

Communication Through Visual Contents: Instagram Use in The Wineries' Strategies

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Abstract

Considering the visual social media diffusion, this research aims at analyzing the content of the photos posted by wineries of high-end products on Instagram. The objective is to evaluate the opportunities in terms of communication strategies by defining content categories and their ability to create engagement. We conducted a visual content analysis of 443 pictures posted by 7 wineries. To explore the factors affecting the number of likes these pictures received, we ran a linear mixed model. Results show that most of the photos still focus on the product and just a few consider the wine in a holistic way, connecting it with elements such as events or arts. Pictures obtain more likes when the photos include the products and are positively related to the number of hashtags. Number of likes decrease if natural landscape, art or food appear in the picture.

Keywords: Visual Communication, Social Media, Wineries.

Introduction

Social media are becoming more and more a relevant marketing and communication tool for many industries to enhance brands value and to effectively communicate. The way they have impacted both consumer behavior and marketing practice has largely been driven by the platforms (Appel, Grewal, Hadi and Stephen, 2020) In the last years, we have seen the rise of social media platforms where images and videos replace text, such as Instagram, thus marketing manager need to know which kind of picture's content are more effective in the digital landscape.

The interest shown by the wine sector towards online platforms is constantly increasing. Wineries are aware of the actual ongoing communication trends and thus they try to explore the rising opportunities of them. Despite some evidence about the effectiveness of the social media usage in increasing the online wine buying (Pucci, Casprini, Nosi, and Zanni, 2019; Finotto and Mauracher, 2020), less is known about the use of Instagram for wine brands communication. Since this area is recent, there is still a scarcity of papers that shed light on the use of social media among wineries (Lockshin and Corsi, 2012) and that address companies in promoting an effective content strategy in these platforms. Due to this situation, the main objective of this paper is to carry out an analysis of the visual communication contents shared on Instagram by a sample of Italian high-end wineries, in order to investigate the content categories used and which of them generate more engagement.

Literature Review

Digital marketing in the wine industry

Today, wine marketing has to become more marketing oriented than product oriented. As Rouzet, Seguin and Marengi (2005) wrote, it is no longer a matter of finding someone who will buy a wine, but of defining a product that will conform to the desires and needs of a specific client. Wine has become an experience: consumers show the desire of being involved in a lifestyle

experience linked to specific brand values available on all the possible touchpoints of their journey as wine bars, wine cellars, e-commerce platforms, blogs, company websites, apps, social networks and so on (Van Zanten, 2005). Therefore, communication is starting to play a high role for the wine products success and the digital presence represents a "must have".

Most of the studies about digital marketing emphasizes consumer roles and analyzes consumer behaviour. As noted by Szolnoki et al. (2018) less academic attention has been paid to the role of social media from a communications perspective, particularly in the wine industry. Only recently scholars have been focused on this industry and some research has been published on the use of digital media in wineries' communication. Neilson (2014) carried out a content analysis of winery websites in five countries, finding that in most of the cases, web sites are just used to provide information to consumers. Capitello, Agnoli and Begalli (2016) demonstrated a heterogeneous development of online communication, not depending on the territory. Lalicic and Gindl (2019) found out that wineries are rather passive than active on Facebook. As far as the contents are concerned, Dolan and Goodman (2017) found that many wine brands have adopted social media to portray not only their products, but also family history, territory information and events because selling wine means selling a pleasure, a dream, a territory, a story. This is also the reason why the wine marketing strategies are highly specific and often associated with territorial or tourist marketing ones (Cohen and Ben-Nun, 2009). Previous studies explored the adoption and use of social media platforms, proving its infancy as far as strategic marketing is concerned. In Italy, wineries are mainly present with websites, Facebook and Instagram (Finotto and Mauracher, 2020). Due to this scarcity, many scholars highlighted the need for more research in this sector to improve the knowledge and to support companies in an effective adoption of them.

Visual Communication

A key component of modern marketing is visual marketing which focuses on the study and analysis of the ways in which images can be used as the center of a communication message (Wedel and Pieters, 2007). Images are able to create an intense and emotional bond with the observer, allowing the message to appear immediately and in an effective way. It is on these bases that the current preference of brands in their communication strategies is moving towards visual contents (Jamieson and Jamieson, 2007).

Nowadays, visual social media platforms can influence the purchasing decisions of people (Meyerson, 2015). They have changed the way consumers discover products and brands, transforming the traditional transactions into a long-lasting and engaging relationships between consumers and companies through a continuous flow of shared visual contents.

The Research

Objective and Research Questions

The general objective of our research is to shed light on how wineries are using Instagram, focusing on posted visual contents. The study investigates pictures published by wineries and the ability of contents' categories to create engagement. An analysis of the photos published on Instagram by Italian wineries of high-end products is carried out. Consistently with previous studies about visual content in a specific sector (Anagnostopoulos, Parganas, Chadwick and Fenton, 2018; Bernkopf and Nixon, 2019; Ferwerda, Schedl and Tkalcic, 2016; Hsu and Song, 2014; Lai, Khoo-Lattimore and Wang, 2019; Song, Han, Lee and Kim, 2018; Sonne and Erickson, 2018), we aim at defining "what" companies communicate in this platform and the effectiveness of these contents.

In particular, we want to answer to the following two research questions:

RQ1- What visual content are Italian wineries of high-end products communicating through Instagram?

This question arises from the need to investigate whether there is a common pattern in communicating through visual content by wineries with the same nationality (Italian), the same product strategy (only one specific designation of origin) and which operate in the same market segment (high-end).

We want then to verify if there are content categories that are particularly able to engage the audience. Thus, the second research question is defined:

RQ2 - Do pictures with certain contents induce more engagement than other pictures?

Research Design and Methodology

The research is carried out in four main phases:

Phase 1 – Context selection: Italian wineries of high-end products. Italian wine market revenue in 2018 was of 13 billion €, with over 310.000 wine companies spread around the territory with a production of 55 million of hl in 2018 (+29% if compared to 2017). The designation of origin certification accounts for 49% on production while the PDO and PGI recognitions are 526 (Ismea, 2019).

Phase 2 – Data collection: information is downloaded from the Instagram official profiles of a sample of Italian wineries using 4kStogram and Instagram API.

Phase 3 – Content analysis: that is a systematic and objective method used to reduce the complexity of the material under analysis and to capture central themes and content categories (Krippendorff, 2018). It is also a common approach to examine pictures (Hsu and Song 2014; Hunter, 2008.). We combine a deductive content analysis using elements presented in previous research (e.g. Rouzet, Seguin and Marengi, 2005) and an inductive one based on the selected wineries' image analysis coherently with what is suggested in literature (Santarossa, Coyne, Lisinski and Woodruff, 2019; Smith and Sanderson, 2015). A final list of categories and variables is defined by two coders as suggested in literature (Hayes and Krippendorff, 2007).

Phase 4 – Image evaluation: adoption of the identifies content categories to a sample of Instagram images, with the objective of providing an answer to the previously listed research questions.

Sampling

As far as the selection of the wineries sample is concerned, the leading Italian wine e-commerce Tannico website was used to obtain a winery list. In this first exploratory phase, we decided to investigate separately the following product categories proposed by Tannico website: reds, whites and sparkling wines. To refine the sample, the following filters have been applied to each category: (1) country: Italy; (2) format: 0.75l; (3) price: we relied on the price criterion of classification of wines proposed by Yeung and Thach (2019), choosing the high-end products (price greater than or equal to 50\$). Among this first sample, only the wineries which had an official Instagram presence were considered.

We then decided to analyze exclusively the companies with a focused product strategy: companies with a single designation of origin.

For each of the selected wineries' Instagram profile, the following information was collected: number of followers, number of posts, average monthly publication frequency in six months (July-December 2018). Then we calculated the average capacity of the published contents to attract new followers in the profile as number of followers divided by the number of posts.

The 7 best performing companies for number of followers, attractive rate and average publication frequency have been initially considered and shown in table 1.

Table 1: Best performing companies on Instagram use.

NUMBER OF FOLLOWERS	ATTRACTIVE RATE (N FOLLOWERS/N POST)	AVERAGE PUBLICATION FREQUENCY
A1	A3	W
A2	A1	A7
A3	B	A5
A4	A4	A2
A5	A6	A1

In selecting our final sample, we chosen the wineries which appear at least in two columns of table 1: A1, A2, A3, A4 and A5, thus A6 and A7 have been excluded from the sample. Furthermore, in order to provide more useful insights through our analyses,

we decided to add to our sample one “worst performer” (W) - which publishes a lot (high frequency publication) without registering positive results on the followers’ variable (low attractive rate) - and the “best performer” (B) - which published less pictures than the others, but more performing.

Through an Instagram API, we then collected for each winery all the posts between 07/01/2018 and 12/31/2018 saving the following information: post Url, post type (single picture, quotes, collage or video), number of likes, publication date.

Image Content Categories Identification

To define the content categories, we started from the literature review, by selecting the most frequently used elements to describe and communicate wine. Then, further categories have been added adopting the following procedure:

1) Inductive coding. The activity was carried out by two coders. To obtain more generalizable results we analyzed pictures extracted from companies in our first extraction of Italian wineries (full sample composed by all the wineries). Ten companies with an official Instagram profile were randomly extracted: five with a focused product strategy and five having a wide assortment. 2) For each company, the most recent 10 pictures were analyzed. Each coder has evaluated a total of 50 images identifying the categories and their frequency of appearance (a photo could be in more than one category). 3) Each coder selected only the categories with a presence greater than 50% in the sample. 4) The creation of the categories was then discussed: in all the categories a common agreement of interpretation between the two coders was found.

At the end of this process the final categories were 7: product (or one of its elements such as the label) presence, production process, natural landscape, human presence, art and wine, food and wine, events and recognition.

Variables

To answer RQ1 contents the aforementioned categories have been used to classify pictures.

To answer RQ2 the number of likes was used as dependent variable, to measure the engagement (Öztamur and Karakadılar, 2014; Klassen, Borleis, Brennan, Reid, McCaffrey and Lim, 2018; Lee, Hosanagar, and Nair, 2018; Gräve, 2019; Demmers, Weltevreden, and Van Dolen, 2020).

Each of the content categories has been used as dummy variable to estimate the effect on the outcome variable.

Based on previous studies, we also considered as dependent variables in our model the number of hashtags for each post, since it affects the number of likes (i.e. Purba, Asirvatham and Murugesan 2020).

Findings

Sample Description

Overall, the number of downloaded photos for our analysis was 690. Images belonging to "collage" or part of a carousels were excluded because data could not be properly referred to a single picture. “Quote” and videos were also excluded from the sample because they were part of a different frame. The final analysis therefore involved a total of 443 images (Table 2).

Table 2: Summary of the sample

Wineries	Number of posts	Relative frequencies of post (%)	Average number of likes per post	SD likes
A1	65	14.67	1421.32	695.01
A2	57	12.87	2995.56	3054.34
A3	23	5.19	951.22	406.55
A4	41	9.26	625.54	372.75
A5	82	18.51	665.27	362.75
B	34	7.67	638.06	216.30
W	141	31.83	88	25.10

In table 3 the content categories for each winery expressed as relative frequency are presented. Even if wineries share some common elements related to the marketing strategies (high-end market and one wine from a single denomination), decisions about visual contents are different. For wineries A1, A2 and A5 the product is the main element, portrayed in more than 75% of the pictures, despite of other elements such as human being, food etc...

Table 3: Image content categories frequency (%) by each assessed winery (RQ1)

Wineries	Products	Process	Natural landscape	Human	Food	Art	Events
A1	92.3	4.6	36.9	0.0	18.3	9.2	0.0
A2	84.2	0.0	21.1	29.8	12.5	12.3	0.0
A3	21.7	47.8	52.2	21.7	20.0	8.7	4.3
A4	68.3	4.9	22.0	14.6	25.0	24.4	12.2
A5	76.8	7.3	45.1	8.5	44.4	6.1	0.0
B	29.4	47.1	52.9	20.6	10.0	0.0	0.0
W	68.8	10.6	15.6	14.2	17.5	2.8	0.7
Average	70.2	12.0	30.2	14.0	22.8	7.7	0.5

Note that pictures can belong to more than one category.

Concerning our first research question, we can notice that the content strategies of the wineries are not homogeneous, even if there are some patterns. One of the most used content categories is the product, with an average of 70.2% of presence, followed by pictures with natural landscape (30.2%) and pictures with food (22.8%). Except for A3 and B, product is the main image category. The link with art is not adopted extensively by the companies, except for A4 that portrays art elements in the 24.4% of its pictures. Events and recognitions are posted by two wineries only.

As far as our second research question is concerned, the higher number of likes (Table 4) is reached by pictures with human presence (1497.98) followed by pictures portraying a product or part of it (1038.67), but results are not homogeneous among wineries (Figure 1). Due to the low number of pictures, we do not consider the events category.

Table 4: Number of likes by category

	Average number of likes	SD likes
Product	1,038.67	1,613.30
Natural landscape	769.41	734.46
Human presence	1,497.98	2,616.73
Process	537.36	370.80
Food	728.03	682.27
Art	973.88	1,165.77

To perform analysis, similar to prior studies (e.g., Kumar, Choi, and Greene, 2017) we log-transformed the outcome variable.

Data suggests that not only the content publication strategy is heterogeneous, but also consumer response in terms of likes changes (Figure 1). Thus, we observed a high heterogeneity in our dependent variable, which should be taken into account for further analyses.

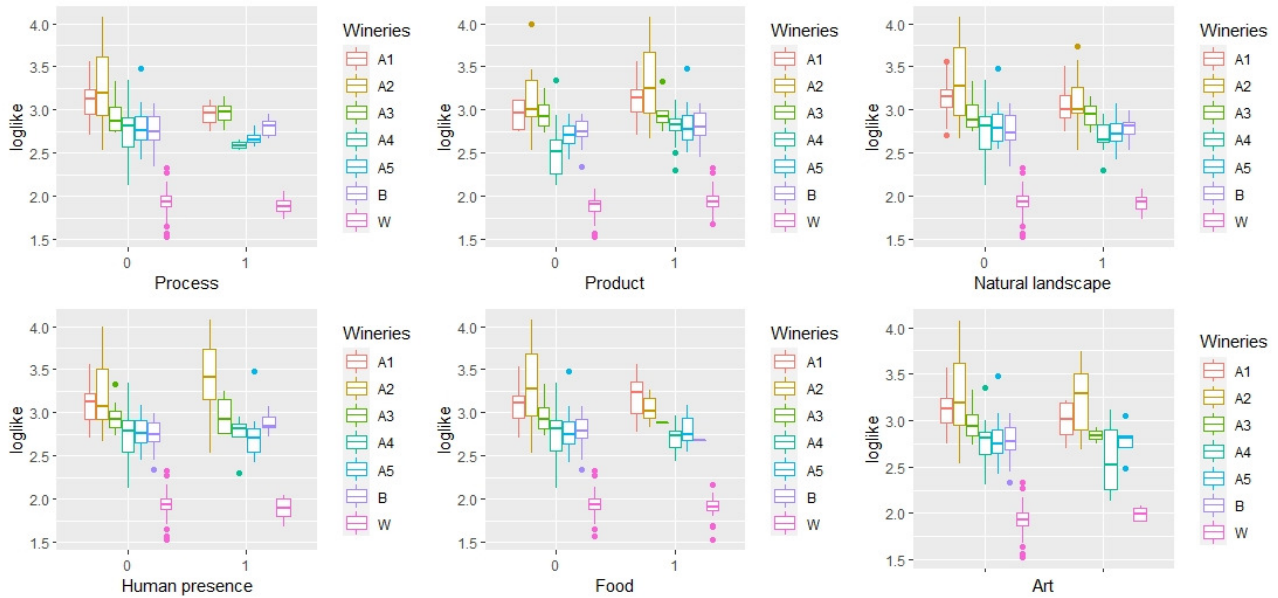


Figure 1: Boxplot of log-transformed number of likes for each category (different panels), grouped for wineries (colours) (where 0s are pictures not belonging to the considered category, 1s are pictures belonging to the considered category).

As previously mentioned, literature suggests that post engagement depends on the number of hashtags, thus to define our model, we analysed the number of hashtags used by wineries too. There are considerably differences in the seven wineries publication strategies, both on the number of pictures published for each category (table 3) and on the number of hashtags (table 5) used in the post captures.

Table 5: Average number of hashtags per post

Winery	Number of hashtags	SD hashtags
A1	1.34	0.59
A2	1.58	0.75
A3	2.35	1.15
A4	10.63	3.67
A5	12.46	6.22
B	5.59	1.64
W	12.32	5.00

Similar to prior studies we log-transformed the independent variable “number of hashtags”. Since number of hashtags have some zeros, in order to avoid taking a log a zero, we added constant of 1 before taking the log-transformation of our independent variable. To analyze the impact of the number of hashtags on post’s number of likes, we plotted these two variables.

Not consistent with previous studies (Ye, Hashim, Baghirov and Murphy, 2018), in our sample hashtags are negative related to likes (Figure 2). Thus, we plotted these relationships by single winery, and we noticed that the slope depends on the wineries.

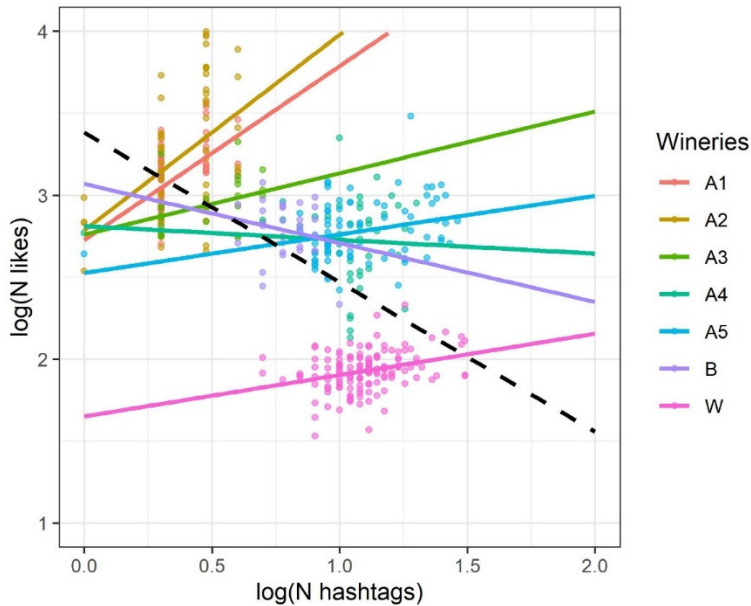


Figure 2: Relation between number of likes and number of hashtags for each winery and for the entire sample (black dashed line)

Using the information that posts are published by the same wineries and hence share some common characteristics (which makes their posts' number of likes similar) a linear mixed model was defined to answer RQ2. This model is able to estimate the general response to the independent variables (fixed effects), while the random effects can be used to control for the heterogeneity among groups (Radojevic, Stanasic and Stanic2015). In particular, our model assumes that intercept of different wineries may vary randomly depending on the winery that publishes a post. The model also assumes that the slope between $\log(N \text{ likes})$ and $\log(N \text{ hashtags})$ may vary depending on the wineries too.

To ensure that the mixed effects model is a suitable technique for the data, we compared all the dependent variables with the fixed component only with the model that contains the same variables and random intercepts based on the wineries.

Model 1 is stated as follows:

$$\log(N \text{ likes}) = \beta_0 + \beta_1 \log(N \text{ hashtags}) + \beta_2 \text{Product} + \beta_3 \text{Natural landscape} + \beta_4 \text{Human} + \beta_5 \text{Process} + \beta_6 \text{Food} + \beta_7 \text{Art} + \varepsilon$$

Model 2 is stated as follows:

$$\log(N \text{ likes})_{ij} = \beta_{0j} + \beta_1 \log(N \text{ hashtags})_{ij} + \beta_2 \text{Product} + \beta_3 \text{Natural landscape} + \beta_4 \text{Human} + \beta_5 \text{Process} + \beta_6 \text{Food} + \beta_7 \text{Art} + \varepsilon_{ij}$$

Where the dependent variable is the average of $\log(N \text{ likes})$ for post i published by winery j . The overall mean of number of $\log(N \text{ likes})$ in the sample is represented as β_{0j} (the intercept) that captures the variation in intercepts between wineries. Our independent variables are: $\log(N \text{ hashtags})$ and six dummy variables related to each category (Product, Natural landscape, Human, Process, Food, Art).

Based on AIC (561.52 vs -41.20), BIC (598.20 vs -0.44) and likelihood value (-271.76 vs 30.60) we can state that model 2 fits better data, therefore the intercept was treated as random effect in the subsequent model.

Then, we compared the model with a random intercept (model 2) with a model (model 3) that includes also a random slope, related to our independent variable $\log(N \text{ hashtags})$ for each post.

Model 3 is stated as follows:

$$\log(N \text{ likes})_{ij} = \beta_{0j} + \beta_{1j} \log(N \text{ hashtags})_{ij} + \beta_2 \text{Product} + \beta_3 \text{Natural landscape} + \beta_4 \text{Human} + \beta_5 \text{Process} + \beta_6 \text{Food} + \beta_7 \text{Art} + \varepsilon_{ij}$$

Therefore, the model estimates different intercept for each winery and also different beta for each winery related to log(N hashtags).

Based on AIC (-41.20 vs -63.11), BIC (-0.44 vs -14.2) and likelihood value (30.60 vs 43.55) model 3 is the preferred option. Thus, a linear mixed model with a random intercept and a random slope to control for multiple observations per wineries was used to appropriately model the data.

Based on significant p-values (<0,05) log(N hashtags) are positive related to the log(N likes) and the presence of products improves average log(N likes). Instead, pictures that portrayed “art and wine” or with “natural landscape” reflected an average decrease in the log(N likes). Pictures where wine is combined with food negatively affect the posts performance (p<0.10).

Table 6: Estimates of fixed effects

	Value	Std.Error	DF	t-value	p-value
Intercept	2.563	0.157	429	16.242.420	0.000
log(N hashtags)	0.399	0.196	429	2.029.252	0.043
Product	0.096	0.026	429	3.570.244	0.000
Natural landscape	-0.060	0.024	429	-2.402.943	0.016
Human presence	0.24	0.028	429	0.817476	0.414
Process	0.048	0.040	429	1.197.403	0.231
Food	-0.046	0.028	429	-1.651.895	0.099
Art	-0.079	0.038	429	-2.074.563	0.038

Conclusions and Managerial Implications

The objective of this work was to evaluate the communication through images posted on Instagram by high-end Italian wineries to understand the contents from a marketing perspective. We used observational data to investigate whether there is a common choice in communicating through visual content by wineries and the effects of image content on consumer engagement.

As far as the contents concern, the analysis highlighted that even comparing similar wineries (wines for high-end market and companies with a single designation of origin) the content strategies are different.

We noticed a prevalence in the presence of the pictures portraying products, but in the high-end wine market, brand is an important asset, and it is mainly communicated through the product itself, the bottle and the wine label. Therefore, these product’s elements are often portrayed either alone or with other elements such as the landscape or human beings.

Our findings also suggest that users prefer picture about products, in fact their presence increases the log(N likes) by 0.096. The importance of highlighting the natural landscape of the territory (Tempesta et al., 2010) is understood by wineries, but pictures portraying natural landscapes decrease log(N likes) by 0.06. This result contrasts with previous studies showing how landscape, history and culture are a powerful communication tool (Sillani, Miccoli and Nassivera, 2017) and thus requires deeper analysis. The difference may be attributable to the natural landscape categorization: Sillani, Miccoli and Nassivera (2017) compared two different types of natural landscape and found that one received more preference than the other. On the contrary, we did not distinguish between the different types of landscape and this could have affected results. Another reason could be related to the specific market we analyzed (high-end) since product characteristics may moderate the influence of various drivers of customer engagement online (Chung and Darke, 2016).

Contrary to some studies on consumer behavioural outcomes in social media, our findings also suggest that human presence does not affect engagement. The reason why should be related to the platform (Instagram) and this is consistent with Li and Xie (2020) that found out that pictures with happy faces increase interaction if they are posted on Twitter but they do not affect liking significantly on Instagram.

Our research contributes to the literature in three way. First, it is one of the first attempt to classify contents and trying to demonstrate if general categories, such as products elements, a human presence, pictures that portray the process, ect... have an impact on the number of likes. Based on general categories related to wine marketing elements, we demonstrated that only

pictures belonging to products and their elements have a positive impact on the number of likes. Photos related to art and wine or with natural landscape produce a smaller number of likes. Second it demonstrates that, despite of the subject of the picture, the number of hashtags affects the number of likes, even if the impact among the wineries is different. Third, our findings highlight the importance to consider the source of the picture when researchers estimate models that explain the performance of posts in social networks such as Instagram, Facebook or YouTube (Wilson and Sherrell, 1993; Wells and Hackanen, 1997; Goh, Heng and Lin, 2013; Checchinato, Disegna and Gazzola, 2015). In fact, our model demonstrates that the number of likes depends on the number of hashtags and it is higher if the product is portrayed and lower if arts, natural landscape or food is the subject, but there is a high heterogeneity that depends on the winery that posted the picture.

In general, however, although belonging to different wineries, the images appear to be very similar, and they seem not to be designed with the aim of telling a specific story.

Based on the main findings and the similarity of pictures, it can be stated that deeper analysis of the Instagram context is needed, adding other information such as time of publishing, target, winery strategy, etc.. Moreover, according to the extant visual advertising literature various image characteristics such as colorfulness, quality or visual arts (Finn, 1988; Li and Xie, 2020) impact on the consumer behavior, therefore further research must consider these elements too.

All these findings suggest that wineries should be able to transfer on Instagram their brands' values by creating memorable experiences, telling a story involving tradition and culture, but emphasizing the uniqueness of their products since it influences users' engagement.

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