THE PRESENCE OF ALGARVE WINE PRODUCERS ON FACEBOOK BETWEEN PRE-COVID-19 AND COVID-19 PERIODS

27

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Abstract

Social media may be used to build virtual communities around brands, allowing consumers to learn more about them and interact with the material they provide. In this sense, it serves as a helpful communication medium for obtaining and disseminating information about wine as a social commodity, affecting wine consumers' purchasing decisions. The number of Algarve wine producers has increased in recent years, indicating the sector's progress. Wine is one of the most popular internet products, and social media sites like Facebook are ideal for promoting it. Thus, the objective of this study is to analyze the evolution of the usage of Algarve wine producers on their Facebook pages between February 2019 and the end of January 2022, corresponding to a pre-Covid-19 period and the Covid-19 period. To do this, we used the model developed by Huertas, Setó-Pàmies & Míguez-González (2015), where the variables of "Contents", "Interactivity", "Visibility" are considered, with an additional variable for "Profitability", referenced by Rodríguez-Fernandez et al. (2017b). The analysis was made through a series of performance indicators collected using the online data collection tool Fanpage Karma. Results have shown a greater effort from some of these pages to produce content more often, specially at the beginning of the Covid-19 pandemic period, while some are still struggling to explore this medium, but overall there is room to be more active and productive in social media networks since these pages frequency of publication is low. In need to adjust their communication strategies, the most active pages grew a lot in numbers of fans, reactions, and other interactions, producing quality content that engaged consumers. The less explored pages show smaller evolution, from which we can conclude that there is still potential in Facebook as a platform for the wine sector.

Keywords

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1. Introduction

Social media networks can be used to create virtual communities around brands allowing its users to inform themselves and interact with the contents delivered by the brands themselves. In this context, it acts as a useful communication channel to obtain and disseminate information about the social product that wine can be, ultimately influencing wine consumers' buying behavior. These networks may be defined as a tool established on the internet (Kaso et al., 2021), that allows user creation, be it individuals or entities (Reyneke, Pitt & Berthon, 2011). Businesses and brands have been investing progressively in them as big communication channels (Ashley & Tuten, 2015).

The most popular social media network worldwide is Facebook, with 2,910 million users globally as of January 2022 (Statista, 2022; Global Social Media Stats, 2022). In Portugal, it is also the most popular and used social network with a significant part of the country's internet users being registered on this platform that allows its users to connect and interact with each other. The Covid-19 pandemic that started in 2020, with the first lockdown in March of that year and the second in January 2021, obligated every brand to make several changes to their communication strategies, including their online presence on social media channels.

Located in the south of Portugal, Algarve was the first region of the country to adopt Mediterranean habits, with the inclusion of the cereals, wine, and olive oil trilogy. The wine production in the region is historically rooted in the Algarve habits, and its wine sector has seen an interesting growth in the latest years in terms of the existent wine producers, showing how the sector has been evolving positively in the region. Wine can be seen as a social product since it is one of the top product categories involved in discussions all over the internet. This platform is ideal for wine promotion and in this case, specifically on social media networks, like Facebook.

This study focuses on analyzing how the Algarve wine producers have been using their Facebook pages throughout the last years, from the 1st of February 2019 until the 31st of January 2022, corresponding to the pre-Covid-19 period and the covid-19 pandemic period. During this time frame, the covid-19 pandemic started and affected all these entities, and their marketing strategies, with most of them needing to reshape and readapt to this new reality where digital communication is crucial to every company. Due to this, the Facebook pages of these wine producers will be analyzed using a methodology established by Huertas, Setó-Pàmies & Míguez-González (2015), using variables such as "Contents", "Interactivity" and "Visibility", adding the variable "Profitability" suggested by Ródriguez-Fernandez et al. (2017) on their research. For the matter, the data collection online tool Fanpage Karma was used to collect data from these Facebook pages.

This study introduces a literature review related to the topics of Engagement, Facebook, social media, Algarve wine producers, and models of usage analysis on Facebook, searched on the scientific databases Scopus and Scholar Google, intending to find articles, book chapters and conference articles relevant for this study. After that, a brief explanation about the situation of the Algarve Wine Commission is provided. The

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chosen methodological framework is described; the results obtained are then described and discussed, to conclude with recommendations for future practice and research.

2. Literature Review

2.1 Communicate and Engage with Social Media

Observing the last decades, the most impactful technological development has been the Internet, making it possible for individuals to share and view knowledge in a very speedy way (Obermayer et al., 2021). Following these developments, organizations have made significant adjustments to the way they interact and communicate with their public, deeply reshaping on businesses operate in terms of communication (Siamagka et al., 2015; Reyneke, Pitt & Berthon, 2011) using communication channels like social media. Social media may be described as a tool based on the internet (Kaso et al., 2021) that allows users, such as individuals or entities (Reyneke, Pitt & Berthon, 2011) to create a semi-public/public profile inside a limited system, create connections with other users and visualize connections established inside this same system in a relatively inexpensive and accessible communication approach (Breton-Miller & Miller, 2016; Kallmuenzer et al., 2018; Parveen, Jaafar & Ainin, 2015; Boyd & Ellison, 2007).

Brands and businesses are increasingly adopting social media as a communication channel since they follow the path consumers take (Ashley & Tuten, 2015), a phenomenon that is transforming the way companies operate and relate to their customers and providers (Pekkala & van Zoonen, 2021). It is bringing up new opportunities for brands to extract different types of value from existing and potential consumers since social media provides new ways of interaction between businesses/brands and their consumers (Kujur & Singh, 2020). Pekkala & van Zoonen (2021) highlight how important social media is to consumer decisions, suggesting that customers consider the content produced in those channels when forming relationships and making buying decisions.

A strong and well-established fan base strengthens consumer-brand relationships and positively impacts the customers' spending decisions (Kumar et al., 2010; Pansari & Kumar, 2017; Kujur & Singh, 2020). Businesses should plan and create marketing strategies that can generate interaction, interest, conversation, and engagement from their customers. Engagement is progressively acquiring greater value and is currently worked by organizations as a concept that is built through content and the participation by customers in platforms like social media (Egaña, Pezoa-Fuentes & Roco, 2021). Engagement can take form as an action that might be passive, by consuming the multimedia content on the pages, or active, by interacting directly with reactions/comments/shares (Ashley & Tuten, 2015; Taylor & Kent, 2014; Schivinski, Christodoulides & Dabrowski, 2016).

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2.2 Facebook Usage in Portugal

Between the multiple social media available today, Facebook is the most popular and used one with 2,910 million users worldwide as of January 2022 (Statista, 2022; Global Social Media Stats, 2022). Facebook is a social network that allows its users to connect, share information, interact with pages, groups, and other users, (Kim et al., 2021; Blazquez et al., 2020) explore themselves and communicate using mobile devices and personal computers, with flexibility and speed. In Portugal, Obercom (2021), through their Digital News Report Portugal, suggests that Facebook is also the most popular and used social media, with 73.7% of the total Internet users in the country using Facebook. Irene Caño (Dn Insider, 2019), Country Manager at Facebook Iberia, indicated there were 6.2 million users in Portugal by the year of 2019, 1 million more when compared to the year of 2015.

2.3 Wine: a Social Product Communicating on Social Media

Wine is an essential part of the culture and history of any region, reflecting the identity and forming an essential part of its heritage. The term 'wine culture' takes various forms within a territory, all centred on wine, which is an inherent part of the culture of the place (Rodríguez-Fernández et al., 2017b). Looking at it in a modern way, wine may be considered a social product, since it is one of the top eight product categories involved in discussions over the internet. Thus, the internet is an ideal platform for wine promotion and sales of it. Before social media got worldwide attention, wine consumers sought information from specialized magazines, books and newsletters (Costopoulou, Ntaliani & Ntalianis, 2019). In recent years, more consumers are consulting social media networks *connoisseurs*, *sommeliers*, and other wine consumers commenting and interacting with those profiles/pages on social media to help them decide on a satisfactory wine purchase (Costopoulou, Ntaliani & Ntalianis, 2019).

In the Wine Industry, online forums/comments about wine and Facebook profiles have positively impacted the positioning of tourist companies (Sánchez Jimenéz, 2020; Rodríguez et al., 2016; Rodríguez-Fernández et al., 2017b), since they can be a potentially valuable source of information for wine tourists (Dean & Forbes, 2016). The businesses have a lot to gain from the social media feedback provided by their customers (Costopoulou, Ntaliani & Ntalianis, 2019), with the example of Fiore et al. (2016), where the adoption of social media was very useful for the wineries in the region of Apulia (Italy) since they used shared consumer ideas and suggestions for product improvement (Pucci et al., 2019).

These communication channels are crucial to open up new opportunities for wine businesses, which can be enhanced for wine branding strategies, like collecting data from social media profiles/pages as an innovative basis for market segmentation (Cuomo et al., 2016), explore downloadable applications, such as mobile commerce (Pelet & Lecat, 2014) and also utilize some software to collect more in-depth relevant data/information

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on the market (Scorrano, Fait & Maizza, 2015). Sogari et al. (2017) study claims that social media use is influencing the wine consumers buying behavior online, encouraging them to pay higher prices per wine bottle.

2.4 Portugal's Wine Sector Profile

The wine culture is historically connected to Portugal as an agricultural activity of great relevance economically and socially. Due to its edaphoclimatic conditions, Portugal's wine has unique characteristics and qualities, recognized all around the world. The international reputation of Portuguese wine is growing a lot, and with that, the exportation numbers have been exponentially growing in the last years. By 2019, the Portuguese wine exportation was worth 820 million euros (Viniportugal, 2022), in 2020 the number reached a total of 846 million euros and by 2021 the growth continued, with an 8,11% growth in the value compared to 2020, being worth 925 million euros (IVV, 2022).

Located in the south of Portugal, Algarve is a region characterized by its proximity to the sea, its climatic conditions, and the natural vegetation. This was the first region in the country to adopt Mediterranean habits, with the inclusion of the cereals, wine, and olive oil trilogy. Wine consumption is deeply rooted in Algarve's habits since it has been explored by merchant wine-consuming peoples like the Phoenicians, Greeks, Carthaginians, and Romans (Serra et al., 2021). The Algarve wine region was demarcated in 1980, and its entire area corresponds to the production area of "Algarve Regional Wine" and "Algarve" fortified wine (IGP) (Serra et al., 2021). The four regions with "Protected Designation of Origin" (DOP) are DOP Lagos, DOP Lagoa, DOP Portimão, and DOP Tavira, which are all located along the Atlantic/Mediterranean coast (CVA, 2022).

The Algarve wine sector history started off with the "Comissão Vitivinícola Regional Algarvia", constituted by public deed in 1991, initiating its activity in 1994. The institutional organization of the winemaking sector was established with the publication of the Decreto-Lei nº 212/2004, also leading to a name change in the commission, becoming "CVA – Comissão Vitivinícola do Algarve" (Mendes & Colaço do Rosário, 2018).

In 2010, there were 16 wine producers registered at the Comissão Vitivinícola do Algarve, a number that exponentially grew during the last decade, with 34 registered in 2018, and by the end of 2021, there were 50 wine producers registered in the region. The Algarve vineyard size represents 0.7% of Portugal's vineyard, with 1400 ha (Instituto da Vinha e do Vinho, 2020), a number that has been decreasing in the last years, showing the focus in the region has been quality over quantity. Following the Instituto da Vinha e do Vinho statistics (2021), the wine production in Algarve reached the 1.4 million liters of wine in 2021, a 10% growth when compared to 2020. Table 1 shows the Algarve wine production from 2017 to 2021 and its share compared to the national production.

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Table 1. The Algarve wine production and its share in national production

Years	Wine Production (hl)	% (of national production)
2017/2018	15 777	0.2
2018/2019	17 042	0.3
2019/2020	13 926	0.2
2020/2021	13 043	0.2

Source: Instituto da Vinha e do Vinho (2021)

33

3. Methodology

3.1. Methodology Design

The objective of this study is to analyze the usage of social media channel Facebook of the Algarve wine producers' pages, an evolutionary analysis between February 2019 and January 2022, starting during a pre-Covid-19 period and during the actual Covid-19 pandemic period. This study has a exploratory nature and follows a comparative approach to comprehend the usage of social media channel Facebook by Algarve wine producers. This study introduces a literature review related to the topics Engagement, Facebook, social media, Algarve wine producers and models of usage analysis on Facebook, searched on the scientific databases Scopus and Scholar Google, with the objective of finding articles, book chapters and conference articles relevant for this study. For this analysis, we used the model used in the Huertas, Setó-Pàmies & Míguez-González (2015) study where it used the following variables: Contents, Interactivity and Visibility. This model has been used in various studies like Pérez-García & Torres-Valdés (2019) in tourism promotion and Amaral & Santos (2020) for Portuguese universities. The variable "Profitability" is also used for this research, being retrieved from the model suggested by Ródriguez-Fernandez et al. (2017b) on their study. In each one of these four variables, we have various indicators as shown in table 2. For further information, check the Annex A, that contains all the authors citing each one of the variables and indicators used in this study.

Table 2. Variables and indicators used for the pages analysis

Contents	Interactivity	Visibility	Profitability
Content format Frequency of publication	Engagement Fan Reactions, Comments and Shares Fan posts	Number of fans Posts per day Reactions (Average) Comments (Average) Shares (Average) Post Length Hashtag usage Publication Hours Preferred days of the week for publication	Ad-Value Page Performance Index

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3.2. Universe and Sample

For the research, we are going to analyze the usage of social media Facebook by the Algarve wine producers, which were identified on the platform Vinhos do Algarve (https://vinhosdoalgarve.pt), the official Wine Commission of the Algarve region. In this platform, 51 producers were identified, and 36 of those are currently active on Facebook, possessing a page there. All the pages analyzed can be seen in table 3.

34

Table 3. Algarve wine producers' Facebook pages

Wine Producers	Facebook page link	Facebook creation date
Adega do Cantor	www.facebook.com/adegadocantor/	22/10/2010
Arvad Wine	www.facebook.com/arvadwine/	05/08/2020
Dom Vicente	www.facebook.com/domvicente.shop/	07/12/2020
Dona Niza	www.facebook.com/donanizawines/	15/04/2020
Edd's Wine	www.facebook.com/Edds-Wine-104656094952765/	19/01/2021
Falésia Wines	www.facebook.com/vinofalesia/	22/03/2019
From Algarve	www.facebook.com/fromalgarve/	24/01/2013
Herdade Barranco do Vale	www.facebook.com/herdadebarrancodovale/	30/05/2017
Herdade do Morgado do Quintão	www.facebook.com/morgadoquintao/	29/04/2017
Herdade dos Pimentéis	www.facebook.com/Herdade-dos-Pimenteis-1481177902133118/	21/08/2014
Herdade dos Seromenhos	www.facebook.com/Herdade-dos-Seromenhos-194811827341581/	21/06/2013
Monte da Casteleja	www.facebook.com/Monte-da-Casteleja-212578398791736/	06/08/2011
Monte do Além	www.facebook.com/montedoalem/	12/11/2012
Monte dos Salicos	www.facebook.com/Monte-de-Salicos-MDS-Vinhos-294665047792403/	19/08/2013
Quinta da Horta Nova	www.facebook.com/Horta-Nova-472051302809137/	20/06/2012
Quinta da Malaca	www.facebook.com/vinho.malaca/	14/05/2013
Quinta da Penina	www.facebook.com/Quinta-da-Penina-109532860759492/	04/11/2021
Quinta da Tôr	www.facebook.com/quintadator/	07/04/2015
Quinta da Torre | Marchalégua	www.facebook.com/Marchal%C3%A9gua-489957517865309/	19/05/2016
Quinta da Vinha - Cabrita Wines	www.facebook.com/cabritaquintadavinha/	02/12/2014
Quinta do Barradas	www.facebook.com/O-Barradas-433387793370085/	01/09/2012
Quinta do Barranco Longo	www.facebook.com/Quinta-do-Barranco-Longo-98780284756/	05/07/2009
Quinta do Canhoto	www.facebook.com/Quinta-do-Canhoto-790397787689386	21/10/2014

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Wine Producers	Facebook page link	Facebook creation date
Quinta do Convento do Paraíso	www.facebook.com/conventodoparaiso/	10/10/2014
Quinta do Francês	www.facebook.com/QuintaDoFrancesWinery/	16/10/2012
Quinta do Morgado da Torre/Villa Alvor	www.facebook.com/morgadodatorre/ e https://www.facebook.com/villaalvorvinhos	25/02/2019
Quinta do Outeiro - Paxá Wines	www.facebook.com/paxawines/	07/05/2010
Quinta do Patarinho	www.facebook.com/casasantoslima/	07/04/2010
Quinta do Rogel	www.facebook.com/QRsporthorses/	11/07/2021
Quinta dos Capinhas	www.facebook.com/quintadoscapinhas/	08/05/2017
Quinta dos Santos	www.facebook.com/QuintaDosSantos/	17/01/2018
Quinta dos Sentidos	www.facebook.com/quintasentidos/	23/09/2016
Quinta dos Vales	www.facebook.com/quintavales/	09/09/2010
Quinta João Clara	www.facebook.com/joaoclaravinhos	
Sul Composto	www.facebook.com/sulcomposto/	21/06/2020
Única – Adega Cooperativa do Algarve	www.facebook.com/%C3%9Anica-Adega-Cooperativa-do-Algarve-274058662638475/	11/11/2011

3.3 Data Collection

The data collected corresponds to the period of 3 years, between the 1st of February of 2019 and 31st of January of 2022. The first year of data collection, from February of 2019 to February 2020 corresponds to the Pre-Covid-19 period, and from March 2020 to January 2022, we consider it the Covid-19 pandemic period. The pandemic which started in 2020, had its first lockdown in March of that year and the secondinn January 2021. For the data collection, we used the online tool Fanpage Karma, used to retrieve social media analytics and for its monitoring. It provides useful insightsinton the performance of multiple social media channels like Facebook, the social media network analyzed for this research. Fanpage Karma has been used on various studies like Jayasingh & Venkatesh (2015), Gutiérrez Montoya, Sánchez Jiménez & Coronil (2018), Martínez-Fernández et al. (2015), Jiménez (2018) and De las Heras-Pedrosa et al. (2020). After collecting the data from Fanpage Karma, it was analyzed using Microsoft Excel, where several graphics and tabled were produced.

4. Results and Discussion

The results obtained from the data analysis of the Algarve Wine Producers Facebook pages are presented in this following section, where the results are exposed.

Regarding the 36 Facebook pages of Algarve wine producers analyzed, it is possible to verify that the date of creation of the first page was in 2009 and the last in 2021, like seen on table 4.1. From 2009 to 2014 the number of pages grew progressively with 3/4

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new pages per year until 2015, in which no new page was created. From 2019 to 2020, 6 new pages were created, the biggest growth in the period analyzed, doubling the growth from the period before, from 2018 and 2019, a pre-Covid-19 period. The growth seen from 2019 to 2020 coincides with the start of the Covid-19 pandemic at the beginning of 2020. The growth of existent Algarve wine producers' pages is presented in Figure 4.

Table 4. Algarve Wine Producers' Facebook pages creation date throughout the years

Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Count	1	2	4	3	4	4	0	3	1	3	3	6	2
Total	1	3	7	10	14	18	18	21	22	25	28	34	36
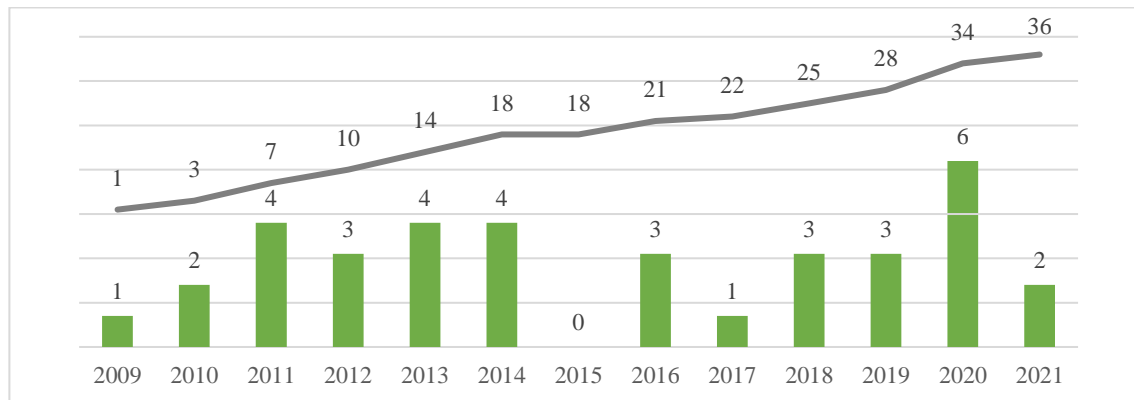
Figure 1. Algarve Wine Producers' Facebook pages creation date throughout the years

4.1 Content

In today's digital era, content is set as a priority for the marketing strategies defined by companies (Rodriguez-Vázquez et al. 2018). Analyzing the first indicator in table 4.2 with the 15 pages that contain the most posts, we have Posts per day, where the Facebook page Herdade Barranco do Vale has the higher average number of all the 36 pages, with 0.5 posts per day and a total of 522 posts, followed by diverse pages with 0.3 posts per day. The lowest average number belongs to Monte do Além, with only 1 post in this period. The page Quinta do Morgado da Torre shares the same average/total number of posts as the Monte do Além page, with their only post being uploaded on the 27th of March of 2019, announcing a brand change, launching their new Facebook page called Villa Alvor. After analyzing the Villa Alvor page, we can understand it has the 4th best number of posts per day. When it comes to the content format, picture posts are the favorite format, representing around 78% of all the Facebook pages posts, followed by link posts, with 12%. Except for the Horta Nova page, every other page's most dominant format is the pictures, since this type of post is very popular between marketeers, as they usually don't require much effort nor time for publication, since memory may easily complete the comprehension of a visual format like an image (Cárcamo & Marcos, 2014).

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The collected and analyzed data about this variable and its indicators is available on table 5.

Table 5. The average percentage for each post type and posts per day

Wine Producers	% Video posts			% Picture posts			% Link posts			Frequency of publication		
	1	2	3	1	2	3	1	2	3	1	2	3
Herdade Barranco do Vale	8,0	11,2	10,2	78,8	59,6	70,5	10,0	23,2	18,3	0,6	0,5	0,3
Quinta dos Vales and The Winemaker Experience	5,7	9,8	6,5	57,2	62,8	50,8	20,4	21,8	34,5	0,4	0,4	0,2
Paxá Wines	9,3	4,9	2,2	72,4	82,8	79,4	0,8	5,9	10,0	0,2	0,4	0,3
Villa Alvor	1,7	10,6	11,8	87,3	87,4	88,2	1,9	2,0	0,0	0,3	0,3	0,2
Casa Santos Lima	3,0	6,8	20,4	97,0	83,6	79,6	0,0	2,1	0,0	0,2	0,3	0,2
Quinta Da Tôr	12,0	24,1	15,4	81,1	67,2	79,2	6,9	6,2	4,0	0,1	0,2	0,3
Única - Adega Cooperativa do Algarve	9,7	6,1	6,6	66,4	54,0	71,3	20,6	14,7	12,6	0,1	0,1	0,2
MALACA	4,9	9,5	8,0	55,6	68,7	70,7	12,5	20,1	21,2	0,1	0,2	0,2
Marchalégua	4,6	11,2	8,3	73,7	67,0	30,6	20,4	5,1	36,1	0,2	0,2	0,0
João Clara Vinhos	0,0	7,4	5,0	8,3	54,1	93,6	16,7	5,6	1,4	0,0	0,1	0,3
Quinta Do Francês Winery	14,1	8,7	10,1	50,2	53,3	69,5	21,1	8,6	20,4	0,1	0,1	0,1
Morgado do Quintão	0,0	0,0	3,8	58,3	41,7	92,9	0,0	0,0	3,3	0,1	0,0	0,3
Quinta dos Capinhas	10,8	4,4	8,3	61,9	70,1	45,8	27,3	8,8	4,2	0,3	0,1	0,0
Horta Nova	17,3	0,0	0,0	30,1	10,4	11,1	42,5	72,9	43,1	0,2	0,1	0,0
Dom Vicente	0,0	4,4	8,9	0,0	7,4	82,8	0,0	4,8	0,0	0,0	0,1	0,2
Average	**6,7**	**7,9**	**8,4**	**58,6**	**57,9**	**67,9**	**13,4**	**13,5**	**13,8**	**0,2**	**0,2**	**0,2**

Note: 1 represents 02/2019 to 01/2020, 2 represents 02/2020 to 01/2021 and 3 represents 02/2021 to 01/2022.

In the case of this study, the picture format is very useful, since it can reproduce what the wine bottle looks like or other visual contents around the wine theme, like the vineyards of these producers or wine-producing processes. Find all the values for the Contents variable and its indicators for the 3 years of data analysis in Annex B.

The video format post is most explored by the Quinta do Barranco Longo page, with 23% of the uploaded contents being video posts and less explored by Quinta dos Sentidos/Sul Composto pages (and Monte do Além/Quinta do Morgado da Torre, but they only have 1 post each on their page between these periods), with 0 video posts in their total of 29 and 26 posts, respectively. The Horta Nova page is at the top of the ranking for Link posts, with more than half (53%) of their posts using this format, followed by Herdade dos Seromenhos, with around 27% of link posts. Figure 2 presents how the posts are distributed by its type, either picture posts, link posts or video posts.

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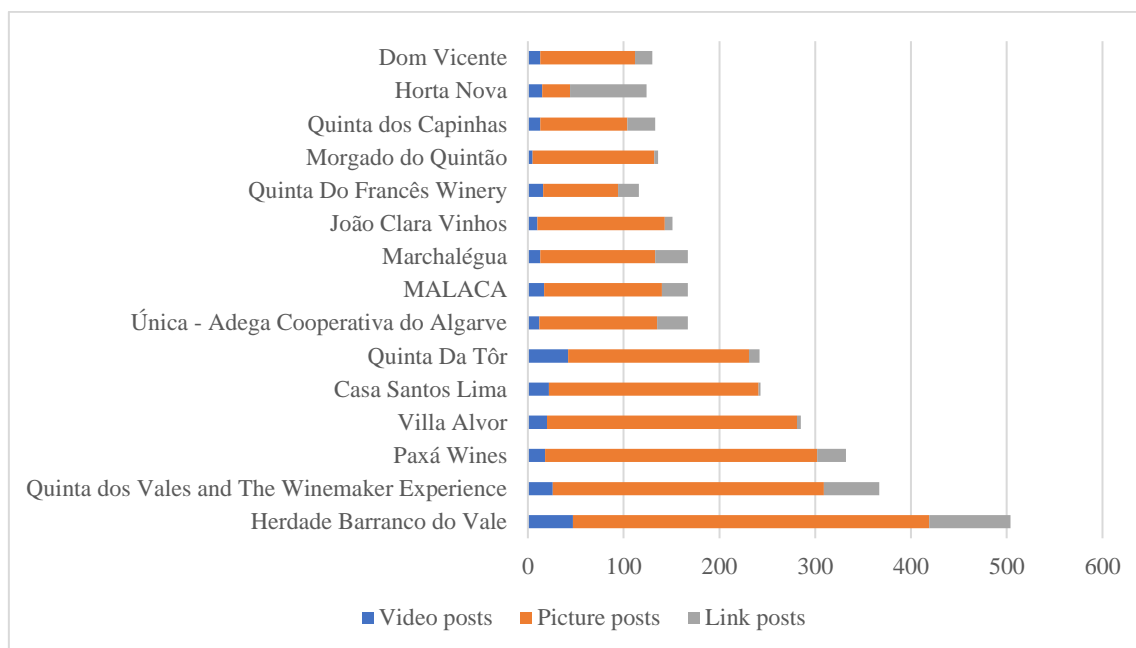
Figure 2. The total of posts of the top 15 Facebook pages per post type, during the 3 periods

4.2 Interactivity

Regarding the Interactivity variable, we first analyzed the fans' reaction, and we can notice that the Villa Alvor stands out among the other pages, with more than 58k total reactions, comments, shares, almost double of the following page, which is Casa Santos Lima. Comparing the posts per day with the fans' reactions, it's not really possible to detect a correlation between the variables: if the posts per day number is high, you can't really say the fans' reaction number will also be high, since some of the pages with higher posts per day numbers have a lower number of fan reactions. Another variable analyzed is the engagement, which following the FanPage Karma formula it is calculated by adding the number of all the fan reactions (as the form of likes, haha., love, wow, etc), comments and shares. For each post, the sum of interactions is divided by the number of followers at the time of the post. Then you add up the values of all posts. Finally, you divide this sum by the number of days in the period (Fanpage Karma Academy, 2022). We can verify the engagement values in the table 6, as well as the Total Reactions, Comments and Shares and Fan posts, a table that contains the 15 pages with the highest engagement values.

Table 6. The indicators for the Interactivity variable

Wine Producers	Fan Reactions, and Shares		Comments	Engagement (%)			Fan Posts		
	1	2	3	1	2	3	1	2	3
Villa Alvor	5 821	22 757	29 619	6,3	3,5	3,2	0	1	13
Herdade Barranco do Vale	10 098	6 046	4 349	1,4	0,6	0,4	6	5	10
Quinta Da Tôr	7 841	6 651	6 070	0,7	0,5	0,3	0	0	0
Morgado do Quintão	823	341	3 286	0,5	0,1	0,5	3	10	16

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Wine Producers	Fan Reactions, Comments and Shares			Engagement (%)			Fan Posts		
	1	2	3	1	2	3	1	2	3
Adega do Cantor	13 584	9 599	2 889	0,6	0,4	0,1	8	18	12
Casa Santos Lima	11 260	10 326	7 491	0,5	0,4	0,2	6	4	18
João Clara Vinhos	384	3 092	4 417	0,1	0,4	0,5	1	5	6
Marchalégua	793	3 337	167	0,2	0,6	0,0	2	2	2
Quinta dos Sentidos	309	351	-	0,4	0,3	0,0	9	2	3
Quinta Do Francês Winery	1 890	1 619	1 953	0,2	0,2	0,2	0	3	10
Monte da Casteleja	1 517	911	530	0,3	0,1	0,1	0	0	0
Horta Nova	586	65	10	0,4	0,0	0,0	0	7	3
Única - Adega Cooperativa do Algarve	665	607	961	0,1	0,1	0,1	1	5	18
Quinta do Barranco Longo	4 390	8 701	2 958	0,1	0,2	0,1	0	5	9
O Barradas	65	144	19	0,1	0,2	0,0	0	0	0
Average	**4002**	**4970**	**4315**	**0,8**	**0,5**	**0,4**	**2**	**4**	**8**

Note: 1 represents 02/2019 to 01/2020, 2 represents 02/2020 to 01/2021 and 3 represents 02/2021 to 01/2022.

In this investigation, engagement will take form as the participation of Algarve wine consumers on Facebook, an action that can be passive, by consuming the multimedia contents on the pages, or active, by interacting directly with reactions/comments/shares (Ashley & Tuten, 2015; Taylor & Kent, 2014; Schivinski, Christodoulides & Dabrowski, 2016). Related to the fans' reaction variable, it's logical the page Villa Alvor will have the highest engagement number since they have the highest number of fan reactions among the 36 pages analyzed. Their 4.3% engagement rate goes to show that success is dependent not only on the number of fans but also on quality content/interaction with the public (Rodríguez-Vázquez et al., 2018). There are different factors that can influence positively/negatively the engagement rate, like content format, hour/day of publication, or the post length (Pletikosa Cvijikj & Michahelles, 2013).

Looking at the user posts type of variable, the Adega do Cantor page has the highest number, with 38 posts, 9 and 10 more posts than the Morgado do Quintão and Casa Santos Lima pages. 6 out of the 36 pages didn't have any user posts during the analyzed period. Even though the Quinta do Morgado da Torre page announced their business marketing would happen on a new Facebook page (Villa Alvor) during the month of March of 2019, only 1 month after the start of our data analysis, it still had 1 user post.

If we analyze the Total Reactions, Comments and Shares for the top 15 pages, it shows that the Covid-19 pandemic had a good effect on it, since this number peaked during the 2nd period analyzed, from February 2020 to January 2021, and kept higher values in the 3rd period compared to the 1st one, referent to February 2019 and January 2020. The engagement values show a decrease during the analyzed periods, specially during the 2nd period, that corresponds to the period between February 2020 and January 2021. The last indicator of this Interactivity variable is the Fan Posts, that had a increase on its values

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during the analyzed period, with the triple average fan posts by the end of the 3rd period, when compared to the 1st period, beginning in February 2019 and ending in January 2020. The total values for the Interactivity variable and its indicators for the 3 years of data analysis are available in Annex C.

4.3 Visibility

40

The Visibility variable is useful to evaluate which are the most relevant indicators to achieve a higher presence on social media (Rodriguez-Vázquez et al., 2018). The number of fans on Facebook is one of the most important variables since it directly allows us to understand the page's visibility beyond its offline community (Amaral & Santos, 2020). The Quinta dos Vales and The Winemaker Experience page stands out with the highest number of fans of all the pages, more than double the Quinta do Barranco Longo page, the second page with the highest number of fans. Only 2 of the 36 pages have more than 10 thousand fans and 13 of them have less than 1000, the other 21 pages have between 8862 and 1238 fans. The posts per day indicator has been also referenced in the contents variable, but in this case, it directly affects the visibility of a page, considering the higher the average number of posts per day is, the chances of it reaching a wider audience is bigger (Rodríguez-Fernández et al., 2017a).

Table 7. The indicators for the variable Visibility for the 15 pages with the most number of fans

Wine Producers	Number of fans			Posts per day			Reactions			Shares			Comments			#	Post Length		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3		1	2	3
Quinta dos Vales and The Winemaker Experience	25	26	27	0,	0,	0,										Y	2	2	
	61	59	22	4	4	2	24	35	20	5,	7,	2,	0,	1,	0,	e	2	3	27
	2	9	1	3	0	0	,5	,5	,2	5	2	4	9	4	7	s	5	9	3
Quinta do Barranco Longo	11	12	12	0,	0,	0,	16	13	10		1					Y	1	1	
	96	40	49	1	1	1	5,	3,	8,	9,	2,	5,	4,	3,	7,	e	5	2	
	1	4	5	1	3	1	8	3	9	2	3	0	5	2	6	s	3	6	91
Casa Santos Lima	7	8	8	0,	0,	0,	13			1		1				Y	3	3	
	03	14	86	2	2	2	5,	93	84	1,	9,	4,	4,	4,	3,	e	7	2	28
	1	0	2	2	6	1	6	,9	,4	1	5	3	9	1	6	s	8	8	0
Adega do Cantor	6	6	7	0,	0,	0,	21	17	10	1	2	1	1	2	2	Y	2	5	
	51	96	16	0	1	1	0,	3,	7,	7,	0,	8,	6,	2,	3,	e	2	3	26
	2	6	3	3	1	6	3	1	5	1	6	0	3	0	3	s	4	4	9
Paxá Wines	5	6	6	0,	0,	0,										Y		2	
	80	13	30	3	4	2	16	21	13	1,	3,	1,	1,	1,	0,	e	9	5	25
	8	7	3	3	0	1	,4	,6	,9	8	0	1	5	9	4	s	2	2	1
Quinta Da Tôr	3	4	6	0,	0,	0,	12			1						Y	1	2	
	33	61	04	3	2	1	9,	78	51	4,	8,	6,	5,	5,	2,	e	9	6	34
	7	4	5	1	3	4	7	,7	,0	6	9	5	8	4	5	s	5	8	1
MALACA	4	4	5	0,	0,	0,										Y			
	60	73	08	2	1	0	17	19	18	2,	5,	7,	0,	1,	1,	e	7	7	
	8	8	9	2	9	7	,3	,5	,7	4	3	0	8	2	7	s	4	9	83

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Wine Producers	Number of fans			Posts per day			Reactions			Shares			Comments			#	Post Length		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3		1	2	3
Villa Alvor	1300	2043	3516	0,23	0,29	0,27	45,2	211,9	309,1	5,4	11,5	12,4	0,6	3,9	4,8	Yes	386	562	304
Herdade Barranco do Vale	2449	3098	3420	0,34	0,49	0,60	38,2	27,1	27,9	5,3	5,0	4,5	1,7	1,6	1,7	Yes	114	112	191
João Clara Vinhos	1914	2499	2855	0,29	0,13	0,01	15,0	53,2	35,9	12,0	3,9	4,6	1,5	2,5	1,6	Yes	76	201	176
Quinta Do Francês Winery	2368	2633	2851	0,13	0,13	0,12	37,2	29,1	34,2	4,4	3,9	4,5	2,0	1,7	1,1	Yes	59	51	88
Cabrita Wines - Quinta da Vinha	1897	2186	2571	0,07	0,17	0,10	10,9	13,0	10,0	0,8	2,1	0,3	0,2	0,3	0,1	Yes	48	83	35
Morgado do Quintão	656	1324	2332	0,28	0,03	0,06	17,8	11,7	28,1	1,9	2,0	2,0	0,6	0,8	1,7	Yes	618	882	1092
Monte da Casteleja	1560	1962	2125	0,06	0,07	0,14	22,8	28,6	16,4	1,3	2,4	0,5	1,0	2,0	0,8	Yes	179	256	46
Herdade dos Pimenteis	1971	2063	2118	0,07	0,16	0,10	18,6	8,7	4,4	1,2	0,6	0,3	0,3	0,3	0,2	No	2	2	6

Note: The symbol # stands for Hashtag usage; 1 represents 02/2019 to 01/2020, 2 represents 02/2020 to 01/2021 and 3 represents 02/2021 to 01/2022.

The table 7 presents all the indicators involved in the variable visibility, filtered by the 15 pages with the greatest number of fans.

The highlights for the biggest growth in the number of fans are the Villa Alvor, Quinta da Tôr and Casa Santos Lima pages, with very interesting growths during the Covid-19 pandemic, reflecting how they positively explored these medium channels for their digital marketing and communication strategies. Other important indicators analyzed were the average number of reactions, comments, and shares per post since they are directly connected to the number of fans and posts per day indicators of each Facebook page (Rodríguez-Vázquez et al., 2017). The average number of reactions is the highest on the Villa Alvor page and the 2nd highest is the Adega do Cantor page. If the average number of reactions is compared to the number of fans of each page, the Quinta dos Vales and The Winemaker Experience page only has the 10th highest number of average reactions, and the Paxá Wines page (5th highest number of fans) is the 14th highest. The Quinta dos Santos has a very high number of average reactions compared to the number of fans, positioning their page only as the 14th most followed page but the 6th highest in the average number of reactions. Analyzing the average number of shares, we understand the

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Adega do Cantor page stands out with the maximal number, with Casa dos Santos Lima, Quinta da Tôr and Villa Alvor pages with lower numbers, but very close to each other.

Then again, we can verify that the pages with the bigger numbers of fans do not really correspond to the ones with the highest numbers of average shares: the João Clara Vinhos page has the 10th biggest fan numbers and surpasses the Quinta dos Vales and The Winemaker Experience page (most fans) in the average number of shares, as well as 6 other pages. The Monte Dos Salicos – MDS page only has 79 fans (2nd lowest number) but their average number of shares is the 14th highest.

Even though this is a relevant indicator, we need to consider it somewhat subjective, since some of the shares are normally made by the page owner's personal profile, as well as close friends/family, trying to promote businesses. Once again, the average number of comments ranking reflects that the number of fans is not totally correlated to it, since the highest average number of comments belongs to the Adega do Cantor page, the 4th biggest page in fans, followed by the Quinta dos Santos Facebook page. These numbers reflect that the pages with the best numbers are producing quality content that promotes actions by fans, like posing questions on them: this is a good practice since it can pull answers that allow companies to better understand and know customers, and also, generate interactivity on their contents (Rodriguez-Fernandez et al., 2017b).

Throughout the years, the average length has increased, reaching a peak in 2021, with an average number of 280 characters per post. The Morgado do Quintão page stands out with an average of over 1000 characters per post, showing an exponential growth increase on the number. The average of the 36 pages is around 236 characters per post. According to a BuzzSumo analysis (2021), the ideal Facebook post length is around 50 characters (or less), which proved to have better results in terms of public engagement/interaction. Observing the average number of post lengths, it's noticeable a few pages prefer to post longer content, while some average similar numbers.

The table 8 shows what are the preferred weekdays for posting content.

Table 8. The preferred weekdays indicator for posting content from the Visibility variable

Weekdays	Number of Posts			Average
	1	2	3	
Monday	213	210	204	209
Tuesday	220	295	193	236
Wednesday	199	255	228	227
Thursday	264	298	221	261
Friday	308	274	299	294
Saturday	155	177	155	162

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Weekdays	Number of Posts			Average
	1	2	3	
Sunday	124	150	141	138

Note: 1 represents 02/2019 to 01/2020, 2 represents 02/2020 to 01/2021 and 3 represents 02/2021 to 01/2022.

43

Analyzing the preferred days of the week for posting, Fridays show the biggest number of posts out of all the weekdays, followed by Thursdays and Tuesdays. The weekend days (Saturday and Sunday), show the least quantity of posts out of the other days, respectively.

In the figure 3, we can observe the number of posts per hour of the day. The table 9 shows the preferred hours of the day for posting, by period, starting in February 2019 and ending by January 2022. In the preferred hours for publication, some are the most dominant out of the 24 in a day: posts at 17:00 are the most dominant, followed by 18:00 and 11:00.

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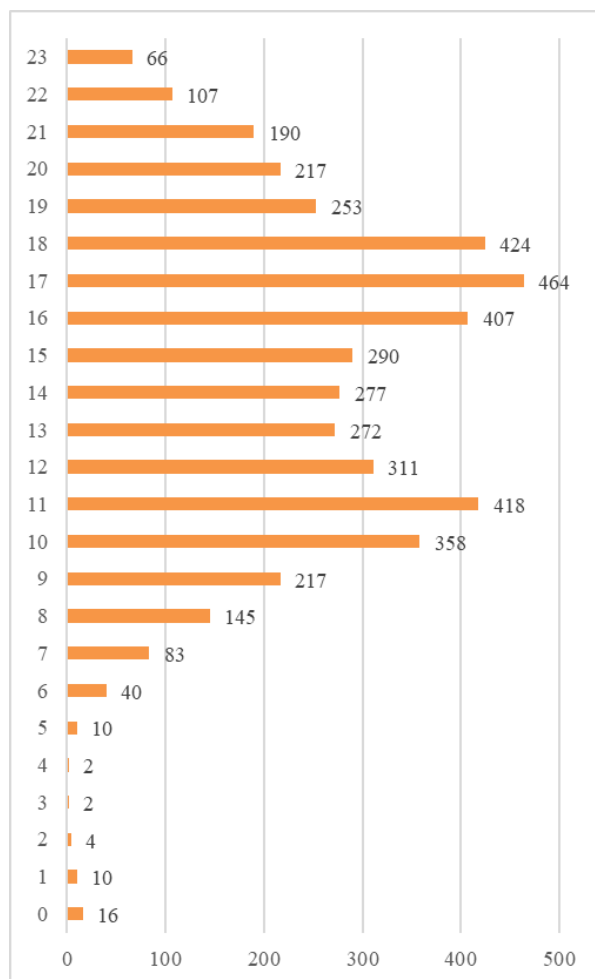
Figure 3. The number of posts per hour of the day

Table 9. Preferred hours of the day for posting, by period

Day hour	Periods			
	1	2	3	Total
0	8	4	4	16
1	5	4	1	10
2	1	3		4
3		1	1	2
4		1	1	2
5	5	1	4	10
6	13	21	6	40
7	43	28	12	83
8	61	48	36	145
9	66	81	70	217
10	124	123	111	358
11	135	170	113	418
12	101	105	105	311
13	72	106	94	272
14	99	86	92	277
15	80	98	112	290
16	85	197	125	407
17	136	156	172	464
18	145	157	122	424
19	80	82	91	253
20	73	74	70	217
21	77	58	55	190
22	45	35	27	107
23	29	20	17	66
Total	**1 483**	**1 659**	**1 441**	**4 583**

Note: 1 represents 02/2019 to 01/2020, 2 represents 02/2020 to 01/2021 and 3 represents 02/2021 to 01/2022.

Another analyzed indicator was the usage or not of hashtags, a practice that attracts consumers' attention and generates higher interactivity with the content (Cheng et al., 2020; Salomon, 2013). After analyzing each post from the time periods established, 29 used hashtags at least once on their contents, while 7 never did.

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Figure 4. The most frequently used hashtags on the time period of 3 years, retrieved on the Fanpage Karma tool.

For further information on all the results of the indicators that belong to the Visibility variable, check Annex D.

4.4 Profitability

The Profitability (in social media) has been a little bit surrounded by some controversy, dragging the attention of some researchers interested in the study of this in social media. A new internet environment emerged following the birth and globalization of social media, influencing the economic activities of some businesses, with new dynamics based on the interactions, conversations, and relations established on social media (Cavalcanti & Sobejano, 2011).

The value of this dynamics is hard to calculate, something even clearer if we wonder, for example, how the ROI of an interaction/conversation can be calculated, how much a customer's recommendation is worth, or what the implications of talking directly with the market (Rodríguez-Fernandéz et al., 2017b). In table 10, the results for the indicators of the profitability variable are presented.

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Table 10. The indicators for the Profitability variable

Wine Producers	Ad-Value (Euro)	Page Performance Index
Villa Alvor	437,6	53%
Casa Santos Lima	372,2	13%
Adega do Cantor	313,2	9%
Herdade Barranco do Vale	297,5	25%
Quinta Da Tôr	273,5	23%
Quinta dos Vales and The Winemaker Experience	161,2	2%
Quinta do Barranco Longo	155,6	3%
Quinta Dos Santos	128,9	-
João Clara Vinhos	114,4	12%
Paxá Wines	89,0	4%
Quinta Do Francês Winery	74,3	9%
Marchalégua	70,6	15%
MALACA	63,6	3%
Morgado do Quintão	51,4	25%
Quinta do Canhoto	36,5	-

In this investigation, we measured the advertising value of the Facebook page (ad-value) and the page performance index. Analyzing the Ad-Value, the Villa Alvor page has the biggest value of all the pages, setting a correlation between this indicator and the engagement rate one, since the ad value is proportionally dependent on the engagement. Some of the pages with bigger Ad-Value numbers are also up there when it comes to the engagement rate, like Herdade do Barranco do Vale, Adega do Cantor, and Casa Santos Lima, among others.

Observing the Page Performance Index indicator, 11 of the 36 pages do not have a value assigned, since our data analysis tool, Fanpage Karma, could not retrieve it due to restrictions from the tool. The highlight on this one goes to the Villa Alvor page with 53, more than doubling the following Facebook pages, like Morgado do Quintão, Herdade do Barranco do Vale and Quinta da Tôr. Comparing these values to the Ad-value indicator, it shows us that even some pages with smaller Ad-value can still reproduce interesting results for the Page Performance Index, but the opposite also happens, with pages like Casa Santos Lima and Adega do Cantor having low numbers for Page Performance Index

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despite being the 2nd and 3rd highest pages for Ad-Value. While analyzing these variables, the global results are not very consistent or similar, with contrasting results for quite a few pages of this analysis. In Annex E, the full results for all the indicators of this variable are presented.

5. Conclusion

The technological developments in the last decades have been crucial and very impactful for organizations/entities, reshaping their communication strategies and ultimately their relations with consumers. In this context, social media networks have become one of the most important communication channels worldwide, and in the case of Portugal, Facebook has shown to be the most popular, like mentioned above. Throughout this work, the usefulness and value of social media networks have been recognized.

In that context, the data of the wine producers' Facebook pages retrieved by the Fanpage Karma tool was analyzed and produced the results briefly described in the following. The analysis of the Content variable which the pages provide through the different post types and post frequency showed that pictures posts are the dominant type on all the pages except the Horta Nova page, where the Link posts are the predominant type. The highest average number of posts per day belongs to the Herdade Barranco do Vale page with a 0.5 posts per day followed by some pages with a 0.3 average number, from what we conclude most of the pages don't have a high post frequency per day. Some of these pages were more active during the beginning of the Covid-19 pandemic outbreak, but not all of them kept that publication frequency, showing signs of decrease during the 2nd period defined in some of the analysis (from 02/2020 to 01/2021).

Regarding the Interactivity variable, we can conclude the Villa Alvor page stands out as the page with the most reactions, comments and shares, with more than double the total from the second page, Casa Santos Lima. Following this variable, it's logical the Villa Alvor page would also stand out as the page with the highest engagement, since the Fanpage Karma tool calculates it by adding the number of all interactions for each post as well as comments and shares. For each post, the sum of interactions is divided by the number of followers at the time of the post - then you add up the values of all posts and divide this sum by the number of days in the period. The total number of reactions, comments, and shares had a decent increase after the Covid-19 pandemic began, showing that consumers were more active on digital platforms, leading them to react and interact more with these Facebook pages. The engagement rate tendency for these pages was to actually decrease, with a few pages showing interesting curves of increase while others had big drops in their engagement rate, but overall the value decreased. Observing the Fan posts, Adega do Cantor sits at the top of the ranking with 38 posts, as we can conclude the number of fan posts are not considered high, with a total of 391 posts for 36 wine producers' pages, from 2019 to 2022, which is not a very high value.

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With regard to Visibility, we can conclude that the Quinta dos Vales and The Winemaker Experience page is the highlight for the number of fans, with a very high number of fans, but a low number of reactions per post, indicating their content is not good enough for public interaction. In the indicator average number of comments and shares, smaller pages in terms of numbers of fans have bigger numbers for these indicators, like the João Clara Vinhos page, which surpasses the Quinta dos Vales and The Winemaker Experience page, with a higher average number of shares than it. The Adega do Cantor page stands out as the page with the biggest average number of comments, once again proving the correlation between the number of fans and these variables is very fragile and can't really be proven.

Observing the Profitability variable, the ad-value and page performance index type of variable are dominated by the Villa Alvor page, standing out with bigger numbers specially in the second indicator, that has some pages with very similar values.

Overall, this study contributes to the literature regarding the wine industry and social media marketing, presenting new and updated findings that compare the pre-Covid-19 analytics to the data retrieved during the pandemic we currently live in. Even though we can conclude there was a slight increase in some of the indicators analyzed, like the frequency of publication, number of fans, and fans reactions, there are still various pages with a performance below average if we consider all the potential Facebook has for marketing strategies in the wine sector. Due to all the adjustments and changes in communication and marketing strategies the Covid-19 pandemic provoked, a much bigger and more evident usage of social media Facebook was expected from a good part of the Algarve wine producers' pages. Despite this, some pages explored all the potential of Facebook and social media as a whole and reached very interesting results for the pandemic era we analyzed. Such findings will allow the players from this sector to better comprehend and understand consumer behavior and make them strategize different marketing plans, achieving higher results in those campaigns.

References

Amaral, I. & Santos, S. (2020). Social networks and institutional communication: The case of Portuguese universities. *Revista Prisma Social*, 28, 20-45.

Ashley, C., & Tuten, T. (2015). Creative strategies in social media marketing: An exploratory study of branded social content and consumer engagement. *Psychology & Marketing*, *32*(1), 15–27. https://doi.org/10.1002/mar.20761.

Avila Campoverde, F., & Ugalde, C. (2020). *Instagram: La red social con la mayor interacción para promover los destinos turísticos ecuatorianos*. *Revista Investigaciones Turísticas*, 19, 50-72. https://doi.org/10.14198/INTURI2020.19.03.

Blazquez, F., Rodriguez, C., & Teijeiro, M. (2020). A new era of communication in higher education. Facebook as a marketing tool. *Revista ESPACIOS*, *41*(06). https://www.revistaespacios.com/a20v41n06/20410623.html.

THIJ – Tourism and Hospitality International Journal   vol. 22 nº 1   ISSN: 2183-0800
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E-mail: thijournal@isce.pt

Boyd, D. M., & Ellison, N. B. (2007). Social network sites: Definition, history, and scholarship. *Journal of Computer-Mediated Communication*, *13*(1), 210–230. https://doi.org/10.1111/j.1083-6101.2007.00393.x.

Breton-Miller, I. L., & Miller, D. (2016). Family firms and practices of sustainability: A contingency view. *Journal of Family Business Strategy*, *7*(1), 26–33. https://doi.org/10.1016/j.jfbs.2015.09.001.

BuzzSumo.Com *(2021). 400,000 Articles: What we learned about content engagement*. Retrieved 12 February 2022: https://buzzsumo.com/resources/creating-engaging-content/view/.

Calderón-Monge, E., & Ramírez-Hurtado, J. M. (2021). Measuring the consumer engagement related to social media: The case of franchising. *Electronic Commerce Research*. https://doi.org/10.1007/s10660-021-09463-2.

Cárcamo Ulloa, L., & Marcos, M. C. (2014). *Prensa en Facebook: La importancia de la imagen en la web social*. https://idus.us.es/handle/11441/33156.

Castellanos Colmenares, O. D., & Rojas Ipuz, D. F. (2021). *Modelo para fundamentar el alcance de la estrategia de marketing online para acercar la oferta y la demanda del turismo de naturaleza en el departamento de Cundinamarca*. Master Thesis in Dirección de Marketing, Colégio de Estudios Superiores de Administración CESA, Bogotá.

Cavalcanti, J., & Sobejano, J. (2011). *Social Media IOR: Las Relaciones como moneda de rentabilidad*. Bubok Publishing S.L., Madrid. Retrieved 15 January 2022: https://libros.metabiblioteca.org/bitstream/001/278/8/Social-Media-IOR--Las-Relaciones-como-Moneda-de-Rentabilidad.pdf.pdf.

Cheng, W. W. H., Lam, E. T. H., & Chiu, D. K. W. (2020). Social media as a platform in academic library marketing: A comparative study. *The Journal of Academic Librarianship*, 46(5), 102188. https://doi.org/10.1016/j.acalib.2020.102188.

Cordero Quintana, C. (2021). *Evaluación, diagnóstico y propuesta de mejora del plan de comunicación en redes sociales de Turismo de Segovia*. Tourism Degree Thesis, Facultad de Ciencias Sociales, Jurídicas y de la Comunicación, Universidad de Valladolid, Segovia.

Costopoulou, C., Ntaliani, M., & Ntalianis, F. (2019). An analysis of social media usage in winery businesses. *Advances in Science, Technology and Engineering Systems*, *4*(4), 380–387.

Cuomo, M. T., Tortora, D., Festa, G., Giordano, A., & Metallo, G. (2016). Exploring consumer insights in wine marketing: An ethnographic research on# Winelovers. *Psychology & Marketing*, *33*(12), 1082–1090.

CVA. (2022). *Vinhos do Algarve*. Retrieved from https://www.vinhosdoalgarve.pt/pt.

De las Heras-Pedrosa, C., Millan-Celis, E., Iglesias-Sánchez, P. P., & Jambrino-Maldonado, C. (2020). Importance of social media in the image formation of tourist destinations from the stakeholders' perspective. *Sustainability*, 12(10), 4092.

Dean, D. L., & Forbes, S. L. (2016). Are customers having e-conversations about your wine? The importance of online discussion forums as electronic word of mouth for

THIJ – Tourism and Hospitality International Journal   vol. 22 nº 1   ISSN: 2183-0800
Revista científica semestral gratuita de distribuição digital / Free bianual scientific journal of digital distribution
E-mail: thijournal@isce.pt

wine marketers. In *Successful social media and ecommerce strategies in the wine industry* (pp. 115–132). Springer.

Decreto-Lei nº 212/2004 (2004). Ministério da Agricultura, Desenvolvimento Rural e Pescas. Retrieved from https://dre.pt/dre/detalhe/decreto-lei/212-2004-479875.

Díaz, J. B., & Olmo, F. J. R. del. (2021). Presencia e interacción de los candidatos a la presidencia del Gobierno de España en las principales redes sociales durante la campaña electoral de noviembre de 2019. *OBETS. Revista de Ciencias Sociales*, *16*(1), 63–74. https://doi.org/10.14198/OBETS2021.16.1.04.

Dn Insider (2019). *Irene Cano: "Já temos 6,2 milhões de utilizadores do Facebook em Portugal"*. Retrieved 28 March 2022: https://insider.dn.pt/featured/irene-cano-ja-temos-62-milhoes-de-utilizadores-do-facebook-em-portugal/11908/.

Egaña, F., Pezoa-Fuentes, C., & Roco, L. (2021). The use of digital social networks and engagement in Chilean wine industry. *Journal of Theoretical and Applied Electronic Commerce Research*, *16*(5), 1248–1265.

Escusol, A. C., Sans, R. N., & Díaz, J. B. (2021). El impacto de las plataformas de podcast en redes sociales: Estudio de caso en las cuentas oficiales de iVoox y Anchor en Instagram, Facebook y Twitter. *aDResearch: Revista Internacional de Investigación en Comunicación*, *25*, 92–105.

Fanpage Karma (2022). *Dashboard – Fanpage Karma*. Retrieved 22 March 2022: https://www.fanpagekarma.com/dashboard?h=YLXEIk45O&time=FREE&from=1548979200000&to=1643673599999#analysen.

Fanpage Karma Academy (2022). *Metrics Overview – Fanpage Karma Academy*. Retrieved from https://academy.fanpagekarma.com/en/metrics/.

Fiore, M., Vrontis, D., Silvestri, R., & Contò, F. (2016). Social Media and Societal Marketing: A Path for a Better Wine? *Journal of Promotion Management*, *22*(2), 268–279. https://doi.org/10.1080/10496491.2016.1121755.

Global Social Media Stats. (2022). *DataReportal – Global Digital Insights*. Retrieved 17 March 2022: https://datareportal.com/social-media-users.

Gutiérrez Montoya, G. A., Sánchez Jiménez, M. Á., & Coronil, A. G. (2018). Redes sociales como medio de promoción turística en los países iberoamericanos. *Retos*, *8*(15), 135–150. https://doi.org/10.17163/ret.n15.2018.09.

Huertas, A., Setó-Pàmies, D., & Míguez-González, M.-I. (2015). Comunicación de destinos turísticos a través de los medios sociales. *Profesional de la Información*, *24*(1), 15–21.

Instituto da Vinha e do Vinho (2020). *Evolução da Área Total de Vinha - Portugal (ha)*. Retrieved 21 February 2022: https://www.ivv.gov.pt/np4/7179.html.

Instituto da Vinha e do Vinho (2021). *Evolução da produção total por Região Vitiviícola*. Retrieved 28 February 2022: https://www.ivv.gov.pt/np4/163.html.

Jayasingh, S., & Venkatesh, R. (2015). Customer engagement factors in Facebook brand pages. *Asian Social Science*, *11*(26), 19.

50

THIJ – Tourism and Hospitality International Journal   vol. 22 nº 1   ISSN: 2183-0800
Revista científica semestral gratuita de distribuição digital / Free bianual scientific journal of digital distribution
E-mail: thijournal@isce.pt

Jiménez, M. A. S., Correia, M. B., & Matos, N. (2018). Análisis de las redes sociales como instrumento de comunicación en los destinos turísticos del Algarve. *Revista GEINTEC – Gestão, Inovação e Tecnologias, 8*(3), 4476–4494.

Kallmuenzer, A., Nikolakis, W., Peters, M., & Zanon, J. (2018). Trade-offs between dimensions of sustainability: Exploratory evidence from family firms in rural tourism regions. *Journal of Sustainable Tourism*, *26*(7), 1204–1221.

Kaso, N., Nurjihad, A., Ilham, D., & Aswar, N. (2021). Facebook and its impact on students' learning achievement at state Islamic high school of Palopo. *Jurnal Studi Guru Dan Pembelajaran*, *4*(1), 1–15.

Kim, J., Uddin, Z. A., Lee, Y., Nasri, F., Gill, H., Subramanieapillai, M., Lee, R., Udovica, A., Phan, L., Lui, L., Iacobucci, M., Mansur, R. B., Rosenblat, J. D., & McIntyre, R. S. (2021). A systematic review of the validity of screening depression through Facebook, Twitter, Instagram, and Snapchat. *Journal of Affective Disorders*, *286*, 360–369. https://doi.org/10.1016/j.jad.2020.08.091.

Kujur, F., & Singh, S. (2020). Visual communication and consumer-brand relationship on social networking sites - Uses & gratifications theory perspective. *Journal of Theoretical and Applied Electronic Commerce Research*, *15*(1), 30–47. https://doi.org/10.4067/S0718-18762020000100104.

Kumar, V., Aksoy, L., Donkers, B., Venkatesan, R., Wiesel, T., & Tillmanns, S. (2010). Undervalued or overvalued customers: Capturing total customer engagement value. *Journal of Service Research*, *13*(3), 297–310.

Martínez-Fernández, V.-A., Juanatey-Boga, Ó., Crespo-Pereira, V., & Burneo, M.-D. M. (2015). Prensa nativa dígital y redes sociales: Cibermedios en Facebook y Twitter. *International Journal of Information Systems and Software Engineering for Big Companies*, *2*(2), 42–50.

Martínez-Sánchez, M. E., Nicolas-Sans, R., & Bustos Díaz, J. (2021). Analysis of the social media strategy of audio-visual OTTs in Spain: The case study of Netflix, HBO and Amazon Prime during the implementation of Disney +. *Technological Forecasting and Social Change*, *173*, 121178. https://doi.org/10.1016/j.techfore.2021.121178.

Mendes, J., & Colaço do Rosário, T. (2018). *Algarve wines & spirits: Algarve - o renascer de uma região*. ID-TOUR. Retrieved 22 February 2022: https://www.vinhosdoalgarve.pt/sites/default/files/2018-07/Algarve%20-%20O%20renascer%20de%20uma%20regiao.pdf.

Obercom (2021). *Digital News Report 2021 PORTUGAL*. Obercom, investigação e saber em comunicação. Retrieved from https://obercom.pt/digital-news-report-2021-portugal/.

Obermayer, N., Kővári, E., Leinonen, J., Bak, G., & Valeri, M. (2021). How social media practices shape family business performance: The wine industry case study. *European Management Journal*, S0263237321001122. https://doi.org/10.1016/j.emj.2021.08.003.

THIJ – Tourism and Hospitality International Journal   vol. 22 nº 1   ISSN: 2183-0800
Revista científica semestral gratuita de distribuição digital / Free bianual scientific journal of digital distribution
E-mail: thijournal@isce.pt

Pansari, A., & Kumar, V. (2017). Customer engagement: The construct, antecedents, and consequences. *Journal of the Academy of Marketing Science*, *45*(3), 294–311. https://doi.org/10.1007/s11747-016-0485-6.

Parveen, F., Jaafar, N. I., & Ainin, S. (2015). Social media usage and organizational performance: Reflections of Malaysian social media managers. *Telematics and Informatics*, *32*(1), 67–78. https://doi.org/10.1016/j.tele.2014.03.001.

Pastor Marin, F. M. (2022). *La comunicación turística en la era digital. El uso de los medios sociales en los grandes destinos urbanos*.

Pekkala, K., & van Zoonen, W. (2021). Work-related social media use: The mediating role of social media communication self-efficacy. *European Management Journal*, *40*(1), 67–76. https://doi.org/10.1016/j.emj.2021.03.004.

Pelet, J.-E., & Lecat, B. (2014). Smartphones and wine consumers: A study of Gen-Y. *International Journal of Wine Business Research*, *26*(3), 188–207. https://doi.org/10.1108/IJWBR-04-2013-0015.

Pérez-García, A., & Torres-Valdés, R. M. (2019). As agências de emprego e desenvolvimento local, e o uso das redes sociais na promoção turística relacional. *Innovar*, *29*(72), 77–88.

Pletikosa Cvijikj, I., & Michahelles, F. (2013). Online engagement factors on Facebook brand pages. *Social network analysis and mining*, *3*(4), 843–861.

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. https://doi.org/10.1108/BFJ-06-2018-0400.

Reyneke, M., Pitt, L., & Berthon, P. R. (2011). Luxury wine brand visibility in social media: An exploratory study. *International Journal of Wine Business Research*, 23 (1), 21-35.

Rodríguez-Fernández, M. M., Sánchez-Amboage, E., & Martínez-Fernández, V. A. (2017). The emergent nature of wine tourism in Ecuador and the role of the Social medium Facebook in optimising its positioning. *Revista ESPACIOS*, *38*(14).

Rodríguez-Fernández, M. M., Sánchez-Amboage, E., & Martínez-Fernández, V. A. (2017b). The emergent nature of wine tourism in Ecuador and the role of the Social medium Facebook in optimising its positioning. Revista ESPACIOS, 38(14).

Rodríguez-Fernández, M.-M., Rodríguez-Vázquez, C., Martínez-Fernández, V.-A., & Viñán-Merecí, C.-S. (2016). El cacao como identidad de marca país en Ecuador y su posicionamiento en Facebook. *Actas del II Simposio de la Red Internacional de Investigación de Gestión de la Comunicación – De los medios y la comunicación de las organizaciones a las redes de valor*, Quito, Equador (15-16 September 2016).

Rodríguez-Fernández, M.-M., Sánchez-Amboage, E., Rodríguez-Vázquez, C., & Mahauad-Burneo, M.-D. (2017a). Galician spas in facebook. Em *Media and Metamedia Management* (pp. 329–334). Springer.

Rodríguez-Vázquez, C., Martínez-Fernández, V.-A., Rodríguez-Fernández, M.-M., & Juanatey-Boga, Ó. (2017). Posicionamiento en Facebook de las Televisiones

THIJ – Tourism and Hospitality International Journal   vol. 22 nº 1   ISSN: 2183-0800
Revista científica semestral gratuita de distribuição digital / Free bianual scientific journal of digital distribution
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Autonómicas con lengua propia. In José Miguel Túñez López, Francisco Campos Freire, Alba Silva Rodríguez *(Coord)*. *Estudios sobre legislación, financiación e innovación en la Televisión Pública*, págs. 143-169.

Rodríguez-Vázquez, C., Teijeiro-Álvarez, M., & Blázquez-Lozano, F. (2016). La educación superior en españa y las redes sociales: Instituciones públicas versus privadas. *2016 11th Iberian Conference on Information Systems and Technologies (CISTI)*, 1–6. https://doi.org/10.1109/CISTI.2016.7521596.

Rodríguez-Vázquez, C., Teijeiro-Álvarez, M., & Blázquez-Lozano, F. (2018). Evaluation of the fanpages of Spanish universities: Public versus private institutions. *Universal Access in the Information Society*, *17*(4), 735–743. https://doi.org/10.1007/s10209-017-0530-3.

Salomon, D. (2013). Moving on from Facebook: Using Instagram to connect with undergraduates and engage in teaching and learning. *ACRL Tech Contents, College & Research Libraries,* pp.408-412. https://doi.org/10.5860/crln.74.8.8991.

Sánchez Jiménez, M. Á. (2020). Análisis de la comunicación digital oficial en la promoción turística de Brasil. *3C TIC* - Cuadernos de desarrollo aplicados a las TIC, 9 (1), 17-39. http://doi.org/10.17993/3ctic.2020.91.17-39.

Schivinski, B., Christodoulides, G., & Dabrowski, D. (2016). Measuring consumers' engagement with brand-related social-media content: Development and validation of a scale that identifies levels of social-media engagement with brands. *Journal of Advertising Research*, 56(1), 64–80. https://doi.org/10.2501/JAR-2016-004.

Scorrano, P., Fait, M., & Maizza, A. (2015). The relationship between unstructured information and marketing knowledge: An experiment in the US wine market. *International Journal of Management Practice*, 8(3), 232–246.

Serra, M., Antonio, N., Henriques, C., & Afonso, C. M. (2021). Promoting sustainability through regional food and wine pairing. *Sustainability*, 13(24), 13759. https://doi.org/10.3390/su132413759.

Siamagka, N.-T., Christodoulides, G., Michaelidou, N., & Valvi, A. (2015). Determinants of social media adoption by B2B organizations. *Industrial Marketing Management*, 51, 89–99. https://doi.org/10.1016/j.indmarman.2015.05.005.

Sidharth, S., Ghosh, E., & Ghosh, S. (2016). Social armed forces: An impact analysis of the Asia-Pacific and Middle East tour 2016 (Half Completed) on the popularity of the RAF Red Arrows Demonstration Team on Facebook. *KHOJ: Journal of Indian Management Research and Practices*, 1(1), 24–36.

Sogari, G., Pucci, T., Aquilani, B., & Zanni, L. (2017). Millennial generation and environmental sustainability: The role of social media in the consumer purchasing behavior for wine. *Sustainability*, 9 (10), 1911.

Statista (2022). *Most used social media 2021*. Retrieved 7 March 2022: https://www.statista.com/statistics/272014/global-social-networks-ranked-by-number-of-users/.

53

THIJ – Tourism and Hospitality International Journal   vol. 22 nº 1   ISSN: 2183-0800
Revista científica semestral gratuita de distribuição digital / Free bianual scientific journal of digital distribution
E-mail: thijournal@isce.pt

Taylor, M., & Kent, M. L. (2014). Dialogic engagement: Clarifying foundational concepts. *Journal of Public Relations Research*, 26 (5), 384–398. https://doi.org/10.1080/1062726X.2014.956106.

VINIPORTUGAL (2022). *Detalhes notícia*. Retrieved 28 March 2022: https://viniportugal.pt/detalhesNoticia?codNoticia=10216.

54

THIJ – Tourism and Hospitality International Journal   vol. 22 nº 1   ISSN: 2183-0800
Revista científica semestral gratuita de distribuição digital / Free bianual scientific journal of digital distribution
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Annexes

Annex A – List of all the variables and indicators analyzed in this research

Variables	Indicators	Description	Authors citing this
Contents	Content Format	Number of posts per different content format (picture, video, link, status, album)	Huertas, Setó-Pàmies & Míguez-González (2015) Amaral & Santos (2020) Pérez-García, A., & Torres-Valdés (2019) Rojas e Castellanos (2021) Rodriguez-Fernandez et al. (2017b) Rodriguez-Vázquez et al. (2016)
	Frequency of publication	Average number of posts per day published in the selected period.	Huertas, Setó-Pàmies & Míguez-González (2015) Amaral & Santos (2020) Pérez-García, A., & Torres-Valdés (2019) Rojas e Castellanos (2021) Cordero Quintana (2021) Sánchez Jiménez (2020) Escusol, Sans & Díaz (2021) Rodriguez-Fernandez et al. (2017a) Rodriguez-Vázquez et al. (2016)
Interactivity	Engagement	Engagement is the average number of interactions on a profile's posts per follower per day. Engagement shows how successfully a profile encourages users to interact. By dividing by the number of followers, the Engagement becomes independent of the size of the profile. This makes profiles comparable.	Huertas, Setó-Pàmies & Míguez-González (2015) Pérez-García, A., & Torres-Valdés (2019) Rojas e Castellanos (2021) Quintana (2021) Sánchez Jiménez (2020) Martínez-Sánchez, Nicolas-Sans & Bustos Díaz (2021) Rodríguez-Vázquez et al. (2018) Rodriguez-Fernandez et al. (2017b)
	Fan Reactions, Comments and Shares	Number of reactions (like, love, haha, thankful, wow, sad, angry), comments and shares on posts published in the selected period.	Amaral & Santos (2020) Rojas e Castellanos (2021) Pérez-García, A., & Torres-Valdés (2019) Cordero Quintana (2021) Rodríguez-Vázquez et al. (2018) Rodriguez-Fernandez et al. (2017b)
	Fan Posts	Number of user posts published in the selected period.	Rodríguez-Vázquez et al. (2017)
Visibility	Number of fans	Number of users on the last day of the selected period who like the Page are called fans. For the "New Pages Experience" this corresponds to the follower count.	Huertas, Setó-Pàmies & Míguez-González (2015) Pérez-García, A., & Torres-Valdés (2019) Rojas e Castellanos (2021) Cordero Quintana (2021) Sánchez Jiménez (2020) Rodríguez-Vázquez et al. (2018) Escusol, Sans & Díaz (2021) Rodriguez-Fernandez et al. (2017a) Rodriguez-Fernandez et al. (2017b)
	Posts per day	Average number of posts per day published in the selected period.	Amaral & Santos (2020) Pérez-García, A., & Torres-Valdés (2019) Cordero Quintana (2021)

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Variables	Indicators	Description	Authors citing this
			Martínez-Sánchez, Nicolas-Sans & Bustos Díaz (2021) Rodríguez-Vázquez et al. (2018)
	Reactions (Average)	Average number of "like" reactions on posts published in the selected period.	Pérez-García, A., & Torres-Valdés (2019) Rojas e Castellanos (2021) Cordero Quintana (2021) Pastor Marín (2022) Rodríguez-Vázquez et al. (2018) Rodriguez-Fernandez et al. (2017a) Rodriguez-Fernandez et al. (2017b)
	Shares (Average)	Average number of shares of posts published in the selected period.	Pérez-García, A., & Torres-Valdés (2019) Rojas e Castellanos (2021) Pastor Marín (2022) Rodríguez-Vázquez et al. (2018) Rodriguez-Fernandez et al. (2017a) Rodriguez-Fernandez et al. (2017b)
	Comments (Average)	Average number of comments on posts published in the selected period.	Pérez-García, A., & Torres-Valdés (2019) Rojas e Castellanos (2021) Martínez-Sánchez, Nicolas-Sans & Bustos Díaz (2021) Pastor Marín (2022) Rodríguez-Vázquez et al. (2018) Cordero Quintana (2021)
	Post Length	The average number of characters per Facebook post.	Rodríguez-Fernández et al. (2017) Pérez-García, A., & Torres-Valdés (2019) Rodríguez-Vázquez et al. (2018) Rodriguez-Fernandez et al. (2017a)
	Hashtag usage	The existence (or not) of hashtags.	Pérez-García, A., & Torres-Valdés (2019) Escusol, Sans & Díaz (2021) Sidharth, Ghosh & Ghosh (2016)
	Publication hours	Number of posts per hour of the day.	Rodríguez-Vázquez et al. (2018) Pérez-García, A., & Torres-Valdés (2019) Rodriguez-Fernandez et al. (2017a)
	Preferred weekdays for posting	Number of posts per weekday.	Pérez-García, A., & Torres-Valdés (2019) Rodriguez-Fernandez et al. (2017a)
Profitability	Ad-Value	It indicates how much money one would have to spend on classic online advertising to reach as many people as with Facebook posts. An average CPM of €12.00 is applied and this is multiplied by the estimated reach. Note: For your own page you can set the CPM for different types of posts yourself. The advertising value is therefore not proportionally dependent on the number of fans but on the engagement.	Rodríguez-Fernández et Al., (2016)

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Variables	Indicators	Description	Authors citing this
	Page Performance Index	Root product between the comparison values of the engagement value and the average weekly growth of a Page. We first determine a value between 0 and 100 percent for both engagement and growth, which serves as a benchmark against the values of all other Pages in our index. A value is set to 100% if the Page is among the top 10% for the respective value - i.e. this Page has a better value than at least 90% of all Pages listed in our database. Then, engagement and growth (in each case the comparison values) are multiplied and the root is taken from this value.	Rodríguez-Fernández et Al., (2016)

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Annex B – Algarve wine producers pages referring to the Contents variable and its indicators

Wine Producers	Posts per day	Album	Picture	Link	Status	Video	Total	Album-posts	Picture-posts	Link-posts	Status-posts	Video-posts
Adega do Cantor	0,1		78	9	3	22	112	0,0	69,6	8,0	2,7	20
ARVAD WINE	0,1		54	5	2	1	62	0,0	87,1	8,1	3,2	2
Cabrita Wines - Quinta da Vinha	0,1		102	3	4	15	124	0,0	82,3	2,4	3,2	12
Casa Santos Lima	0,2	2	221	1	3	22	249	0,8	88,8	0,4	1,2	9
Convento Do Paraíso	0,1		67			1	68	0,0	98,5	0,0	0,0	1
Dom Vicente	0,1		99	18		13	130	0,0	76,2	13,8	0,0	10
Dona Niza Wines	0,1		59	4		3	66	0,0	89,4	6,1	0,0	5
Falesia Wine	0,0		28	3	1	2	34	0,0	82,4	8,8	2,9	6
From Algarve	0,0		1	1		1	3	0,0	33,3	33,3	0,0	33
Herdade Barranco do Vale	0,5	3	377	87	7	48	522	0,6	72,2	16,7	1,3	9
Herdade dos Pimenteis	0,1		96	2	1	21	120	0,0	80,0	1,7	0,8	18
Herdade dos Seromenhos	0,1		34	20		1	55	0,0	61,8	36,4	0,0	2
Horta Nova	0,1		29	80	6	15	130	0,0	22,3	61,5	4,6	12
João Clara Vinhos	0,1	4	136	6	2	10	158	2,5	86,1	3,8	1,3	6
MALACA	0,2	1	124	27	2	17	171	0,6	72,5	15,8	1,2	10
Marchalégua	0,2		120	35	2	12	169	0,0	71,0	20,7	1,2	7
Monte da Casteleja	0,1		71	19	1	6	97	0,0	73,2	19,6	1,0	6
Monte de Salicos - MDS Vinhos	0,1		46	13	1	6	66	0,0	69,7	19,7	1,5	9
Monte do Além	0,0			1			1	0,0	0,0	100,0	0,0	0
Morgado do Quintão	0,1	9	118	4		5	136	6,6	86,8	2,9	0,0	4
O Barradas	0,0		14	2	4	4	24	0,0	58,3	8,3	16,7	17
Paxá Wines	0,3	6	283	30	4	18	341	1,8	83,0	8,8	1,2	5
Quinta Da Tôr	0,2	2	188	9	6	42	247	0,8	76,1	3,6	2,4	17
Quinta do Barranco Longo	0,1	1	83	10		31	125	0,8	66,4	8,0	0,0	25
Quinta do Canhoto	0,1		46	2		11	59	0,0	78,0	3,4	0,0	19
Quinta Do Francês Winery	0,1		80	21	20	17	138	0,0	58,0	15,2	14,5	12
Quinta do Morgado da Torre	0,0			1			1	0,0	0,0	100,0	0,0	0
Quinta do Rogel	0,0		7	2		4	13	0,0	53,8	15,4	0,0	31
Quinta dos Capinhas	0,1		91	29		13	133	0,0	68,4	21,8	0,0	10
Quinta Dos Santos	0,1		102	5	6	10	123	0,0	82,9	4,1	4,9	8
Quinta dos Sentidos	0,0		26	3	1		30	0,0	86,7	10,0	3,3	0

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Wine Producers	Posts per day	Album	Picture	Link	Status	Video	Total	Album-posts	Picture-posts	Link-posts	Status-posts	Video-posts
Quinta dos Vales and The Winemaker Experience	0,3	2	286	59	2	25	374	0,5	76,5	15,8	0,5	7
quintadapenina	0,0		7	5		2	14	0,0	50,0	35,7	0,0	14
Sul Composto	0,0		23	3			26	0,0	88,5	11,5	0,0	0
Única - Adega Cooperativa do Algarve	0,2	3	125	30	6	12	176	1,7	71,0	17,0	3,4	7
Villa Alvor	0,3		261	4	1	20	286	0,0	91,3	1,4	0,3	7
Total Geral	**0,1**	**33**	**3 482**	**553**	**85**	**430**	**4 583**	**0,7**	**76,0**	**12,1**	**1,9**	**9,4**

59

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Annex C – Algarve wine producers pages referring to the Interactivity variable and its indicators

Wine Producers	Total Reactions, Comments and Shares	Engagement	Fan Posts
Villa Alvor	58197	4,338	14
Herdade Barranco do Vale	20493	0,773	21
Quinta Da Tôr	20562	0,506	0
Morgado do Quintão	4450	0,366	29
Adega do Cantor	26072	0,363	38
Casa Santos Lima	29077	0,355	28
João Clara Vinhos	7893	0,296	12
Marchalégua	4297	0,264	6
Quinta dos Sentidos	660	0,210	14
Quinta Do Francês Winery	5462	0,202	13
Monte da Casteleja	2958	0,165	0
Horta Nova	661	0,147	10
Única - Adega Cooperativa do Algarve	2233	0,139	24
Quinta do Barranco Longo	16049	0,121	14
O Barradas	228	0,110	0
Cabrita Wines - Quinta da Vinha	2273	0,100	8
Paxá Wines	6479	0,098	22
MALACA	3616	0,070	4
Herdade dos Pimenteis	1382	0,063	15
Herdade dos Seromenhos	876	0,057	9
Convento Do Paraíso	774	0,051	20
Quinta dos Vales and The Winemaker Experience	10830	0,038	18
Dom Vicente	2041	0,019	1
Dona Niza Wines	2338	0,009	9
From Algarve	104	0,007	3
Quinta do Canhoto	2393	0,007	10
Quinta do Morgado da Torre	53	0,006	1
ARVAD WINE	1188	0,004	8
Monte do Além	8	0,002	0
Quinta do Rogel	126	0,001	0
Sul Composto	1284	0,000	8
quintadapenina	61	0,000	1
Falesia Wine Club	220	0,000	0
Quinta Dos Santos	9796	0,000	11
Quinta dos Capinhas	2112	0,000	9
Monte de Salicos - MDS Vinhos	1049	0,000	11

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Annex D - Algarve wine producers pages referring to the Visibility variable and its indicators

Wine Producers	Fans	Posts per day	Reactions	Likes	Angry	Sad	Love	Haha	Wow	Care	Thankful	Shares	Comments	Hashtag	Post Length
Adega do Cantor	7163	0,1	163,6	135,9	0,0	0,9	25,5	0,2	1,1	0,0	0,0	18,6	20,5	Yes	345
ARVAD WINE	1238	0,1	5,8	5,2	0,0	0,0	0,6	0,0	0,0	0,0	0,0	1,1	0,2	Yes	253
Cabrita Wines - Quinta da Vinha	2571	0,1	11,3	10,9	0,0	0,0	0,4	0,0	0,0	0,0	0,0	1,1	0,2	Yes	63
Casa Santos Lima	8862	0,2	104,6	98,7	0,0	0,0	5,8	0,1	0,1	0,0	0,0	11,6	4,2	Yes	328
Convento Do Paraíso	1565	0,1	4,9	4,5	0,0	0,0	0,4	0,0	0,0	0,0	0,0	0,7	0,1	Yes	210
Dom Vicente	522	0,1	5,2	4,7	0,0	0,0	0,4	0,0	0,0	0,0	0,0	1,1	0,2	Yes	184
Dona Niza Wines	693	0,1	16,7	15,2	0,0	0,0	1,5	0,0	0,0	0,0	0,0	0,7	0,6	Yes	75
Falesia Wine Club	109	0,0	3,1	3,0	0,0	0,0	0,1	0,0	0,0	0,0	0,0	0,2	0,2	Yes	35
From Algarve	1428	0,0	2,0	1,9	0,0	0,0	0,1	0,0	0,0	0,0	0,0	0,9	0,0	No	69
Herdade Barranco do Vale	3420	0,5	31,1	27,3	0,0	0,0	3,6	0,0	0,1	0,0	0,0	4,9	1,7	Yes	131
Herdade dos Pimenteis	2118	0,1	10,5	9,9	0,0	0,0	0,6	0,0	0,1	0,0	0,0	0,7	0,3	No	3
Herdade dos Seromenhos	1509	0,1	9,2	8,6	0,0	0,0	0,4	0,1	0,1	0,0	0,0	0,6	0,3	No	17
Horta Nova	459	0,1	2,0	1,4	0,0	0,0	0,2	0,3	0,1	0,0	0,0	0,7	0,2	Yes	50
João Clara Vinhos	2855	0,1	34,7	30,9	0,0	0,0	3,7	0,0	0,1	0,0	0,0	6,8	1,9	Yes	180
MALACA	5089	0,2	18,5	16,2	0,0	0,3	2,0	0,0	0,0	0,0	0,0	4,9	1,2	Yes	80
Marchalégua	1923	0,2	16,4	14,8	0,0	0,0	1,4	0,1	0,1	0,0	0,0	2,9	0,3	Yes	619
Monte da Casteleja	2125	0,1	22,6	19,4	0,0	0,0	3,0	0,0	0,1	0,0	0,0	1,4	1,3	Yes	170
Monte de Salicos - MDS Vinhos	79	0,1	7,6	7,3	0,0	0,0	0,3	0,0	0,0	0,0	0,0	2,7	0,4	Yes	282
Monte do Além	498	0,0	0,2	0,2	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	No	0
Morgado do Quintão	2332	0,1	19,2	16,9	0,0	0,0	2,2	0,0	0,0	0,0	0,0	2,0	1,0	Yes	1000
O Barradas	428	0,0	1,8	1,6	0,0	0,0	0,2	0,0	0,0	0,0	0,0	0,2	0,3	No	159
Paxá Wines	6303	0,3	17,3	16,1	0,0	0,1	1,2	0,0	0,0	0,0	0,0	2,0	1,3	Yes	216
Quinta Da Tôr	6045	0,2	86,5	80,0	0,0	0,0	6,1	0,2	0,1	0,0	0,0	10,0	4,6	Yes	286
Quinta do Barranco Longo	12495	0,1	136,0	128,1	0,0	0,0	7,3	0,3	0,3	0,0	0,0	8,8	5,1	Yes	123
Quinta do Canhoto	1382	0,1	15,6	14,5	0,0	0,0	1,1	0,0	0,0	0,0	0,0	3,2	0,5	Yes	252
Quinta Do Francês Winery	2851	0,1	33,5	28,8	0,1	0,1	4,2	0,0	0,2	0,0	0,0	4,2	1,6	Yes	67
Quinta do Morgado da Torre	949	0,0	1,3	1,3	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,2	0,0	No	312
Quinta do Rogel	210	0,0	0,7	0,6	0,0	0,0	0,1	0,0	0,0	0,0	0,0	0,1	0,1	No	82
Quinta dos Capinhas	437	0,1	13,7	10,6	0,0	0,0	2,7	0,2	0,3	0,0	0,0	0,5	0,9	Yes	49
Quinta Dos Santos	2300	0,1	56,1	48,1	0,0	0,4	7,2	0,0	0,3	0,0	0,0	4,2	6,6	Yes	229
Quinta dos Sentidos	569	0,0	9,8	8,6	0,0	0,0	1,0	0,0	0,2	0,0	0,0	0,5	0,7	Yes	96
Quinta dos Vales and The Winemaker Experience	27221	0,3	26,7	24,8	0,0	0,0	1,8	0,0	0,0	0,0	0,0	5,0	1,0	Yes	240
quintadapenina	75	0,0	0,2	0,2	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,1	0,0	Yes	224
Sul Composto	412	0,0	6,0	5,7	0,0	0,0	0,3	0,0	0,0	0,0	0,0	1,7	0,2	Yes	238
Única - Adega Cooperativa do Algarve	1722	0,2	9,6	8,9	0,0	0,0	0,7	0,0	0,0	0,0	0,0	1,5	0,5	Yes	301
Villa Alvor	3516	0,3	191,5	183,1	0,0	0,0	8,1	0,1	0,2	0,0	0,0	9,8	3,1	Yes	428
Average	3152,0	0,1	30,4	27,6	0,0	0,1	2,6	0,1	0,1	0,0	0,0	3,2	1,7		205

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Annex E - Algarve wine producers pages referring to the Profitability variable and its indicators

Wine Producers	Ad-Value (Euro)	Page Performance Index
Villa Alvor	437,6	53%
Casa Santos Lima	372,2	13%
Adega do Cantor	313,2	9%
Herdade Barranco do Vale	297,5	25%
Quinta Da Tôr	273,5	23%
Quinta dos Vales and The Winemaker Experience	161,2	2%
Quinta do Barranco Longo	155,6	3%
Quinta Dos Santos	128,9	-
João Clara Vinhos	114,4	12%
Paxá Wines	89,0	4%
Quinta Do Francês Winery	74,3	9%
Marchalégua	70,6	15%
MALACA	63,6	3%
Morgado do Quintão	51,4	25%
Quinta do Canhoto	36,5	-
Monte da Casteleja	34,2	9%
Dom Vicente	32,8	-
Única - Adega Cooperativa do Algarve	31,9	8%
Cabrita Wines - Quinta da Vinha	26,9	6%
Dona Niza Wines	26,6	-
Quinta dos Capinhas	22,2	-
Sul Composto	19,4	-
Monte de Salicos - MDS Vinhos	19,3	-
ARVAD WINE	17,8	-
Horta Nova	15,3	3%
Herdade dos Pimenteis	14,0	4%
Convento Do Paraíso	9,7	4%
Herdade dos Seromenhos	9,1	2%
Quinta dos Sentidos	7,7	13%
O Barradas	3,8	9%
Falesia Wine Club	2,6	-
Quinta do Rogel	2,3	-
From Algarve	2,1	2%
Quinta da Penina	1,0	-
Quinta do Morgado da Torre	0,7	2%
Monte do Além	0,1	2%

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