

Progress and prospects for research of Wine Tourism in Portugal

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Abstract: Wine producers in Portugal have begun to see tourism as an opportunity to diversify their profit margins. With the growing importance of enology universities have established greater research into the subject and to organize the existing bibliography. Thus, this paper presents a panorama of the articles on wine tourism 2003 to 2018 with a critical analysis of characteristics and trends in the Portuguese context. The literature review covers all the completed publications in English, Portuguese and Spanish in journals indexed in Scopus, Web of Science, Scielo and Spell. A total of 36 articles were examined after eliminating duplicates, dissertations and theses. The main conclusions are that wineries tend to be organized by routes with scant literature relating to other routes and wine regions outside Portugal.

Keywords: Wine tourism; Wine consumption; Wine research; Portugal wine; Portugal wine research.

Avances y perspectivas para la investigación del turismo del vino en Portugal

Resumen: Los productores de vino en Portugal comenzaron a ver el turismo como una oportunidad para ayudar a diversificar los beneficios económicos de la manufactura dentro de sus actividades. Con la creciente importancia del tema, las universidades comenzaron a investigar más sobre el tema y no había una organización de publicaciones actualizada. Por lo tanto, este documento presenta un panorama de los artículos del tema de 2003 a 2018 con un análisis descriptivo de las características y tendencias en el contexto Portugués. La revisión de la literatura cubre todas las publicaciones completas que aparecieron en los idiomas inglés, portugués y español en revistas indexadas en Scopus, Web of Science, Scielo y Spell entre 2003 y 2018. Se examinaron un total de 36 artículos después de duplicados, disertaciones y tesis. Las principales conclusiones son las tendencias de las bodegas organizadas en rutas y una escasa publicación de publicaciones de otras rutas y regiones vinícolas.

Palabras Clave: Enoturismo; Consumo de vino; Investigación del vino; Portugal vino; Portugal vino investigación.

1. Introduction

Portugal ranked 11th place in world wine production in 2016 with 5,6 mhl, making wines as one of the main products exported by the country and where the largest commercial surpluses are recorded (Machado & Ribeiro, 2017). In line with that, the tourism sector represents an important status in Portugal whose driving force is not limited to the economic dimension (9% of GDP), but extends to its repercussion in social dimension. The tourism in Portugal has wine tourism as one of the fastest growing economic exponents and an enhancer of sustainable local development (Maduro, Guerreiro, & de Oliveira, 2015). In this sense, Portugal has begun to view wine tourism as an interesting activity that can help the country's economy and, simultaneously, generate economic and social progress in

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regions with Beyond the socioeconomic importance, the Portuguese culture of producing wine made the product as symbol of the country throughout the world and two UNESCO World Cultural and Natural Heritage. The country is one of the first wine-producing regions in the world, and heritage region in the Douro Valley Wine Region and the Pico Island Wine Region (Charzyński, Łyszkiewicz, & Musiał, 2017).

Additionally, there are some wine regions where the dependence of tourism is more evident. The funding and financial benefits for tourism are concentrated in certain areas of the country due to the long-established tradition that those regions have within the tourism sector. These areas absorb a considerable number of support infrastructures, hence increasing the visibility and attractiveness of such destinations in the domestic and international markets (Carvalho, Soutinho, Paiva, & Leal, 2018).

Generally, the characteristics of wine and tourism can change with the regional attributes such as climate, identity and production of the country. These attributes can change the network, the regulation and certification of wine production and tourism services, that are linked to the attractiveness of the destination. This network creates a regional setting to generate an organized the tourism and wine agents, based on several partners connected to each other and to the region, creating wine routes (Carvalho et al., 2018). Thus, the recognition of the European wine regions and wines is crucial to the success of the wine regions and more for the wine sector and the tourism has an important role on this process. In this sense, the tourism activity can be an opportunity to diversify the local economy of the wine producers because of its environmental, social, economic and cultural dimensions linked to the wine region territory (da Silva, Fernao-Pires, & Bianchi-de-Aguiar, 2018).

From a research perspective, a study developed by Durán Sánchez, Álvarez García, & del Río Rama (2016) identified that publications of wine tourism are relatively new and scarce and do not follow the importance that the tourism sector has achieved. To fill this gap, this study aims to do a systematic review of the existing papers of wine tourism in Portugal with a critic analysis of the literature and characteristics of the regions and routes in within the Portuguese context.

Therefore, we intend to contribute both to the literature of the field and to the knowledge of the wine tourism sector with the characteristics and different approaches that research, and management of the Portuguese context can have. This paper is organized as follows: first, an initial chapter about the methodology approaches. Next, a chapter with a description of wine tourism in Portugal and another chapter about the routes, festivals and tendencies of these wine routes. Finally, the fourth chapter presents and discuss information about the published papers of the period, ending with the conclusions.

2. Research design

Due to the contexts of publications of the wine tourism in Portugal, this study adopts a qualitative, exploratory systematic review of the literature of the last 15 years (from 2003 to 2018). The systematic review also called as integrative review method is indicated by Botelho, de Almeida Cunha, & Macedo (2011) to set out a panorama about the scientific production topic, so the study can examine the evolution of the theme over time and, with this, to visualize possible research opportunities. Another determining factor designated for Chueke & Amatucci (2015) for the choice of the search method, is the size of the “sample”. In cases with 30 or 40 articles is more appropriate to carry out an integrative literature review. Since it is possible to read in depth this number of articles, this approach is adequate in order to articulate ideas and to point out new directions of research in a certain area.

The literature search was carried out using indexed journals on the most popular databases: Scopus, Web of Science, Scielo and Spell. The purpose was to review all full publications that have been appeared in English, Spanish and Portuguese languages in the journals from 2003 to 2018. The key words used in the database were a combination of “wine”, “tourism” and “Portugal” in the articles titles, abstracts and keywords, also in English, Spanish and Portuguese languages in December 2018. The keywords combination in each database are shown in Table 1.

Table 1: Keywords combination

Database	
Scopus	Wine AND tourism AND Portugal “Wine tourism” AND Portugal “Portugal wine tourism” enoturismo AND Portugal
Web of Science	Wine AND tourism AND Portugal “Wine tourism” AND Portugal “Portugal wine tourism” enoturismo AND Portugal
Scielo	Wine AND tourism AND Portugal Enoturismo AND Portugal turismo del vino AND Portugal
Spell	Wine AND tourism AND Portugal Enoturismo AND Portugal turismo del vino AND Portugal

A total of 47 citations were identified and after exclusion of duplicates, editorials, brief commentaries, dissertations and thesis. Table 2 shows the chronological list of works available by year after the exclusion of publications.

Table 2: Chronological list of works

Year	Number of works
2006	2
2008	1
2010	3
2012	3
2014	6
2015	1
2016	7
2017	8
2018	5
Total	36

A total of 36 papers were examined with focus on the panorama of the research of wine tourism in Portugal: the main theoretical and methodological visions used to investigate the topic in previous works. The findings and discussion are presented on the following chapters.

3. Wine tourism in Portugal: characteristics and concepts

There are social, cultural, and religious characteristics of drinking wine in Portugal. According to Salvado (2017), the wine has an important role in the catholic church in social, cultural and religious rituals, the most popular religion in Portugal. In different wine-growing regions the production is also linked to the historical, physical, biological, cultural and sociological development. The author highlights important components that nowadays describe wine as a source of nutrition and a healthy lifestyle within the population.

Historically, the vine cultivation and wine production have a secular influence from Roman and Pre-Roman origin in Trás-os-Montes region as archaeological remains shows (Salvado, 2017). The wine was introduced in the Iberian Peninsula from the VIII-VII a. C. by the Phoenicians, together with the olive oil (Kullberg, Coelho, Almeida, & Rocha, 2014). During the exploration period, Portuguese wines reached all continents, with the “Round” or “Back Voyage” wines achieving fame, experiencing new aging techniques and improved over the following centuries (da Silva et al., 2018).

Currently, Portugal has many different wine regions. According to Charzyński et al. (2017) the country is a singular destination with production within the territory with a diversity of local grape varieties (Table 3). Also, there are 14 major wine regions in Portugal and 28 D.O.C. (Registered Designation of Origin - Denominação de Origem Controlada) regions (Figure 1).

Table 3: Vine varieties and grapes characteristics in Portugal

White varieties		Red varieties	
Name and characteristics	Main growing areas	Name and characteristics	Main growing areas
<i>Alvarinho</i> intense aromas of lime, mango, passion fruit and other tropical fruits	Vinho Verde, the Minho river valley	<i>Alfrocheiro Preto</i> spicy and floral aromas, blackberry, tannic	primarily in Dão DOC and Alentejano VR
<i>Arinto</i> <i>Pedernã</i> refreshing acidity, often with a mineral quality, gentle flavours of apple, lime and lemon	in most wine regions; in Vinho Verde country, know by the name Pedernã; valued especially in DOC Bucelas	<i>Touriga nacional</i> intense flavours, both floral and fruity – blackcurrants, raspberries – with complex hints, also of herbs and liquorice	nothern origin (Douro, Dão), spread across the country – cultivated in the south in Algarve and Alentejo, in the west in Ribatejo/Tejo and Setúbal regions
<i>Loureiro</i> fresh and refreshing, floral-citrus notes	mainly in Vinho Verde but also in other regions	<i>Baga</i> flavours of berries and black plums and hints of coffee, hay, tobacco and smoke	originating in Bairrada, also common elsewhere in Beiras, including Dão
<i>Moscatel</i> intense aroma of orange blossoms with the honey flavour and hints of coffee and caramel	Península de Setúbal	<i>Castelão</i> pronounced fruity aroma of blackcurrant, preserved plums and forest fruits	commonly planted grapes in the south of Portugal; especially popular in the regions of Tejo, Lisboa, Península de Setúbal and Alentejo
<i>Encruzado</i> delicate aromas of roses and violets, ligh citrus notes, often mineral notes (flint); while ageing it takes on hints of pine nuts, hazelnuts and resins	restricted to DOC Dão only	<i>Trincadeira</i> <i>Tinta Amarela</i> when young its aroma carries notes of ripe plums; later raspberry notes tempered by herby, peppery, spicy, floral complexity	Alentejo, Douro, Tejo
<i>Fernão Pires</i> flavours of roses and other flowers, lemon, oranges, tangerines	mainly in Bairrada, Tejo, Setúbal as well as in Douro, Dão, Alentejo	<i>Tinta Roriz</i> <i>Aragonês</i> aromas of plums and forest fruits, developing into new complexes with ageing	Alentejo, Douro and Tejo. It probably originates from Asturia, Spain

Source: Charzyński, P., Łyszkiwicz, A., & Musiał, M. (2017)

Figure 1: Major Wine Region's and D.O. C's in Portugal



Source: Charzyński, P., Lyszkiewicz, A., & Musiał, M. (2017)

The characteristics of the worldwide known Vinho do Porto is made in Douro Valley in Duriense Region. This region has a lot of red wines varieties and different times and methods of the wine aging that makes different products of Porto wine (Gouveia, Rebelo, & Lourenço-Gomes, 2018). Charzyński et al., (2017) in their work of Portugal as a culinary and wine tourism destination, described detailedly some components of different regions in the country. The wine region Lisboa produces both red and white wine and there are 9 distinguished wine appellations. Besides, the Tejo region has specific types of soils, limestone and clayey soils. Also, many varieties of vines are cultivated there, including the traditional and a first-class white wine, popular among Portuguese people. The Alentejano region is characterized by excellent conditions to produce high-quality wines, the most popular red wine in the country. Although red and white wine from this region are very popular in Portugal, the red wine represents the major part of the production while white wines represent a small percentage of production. Moreover, the Peninsula Setubal region produces the Moscatel wines and red wine. The Moscatel variety can age for 20 years in barrels with a complex characteristic of taste and intense aromas. The red wine is made of a specific grape variety with the name of Castelão. The region is characterized of the integrated production with cooperatives, local institutions and regional agents networked. Furthermore, the Algarve region

has different types of red wine that are signed as Wine Region Algarve with a lot of contents of alcohol. With a dry and hot climate, the region also produces white wine. Beyond that, The Madeira region is an island in Portugal that also produces sercial, verdelho, boal and malvasia specific varieties, and offers a sea voyage in the tropical climate. The region has the most popular red wines among Portuguese after the Alentejo region. Finally, the Minho Region is the second oldest wine region in Portugal with a big nature influence in its production mainly about the white and green wine.

Although the importance and dissemination of the vine cultivation, there were no evidence from some "less popular" regions such as Távora-Varosa, Lafões and Lagoa. Also, from the knowledge of the characteristics of the wine regions, culturally, socially, historically the absence of evidence from these aspects are missed in the articles published.

About the producers of wine, the wine production in Portugal is mainly characterized by micro and small business with a family orientation in rural areas, that can make the tourism activity in these regions difficult (Esteves, 2014; Pacheco, 2017). A. Correia, Vaughan, Edwards, & Silva (2014) support the idea of wine production as a diversification of the rural producers through agriculture revitalization and distribution. Also, the tourism activity as a development of rural areas and the promotion of the region through its natural, patrimonial and cultural resources. These singularities made two regions of Portugal as UNESCO World Cultural and Natural Heritage: the Douro Valley Wine Region and the Pico Island Wine Region. This attractiveness in rural areas contributes to the preservation of traditions and landscapes and produces self-organize them in form of routes, to help them became more established and competitive in national and international scale in wine tourism activity.

Different works published that mentioned the UNESCO regions (see Amaral, Saraiva, Rocha, & Serra, 2015; Charzyński et al., 2017; R. F. Correia & Brito, 2014; da Silva et al., 2018; Tavares & Azevedo, 2012) converge by describing and support the idea of make these regions UNESCO heritage as good for tourism activity and improving the number of visitors and the sustainability of these places.

Regarding the definitions of wine tourism, there are some contrasts in the description of what is wine tourism within the literature. The definition of according to Simões (2008), is a set of activities associated with visits to wine companies, museums, participation in events or centers and other establishments linked to the wine sector or wine interests which the main objective is the knowledge and the proof of the wines of the regions visited. Another definition presented by Gonçalves & Maduro (2015) presents the wine tourism as a tourist activity based around trips motivated by wine and vine growing but also by tradition and local *ethos*. The activity can assume a system formation with full of connections between supply and demand in local, regional development. Furthermore, a definition from Maduro, Guerreiro, & de Oliveira (2015) also characterize wine tourism as a set of tourist services, leisure and leisure activities dedicated to the discovery and cultural and oenological pleasure of the vine and wine. These differences are discussed in the work of Ramos, Santos and Almeida (2018) that presents a table (Table 4) with the most cited wine tourism definition in the literature.

Table 4: 6 Most used wine tourism definitions in literature review

Definitions	Authors
"wine tourism is special-interest travel based on the desire to visit wine producing regions, or in which travellers are induced to visit wine-producing regions, and wineries in particular, while travelling for other reasons".	Getz <i>et al.</i> (2007, p. 246)
"all activities and tourist resources, leisure and leisure related to the material and immaterial cultures, wine and local gastronomy of their territories".	European Charter for Wine Tourism (2006, p. 1)
"wine tourism is simultaneously a form of consumer behaviour, a strategy by which destinations develop and market wine-related attractions and imagery, and a marketing opportunity for wineries to educate an to sell their products directly to consumers".	Getz & Brown (2006, p. 147)
"the development and marketing of wineries as places to visit, and of destinations based on the appeal of wine".	Brown & Getz (2005, p. 3)
"visit to vineyards, wineries, festivals and wine shows where wine tasting and/or experiencing the attributes of a wine region are the main motivation factors".	Getz (2000, p. 3)
"visitation to vineyards, wineries, wine festivals and wine shows for which grape wine tasting and/or experiencing the attributes of a grape wine region are the prime motivating factors for visitors".	Hall <i>et al.</i> (2000, p. 3)

Source: (Ramos et al., 2018)

Different authors suggest other aspects to include in the definition. Ramos et al. (2018) indicates that the concept needs to develop and include motivations and emotions. Simões (2008) indicates that is important to highlight all the landscape and architectural heritage related to the culture of the vineyard and the production of wine to the. Da Silva, Joao Ferno-Pires, & Bianchi-de-Aguiar (2018) advise about the landscape territories management in rural areas. The authors argue about the need to be more integrated to the products, to the city, region and national tourism management plans and consider the stakeholders and local's opinions, respecting historical memory and the collective identity. This relation preserves the authenticity and the quality of landscapes and terroirs through the country to an economic, social and cultural sustainable development paradigm. Because of different aspects of the definition founded in the literature, the discussion emphasizes the need and the challenge to develop the description and the limits of wine tourism that integrates different actors and activities involved.

Other authors (Marques & Marques, 2017; Reis, 2016) highlight the contribution of tourism can have in rural areas and in wine regions for the local context. The tourists need the gastronomy and hospitality sector in addition to one-day wine tasting (Henriques & Custódio, 2010). Also, the need to enjoy the traditional environment, to experience a range of complementary activities and escaping the stress of the city, can increase the number of visitors and extend the length of stay. As wine tourism is essentially tourism in rural areas linked to wine and vineyards, there is a strong connection to nature tourism and cultural tourism. The tourist objective can be to visit the places related to the culture of the vineyard and the production of wines, but also, the wine routes. In this sense, it is important to preserve of a vast and rich material and immaterial, social and environmental patrimony, which may be the greatest allies in the fight against vulgarity, lack of quality, massification and de-characterization of tourism activity in rural areas.

From this perspective, there is an effort from the National Wine Board from Portugal that became the National Institute of Vine and Wine, not only to organize and ensure the quality certification system, but as overseeing and auditing entities certification bodies and a connection with the European Union policies. In addition, there is an awareness campaign for the supply of all material to be part of museum collections, and therefore, to ensure the collection and selection of the materials. The national character of the collection, in which the wine-growing regions must be equitably represented, is giving priority to

a model centered on industry and technology. This collection elucidates the various stages of vineyard work and respective operating chain of production, not neglecting the artistic and folk component of the wine process (Maduro et al., 2015).

Although the importance of rural areas and wine tourism, few researchers committed to discuss the topic and there are some evidences for Douro and the North of Portugal and, at the same time, few publications from the southern regions including some with no evidence for this discussion, creating some opportunities of research. The promotion in local communities, the local stakeholders' companies' and actor's participation in policy and management decision making, related with tourist satisfaction in a global competition market makes a complex system for the viability of a sustainable wine tourism activity. Thus, the wine tourism must integrate environmental, economic and social principles of sustainability (Sampaio, 2012). Some routes, festivals and tendencies in Portuguese market demonstrate this tendency.

4. The routes, festivals and tendencies of wine tourism

The notion of wine route, although widely applied and promoted in almost all the published works, was barely discussed in the literature. Carvalho et al. (2018) describe a wine route as an itinerary to appreciate wine by each of its components to the resources of regional actors involved. The implementation should be flexible and with a social network that offers information and knowledge to the collective learning, promotion of the route and opportunities for the producers. From this perspective, the strategy can generate and collect a widespread consensus to embellish the positive tourism impacts and manage the negative outcomes.

In Portugal, the wine routes started in 1993 with the participation of the country in *Dyonisios* European Union Program. The program supported the routes with funding and assistance to create regulation and quality standards to all the programs in the country. Despite the program started in 1993, most of the routes started in 1996 and 1998 and has a growing interest to approximate the universities, the government, private companies and routes of wine tourism. This approximation resulted in the first congress of wine tourism in Portugal in 2001 with a focus in financial funds and public policy to producers (Simões, 2008).

The country identified 12 main wine routes in Portugal: Port wine route; Wine route of the Tagus; Wine route of Lisbon; Wine route of the Peninsula of Setúbal; Wine route of the Dão; Wine route of the Bairrada; Wine route of the Algarve; Wine route of the Alentejo; Route of the Green Wines and Route of the Vineyards of Cister (Correia & Ascensão, 2006; Quaresma, Ribeiro, & Fernandes, 2017). Some authors (Carvalho et al., 2018; Martins et al., 2017; Montenegro, Costa, Rodrigues, & Gomes, 2014) present the routes and the wine producers in Portugal as a dynamic and high-quality activity. In the last decade, there were various investments made in the sector that created the techniques and processes modern, also the internationalization of the wine circuits all over the country.

This development made the Portuguese wine tourism sectors currently one of the most dynamic tourism segments in the country with the Douro Valley region as one of the highlights of this trend (Martins et al., 2017). Correia & Brito (2014) describes the Douro route with a unique landscape alongside the river Douro in the North of Portugal. With different vineyards planted in slopes that form one of its main distinctive attractions with a great vocation for tourism. Through tourism, one project highlights the possibility of revitalizing local abandoned places and abandonment of traditional activities. Goncalves (2018) indicates the Aldeias Vinhateiras Project has become a way of the village's population, who were previously under socioeconomic depression, to a reinvention of the rural region in a tourism product. The empowerment of the community in the process of governance, in the planning of local policies and in the development process of the region, ruled the ideas of "more conscious and more responsible" community practices.

It is important to feature that the region has other activities with tourism such as agritourism. Marques (2006) define agritourism as a specific type of rural tourism that make the hosting house integrated into an agricultural estate, inhabited by the proprietor, allowing visitors to take part in agricultural or complementary activities in the property. For this reason, Martins et al. (2017) argue that in Douro, not only the wine routes can exist, but multiples routes of rural tourism can coexist in the region.

Another wine route has the name of Green Wine Route. Created in 1997 with the main purpose of stimulating the development of the Wine Region in the different aspects of winemaking: from the vineyard to the glass, through the experiments in the context of wine tasting, until the visits to farms.

The Rota dos Vinhos Verdes (Green Wine Route) integrates a set of vineyards and wine regions, organized in a network, duly signalized, to arouse interest on the part of the tourist, through a strictly selected offer according to predefined rules. Since its creation, the route has a central office based in Oporto, to support tourists, organize wine tourism programs, bookings and reservations, with available service for clarification to all interested parties (Brochado & Oliveira, 2018; Loureiro & Cunha, 2017; Reis, 2016; Santos, Ramos, & Almeida, 2017).

In addition, the Alvarinho Green Wine Route also integrates the Green Wines route. Considered the most national and international prized category of green wine, Alvarinho has its own route. Portugal, Spain and France are the main markets for tourism in the region with an annual Alvarinho Wine Festival. Since 1995, the festival promotes the grape variety and the cultivation in the region for tourists (Baptista, 2017; Delgado & Sa Machado, 2012).

Therefore, the Bairrada Wine Route was created in 1995 by a group of regional and local wine related actors from the public and private sector. The region offers the highest number of underground wineries, offering an innovate tourism product with a 28 regional wine producers and wineries (Carvalho et al., 2018).

Besides that, the Peninsula Setubal Wine Route corresponds the highest quality generous wines with indication of age or harvest, for whites of typical varieties of colder areas, and for reds less adapted to the sandy terrains and the very climates hot. The route also coexists with other tourism attractive such as the beaches and the national parks (Kullberg et al., 2014).

Furthermore, the Alentejo Wine Route was created in 1997 by the regional commission of wine. The special characteristic of the route is the diversity of wine tourism, the number of agents associated to the route and the UNESCO World Cultural and Natural Heritage. The gastronomy and the intercultural tourism scene are an important complement to this product into the tourism market (Amaral et al., 2015; Lavandoski, Pinto, Silva, & Vargas-Sánchez, 2016).

There was no description about the other wine routes such as Wine route of the Tagus; Wine route of Lisbon; Wine route of the Dão; Wine route of the Algarve; and Route of the Vineyards of Cister in the literature, which could discuss some challenges, trends and opportunities of the wine routes to other routes, including outside Portugal.

Among the festivals, the Madeira Wine festival is one of the oldest European wine festivals. Since 15th Century in September in the city of Madeira, the festival has 2 weeks of events and exhibitions of the grapes and wines of the region. Moreover, the Wine in Azores is a festival that annually promotes in Azores the Portuguese wine from all over the country, with a mix of gastronomy and wine events and exhibitions (Charzyński et al., 2017).

These events make one of the wine tourism market tendencies for the Portuguese market. These festivals help the image of the wine region in the international and national market position among stakeholders and a consistent wine-related image. Thus, a growing governmental support with policies and funding, since wine tourism is a priority of EU economic support and Portugal government actions. Another tendency is a grown number of wines and companies in international and national competitions. These competitions help Portuguese wine to be seen and promoted as high-quality sustainable product and established Portugal as a wine tourism destination (Ramos et al., 2018).

Another tendency to wine tourism is the development of supply and demand of the market. Also, use of education in order to change perceptions and promote responsible behaviors. Therefore, a personalization on the experiences that the routes can offer to a more exclusive format of tourist (Tavares & Azevedo, 2012; Tavares & de Azevedo, 2010).

Although all the market tendencies, the main difficulties of the wine tourism business are the small companies operating in an international scale. According to Lamelas, Lamelas, & Filipe (2016), most of the organizations not only from wine industry but others such as gastronomy and hospitality, are made of small business. This context reinforces the potential of all the agents organized in routes to be more coordinated and competitive in the market and provide personalized experiences in the local scale (Correia et al., 2014).

From the competitive and scale of the market wine contexts, the research and development (also known in Europe as research and technological development - RTD), can help the wine tourism market with modernization of the wine-making processes, preservation of the vineyard regions' history and identity, better prices policies, market position and product placement. This context reinforces the need to align research and development with the actions, companies and public policy of the wine routes to be more competitive in the market (da Silva et al., 2018; Lopes, 2014)

5. Discussion and conclusion

The analysis of the 15 years of the production of wine tourism in Portugal shows a growing number of publications in the last years with 22% on 2017 and 19% on 2016. The qualitative approach was the most used (72,2%) way to produce the papers. Besides that, the most researched wine route was the Douro Wine Route included in 22% of the research. Also, is important to highlight that 27% of the studies searched about wine tourism all over the country and some of them studied more than one wine route. Almost all the works were published by Portuguese authors with 91,6% of all authors. Furthermore, the most frequent publication language was English language with 69,4%, followed by Portuguese language with 27,8% of the studies. In addition, the most used journals by authors to publish about the topic were the *Worldwide Hospitality and Tourism Themes* with 11,1% and *PASOS: Revista de Turismo y Patrimonio Cultural*, also with 11,1% , both in the first place. The authors who most published about the topic during the period analyzed were Madaleno, Eusebio, & Varum (2016, 2017, 2018) with 8,3% of the studies.

There are few papers published about the Portuguese context in wine tourism, although the importance of the topic and the grown of the publication in the last 3 years. The papers have done a substantial contribution to characterize and describe the context, the difficulties, the tendencies and the research of the topic. Some gaps of research include contexts such as as Távora-Varosa, Lafões, Lagoa, the southern wine routes, events and festivals with almost no research about their evidences, consequences, trends and opportunities.

This article contributes in a theoretical and practical basis. From the management perspective the organization in routes, the participation in festivals and competitions and the personalization are the next tendencies of the Portuguese market. From the literature point of view, there is a predominance of qualitative studies in case studies and to study the managerial and tourist issues of the organization of wine routes and the consequences for the local community. This context creates opportunities of publications for further reseraches with quantitative and mixed approaches.

In conclusion, most of the studies explored the management and business area, more especifically about the conditions and challenges of the managers inside the activity and value of the wine. Regarding future studies, to study the tourist and visitor perceptions and consumer behavior could be an opportunity for researchers on the topic. In addition, it seems that more quantitative or mixed approaches are demanded to study the field. Designs such as correlational and experimental studies almost was not found in the analyzed literatute. Also, other disciplines such as geography, economy, hospitality, sustainability, transportation, human resources or muti or transdisciplinary studies can give other perspectives with the Portuguese context: wine tourism and the use of space in some regions, the sharing economy in transportantion and hospitality, the human resources challenges of tourism in rural areas, are some examples of gaps that can guide further researches.

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