
Figure 2 – Interaction between social media use and a) average price of purchased wine and b) knowledge



1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

British Food Journal

Figure 3 – Interaction between social media usage and age



- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20
- 21
- 22
- 23
- 24
- 25
- 26
- 27
- 28
- 29
- 30
- 31
- 32
- 33
- 34
- 35
- 36
- 37
- 38
- 39
- 40
- 41
- 42
- 43
- 44
- 45
- 46
- 47
- 48
- 49
- 50
- 51
- 52
- 53
- 54
- 55
- 56
- 57
- 58
- 59
- 60

British Food Journal

## Does social media usage affect online purchasing behavior for wine? The moderating role of subjective and objective knowledge

### TABLES

**Table I** – Knowledge-based clustering

		Objective knowledge	
		High	Low
Subjective knowledge	High	<b>(HH) Expert</b> (n = 514 – 20%)	<b>(HL) Snob</b> (n = 641 – 25%)
	Low	<b>(LH) Modest</b> (n = 176 – 6%)	<b>(LL) Neophyte</b> (n = 1266 – 49%)

N.B. The name of the wine knowledge type is drawn from Vigar-Ellis et al. (2015b).

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47

Table II: Descriptive statistics and correlations

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]
[1] Wine_online_buying_intention	1,000													
[2] Online_Buying_Freq	0,252	1,000												
[3] Age	0,171	-0,075	1,000											
[4] Gender	0,178	0,100	0,171	1,000										
[5] Salary	0,128	0,014	0,410	0,101	1,000									
[6] Level_edu	0,078	0,055	0,004	-0,091	0,097	1,000								
[7] Wine_Cons_Freq	0,176	-0,011	0,291	0,208	0,172	0,032	1,000							
[8] Wine_Price	0,316	0,082	0,079	0,094	0,122	0,015	0,156	1,000						
[9] Wine_Buying_Freq	0,246	0,042	0,233	0,134	0,139	0,063	0,597	0,182	1,000					
[10] HH	0,338	0,089	0,234	0,198	0,164	0,059	0,338	0,279	0,253	1,000				
[11] LL	-0,293	-0,074	-0,250	-0,238	-0,160	-0,032	-0,397	-0,312	-0,353	-0,484	1,000			
[12] HL	0,057	-0,012	0,031	0,104	-0,006	-0,017	0,136	0,119	0,186	-0,284	-0,558	1,000		
[13] LH	-0,050	0,027	0,072	-0,019	0,069	-0,002	0,023	-0,027	-0,019	-0,134	-0,263	-0,154	1,000	
[14] Social_Media_Use	0,403	0,130	0,037	0,084	-0,024	0,022	0,091	0,241	0,190	0,192	-0,259	0,154	-0,054	1,000
<i>Mean</i>	1,314	2,346	34,276	0,592	0,194	0,458	3,330	2,425	2,656	0,198	0,487	0,247	0,068	1,714
<i>St. Dev.</i>	0,685	0,871	12,658	0,492	0,396	0,498	1,017	0,909	0,916	0,399	0,500	0,431	0,251	0,938
<i>Min.</i>	1,000	1,000	18,000	0,000	0,000	0,000	1,000	1,000	1,000	0,000	0,000	0,000	0,000	1,000
<i>Max</i>	4,000	5,000	88,000	1,000	1,000	1,000	5,000	5,000	5,000	1,000	1,000	1,000	1,000	5,000
<i>VIF</i>	-	1,05	1,31	1,09	1,24	1,03	1,66	1,11	1,63	-	-	-	-	1,11
<i>Tolerance</i>	-	0,96	0,76	0,92	0,81	0,97	0,60	0,90	0,62	-	-	-	-	0,90

N = 2597. The correlation indeces higher than 0,05 in absolute value are statistically significant at 95%. Mean VIF: 1,25; Condition number: 17,03.

Table III: Results from multinomial regression model

Dependent variable: Wine_online_buying_intention			
Outcome basis:			
Never (1)	Outcome (2)	Outcome (3)	Outcome (4)
	< 1/Month	3/4 times/month	> 1/week
Online_Buying_Freq			
[2]	1,904***	1,309***	1,358
[3]	1,533***	2,358***	2,666***
[4]	2,091***	2,469***	5,343***
[5]	4,688***	-12,611***	-14,102***
Age	0,133***	0,395***	0,164
Age <sup>2</sup>	-0,001***	-0,005***	-0,002
Gender	0,278*	1,159***	1,988***
Salary	0,197	0,108	0,711
Level_edu	0,089	0,172	0,965**
Wine_Cons_Freq			
[2]	0,304	-1,034	-1,233
[3]	0,481	-0,173	-2,466**
[4]	1,163*	-0,581	-3,485***
[5]	1,297*	-0,135	-3,848***
Wine_Price			
[2]	0,182	0,100	13,824***
[3]	0,674**	1,324**	13,868***
[4]	1,282***	2,169***	14,809***
[5]	0,328	2,243***	16,195***
Wine_Buying_Freq			
[2]	0,232	0,495	-1,522*
[3]	0,185	2,163**	-1,500*
[4]	-0,025	2,197**	1,211
[5]	0,398	2,646**	2,905**
HH	0,980***	1,830***	1,652
LL	-0,108	1,040*	-0,507
HL	-0,297	1,232**	1,296
Social_Media_Use	0,576***	0,923***	1,404***
Constant	-9,406***	-18,345***	-27,233***

N = 2597. Wald Chi<sup>2</sup>: 4941,10; Pseudo R<sup>2</sup>: 0,345

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47

**Appendix – Measures Description and Properties**

<b>Measures and Source</b>	<b>Item Description*</b>	<b>Factor Load.</b>
Social Media Usage $\alpha = 0.90$	<i>Rate each of the following statements from 1 (strongly disagree) to 5 (strongly agree).</i> x1: I use Social Media to follow the wine brands I like x2: I use Social Media to learn about practical information about wine x3: I use Social Media to read opinions from people sharing the same interest as me on wine x4: I use Social Media to be updated on discounts and promotions on wine	0.83 0.91 0.91 0.86
Subjective Knowledge $\alpha = 0.92$	<i>Rate each of the following statements from 1 (strongly disagree) to 5 (strongly agree).</i> x5: I know a lot about wine brands x6: I know a lot about the features of wine x7: I know a lot about the terminologies related to wine x8: Among my circle of friends, I am one of the “experts” on wine	0.91 0.93 0.91 0.85

