



UNIVERSITY OF SEVILLE

Faculty of Tourism and Finance

Interuniversity Doctorate in Tourism

# **WINE TOURISM: WINE AND WINE TOURISM EXPERIENCE**

*NEW TOOLS FOR ITS CHARACTERISATION AND  
MEASUREMENT IN PORTO AND MADEIRA WINE*

**DOCTORAL THESIS  
(by compendium of publications)**

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Seville, 2020

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# DOCTORAL THESIS

SEVILLE, 2020

FACULTY OF TOURISM AND FINANCE  
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INTERUNIVERSITY DOCTORATE IN TOURISM

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Thesis (by compendium of publications) presented by Vasco Ribeiro dos Santos  
to attain the Doctor degree in Tourism  
(Research line: Local Society and Impacts of Tourism)

Vasco Ribeiro dos Santos

Seville, 2020



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*What peculiar privilege has to be little agitation of the brain which we call  
thought.*

(David Hume)





## ABSTRACT

This study, conducted using a compendium of published papers corresponding to chapters, aims to contribute to the development of the concept of wine tourist behaviour in the wine tourism area, specifically in the wine and wine tourism experience, by bringing new discussion and empirical evidence. For this, a literature review and content analysis of the main constructs and dimensions, along with an analysis of their combined interaction, was conducted in order to support and perform a segmentation of wine tourists and the development of a scale. This research was undertaken in the framework of wine tourism, mostly related to wine tourist profiling and the wine experience of tourists in the Porto and Madeira wine cellars, respectively.

Methodologically, the first chapter is a general review study in which a literature review and content analysis for wine tourism in Portugal is carried out, allowing a better identification of the main challenges, trends and opportunities. The second chapter consists of new evidence of segmentation based on wine product involvement (Porto wine product), focused on the profiling of wine tourists in Porto wine cellars, and the three clusters with high, medium and low wine product involvement levels in particular. For the third chapter, a theoretical and conceptual review is used, within the wine and wine tourism experience, leading the way for the development wine experience in the context of wine tourism activity. In the fourth chapter, a quantitative research is used to measure the holistic behaviour of wine tourists. The wine experience scale was developed using SEM-AMOS software, allowing the validation of this new measurement scale, comprising four major dimensions: wine storytelling, wine tasting excitement, wine involvement, and winescape, tested in Porto and Madeira wine cellars.

In the first chapter (scientific paper 1), the findings provided support for the boundaries to identify the main challenges, trends and opportunities in the field of wine tourism in Portugal. The literature review and content analysis produced insights based on benchmarks for the wine tourism industry, and key points that formed the basis of a strategic agenda for future action.

In the second chapter (scientific paper 2), the findings sustained the special interest in wine tourist profiling in the Porto wine cellars, and segmentation was stated based on wine product involvement in a set of three clusters – high, medium and low wine product involvement levels, where the main constructs related to wine tourist profile and

segmentation as well as wine product involvement based on segmentation are interlinked.

In the third chapter (scientific paper 3), the theoretical and conceptual review of wine and wine tourism highlighted the current state of the art with an in-depth literature review. This research found that the experience focused on wine and wine tourism requires further exploration and research. Directions and approaches are proposed, demonstrating the need to develop a measurement scale for wine experience in the context of wine tourism activity during the visits.

In the fourth chapter (scientific paper 4), a scale was developed and validated, using structural equation modelling (SEM-AMOS), to measure the wine experience of wine tourists, and it was tested in Porto and Madeira wine cellars, revealing the holistic behaviour of wine tourists. Four major underlying wine experience dimensions of local food consumption were labelled: wine storytelling, wine tasting excitement, wine involvement, and winescape. The outcomes and applications of the newly developed scale were addressed and discussed both in terms of theoretical scientific research and managerial implications.

The study has methodological research contributions for the scientific community, and direct implications for Porto and Madeira wine cellars. The results led to final conclusions, practical implications for management, and suggestions for future research.

### **Keywords**

Wine involvement, segmentation, wine tourism, wine tourist, wine experience, theoretical and conceptual review, SEM-AMOS, Porto and Madeira wine cellars.



## RESUMEN

Este estudio, realizado a través de un compendio de artículos publicados correspondientes a capítulos, pretende contribuir para el desarrollo del concepto del comportamiento del enoturista en el área del enoturismo, concretamente en la experiencia del enoturismo y en la experiencia vínica, aportando nuevas discusiones y evidencias empíricas. Para ello, se realizó una revisión de la literatura y análisis de contenido de los principales constructos y dimensiones, junto con un análisis de su interacción conjunta, con el fin de apoyar y realizar una segmentación de los enoturistas y el desarrollo de una escala. Esta investigación se llevó a cabo en el ámbito del Enoturismo, fundamentalmente relacionada con el perfil del enoturista y la experiencia vínica de los enoturistas en las bodegas de Vino de Oporto y Madeira, respectivamente.

Metodológicamente, el primer capítulo es un estudio de revisión general en el que se realiza una revisión bibliográfica y un análisis de contenido del enoturismo en Portugal, que permite una mejor identificación de los principales retos, tendencias y oportunidades. El segundo capítulo consiste en una nueva evidencia de segmentación basada en la implicación del producto vino (producto de vino de Oporto), centrada en el perfil de los enoturistas en las bodegas de Oporto, y en particular en los tres clústeres con alta, media y baja implicación en el producto vino. Para el tercer capítulo se hace una revisión teórica y conceptual, en el ámbito de la experiencia enoturística, abriendo el camino para el desarrollo de la experiencia del vino en el contexto de la actividad enoturística. En el cuarto capítulo, se utiliza una encuesta cuantitativa para medir el comportamiento holístico de los enoturistas. La escala de experiencia del vino se desarrolló utilizando el software SEM-AMOS, lo que permitió la validación de esta nueva escala de medición, compuesta por cuatro dimensiones principales: storytelling del vino, emoción de la cata de vinos, implicación con el vino y el paisaje del vínica, probado en las bodegas de Oporto y Madeira.

En el primer capítulo (artículo científico 1), los resultados obtenidos proporcionaron el soporte para delimitar la identificación de los principales desafíos, tendencias y oportunidades en el área del enoturismo en Portugal. La revisión de la literatura y el análisis de contenido originaron ideas basadas en referencias para la industria del enoturismo y puntos clave que formaron la base de una agenda estratégica para acciones futuras.

En el segundo capítulo (artículo científico 2), los resultados respaldaron el especial interés por el perfil del enoturista en las bodegas del vino de Oporto, y la segmentación se determinó a partir de la implicación del producto vino en un conjunto de tres clústeres - niveles alto, medio y bajo la implicación del producto vino, donde se vinculan los principales constructos relacionados con el perfil y la segmentación del enoturista, así como la implicación del producto vino basado en la segmentación.

En el tercer capítulo (artículo científico 3), la revisión teórica y conceptual del enoturismo y el vino destacó el estado del arte actual con una revisión en profundidad de la literatura. Esta investigación concluyó que la experiencia centrada en el vino y en el enoturismo requiere más exploración e investigación. Se proponen pautas y enfoques, demostrando la necesidad de desarrollar una escala de medición para la experiencia del vino en el contexto de la actividad enoturística durante las visitas.

En el cuarto capítulo (artículo científico 4), se desarrolló y validó una escala, utilizando modelado de ecuaciones estructurales (SEM-AMOS), para medir la experiencia vínica de los enoturistas, y fue probada en las bodegas de Oporto y Madeira, revelando su carácter holístico comportamiento de los enoturistas. Se etiquetaron cuatro dimensiones principales que subyacen a la experiencia del vino en el consumo de alimentos locales: storytelling del vino, entusiasmo por la cata de vinos, implicación con el vino y el paisaje del vino. Los resultados y aplicaciones de la escala desarrollada recientemente fueron abordados y discutidos en términos de investigación científica teórica e implicaciones gerenciales.

El estudio tiene contribuciones metodológicas de investigación para la comunidad científica, y tiene implicaciones directas para las bodegas del Vino de Oporto y Madeira. Los resultados llevaron a conclusiones, implicaciones prácticas para la gestión y sugerencias para futuras investigaciones.

### **Palabras clave**

Implicación con el vino, segmentación, enoturismo, enoturista, experiencia vínica, revisión teórica y conceptual, Bodegas de Vino de Oporto y Madeira.

## INFORMATION OF THE SCIENTIFIC PAPERS PUBLISHED

The present doctoral thesis, in accordance with the quality criteria for defense of doctoral thesis by compendium of publications, authorized by the Thesis Directors and the Doctoral Program Commission, is presented as a compendium of four previously published scientific papers. The full references of the scientific papers that constitute the thesis are as follows:

- I. Ramos, P., Santos, V. & Almeida, N. (2018). Main challenges, trends and opportunities for wine tourism in Portugal. *Worldwide Hospitality and Tourism Themes*, 10(6), 680-687. DOI: 10.1108/WHATT-08-2018-0055
- II. Santos, V., Ramos, P., Almeida, N. & Santos-Pavón, E. (2019). Wine and wine tourism experience: a theoretical and conceptual review. *Worldwide Hospitality and Tourism Themes*, 11(6), 718-730. DOI: 10.1108/WHATT-09-2019-0053
- III. Santos, V., Ramos, P., Almeida, N., Marôco, J. & Santos-Pavón, E. (2020). Wine tourist profiling in the Porto wine cellars: segmentation based on wine product involvement. *Anatolia*, 31(4), 577-590. DOI: 10.1080/13032917.2020.1802308.
- IV. Santos, V., Ramos, P, Almeida, N. & Santos-Pavón. E. (2020). Wine Experience Scale Development: a new strategy to measure holistic behaviour of wine tourists. *Sustainability*, 12(19), 8055. DOI: 10.3390/su12198055.



## INFORMATION OF THE SCIENTIFIC RELEVANCE OF PUBLICATIONS OF THE THESIS BY COMPENDIUM

### I. Main challenges, trends and opportunities for wine tourism in Portugal

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**Authors:** Paulo Matos Graça Ramos, Vasco Ribeiro dos Santos, and Nuno Miguel Castanheira Almeida

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**Journal area:** Tourism, Leisure and Hospitality Management



## **II. Wine and wine tourism experience: a theoretical and conceptual review**

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**Journal area:** Tourism, Leisure and Hospitality Management

### **III. Wine tourist profiling in the Porto wine cellars: segmentation based on wine product involvement**

**Journal:** Anatolia - An International Journal of Tourism and Hospitality Research

**Title:** Wine tourist profiling in the Porto wine cellars: segmentation based on wine product involvement

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**Journal:** Sustainability

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**Authors:** Vasco Ribeiro dos Santos, Paulo Matos Graça Ramos, Nuno Miguel Castanheira Almeida, and Enrique Luis Santos-Pavón

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## INDEX

<b>INTRODUCTION</b> .....	1
<i>i. Justification of the research theme</i> .....	1
<i>ii. Objectives of the doctoral thesis</i> .....	3
<i>iii. Methodology of the doctoral thesis</i> .....	3
<i>iv. Structure of the doctoral thesis</i> .....	6
<i>v. Framework summarizing the logical flow of the scientific papers</i> .....	9
<i>vi. Research process adopted in the scientific papers</i> .....	10
<b>CHAPTER I</b>	
Scientific Paper 1: <i>Main challenges, trends and opportunities for wine tourism in Portugal</i> .....	11
<b>CHAPTER II</b>	
Scientific Paper 2: <i>Wine tourist profiling in the Porto wine cellars: segmentation based on wine product involvement</i> .....	21
<b>CHAPTER III</b>	
Scientific Paper 3: <i>Wine &amp; wine tourism experience: a theoretical and conceptual review</i> .....	39
<b>CHAPTER IV</b>	
Scientific Paper 4: <i>Wine Experience Scale Development: a new strategy to measure holistic behaviour of wine tourists</i> .....	55
<b>SUMMARY OF THE GLOBAL RESULTS</b> .....	73
<i>i. Main challenges, trends and opportunities for wine tourism in Portugal</i> .....	73
<i>ii. Wine tourist profiling in the Porto wine cellars: segmentation based on wine product involvement</i> .....	75
<i>iii. Wine and wine tourism experience: a theoretical and conceptual review</i> .....	78
<i>iv. Wine Experience Scale Development: a new strategy to measure holistic behaviour of wine tourists</i> .....	80
<b>DISCUSSION OF THE GLOBAL RESULTS</b> .....	83
<i>i. Main challenges, trends and opportunities for wine tourism in Portugal</i> .....	83
<i>ii. Wine tourist profiling in the Porto wine cellars: segmentation based on wine product involvement</i> .....	84
<i>iii. Wine and wine tourism experience: a theoretical and conceptual review</i> .....	85
<i>iv. Wine Experience Scale Development: a new strategy to measure holistic behaviour of wine tourists</i> .....	86
<b>FINAL CONCLUSIONS</b> .....	89
<i>i. Contributions of the research</i> .....	89
<i>ii. Methodological contributions of the research</i> .....	91
<i>iii. Implications for management</i> .....	92
<i>iv. Research limitations</i> .....	93
<i>v. Suggestions for future research</i> .....	94





## INTRODUCTION

### *i. Justification of the research theme*

Wine tourism as the intersection between tourist and winemaking activities is a theme which has been much explored by the national and international scientific community and this has boosted scientific investigation about this issue. This phenomenon is due to the potential that wine tourism has as a destination and a product, not only as an offer, but as something people are looking for. Thus, wine tourism has demonstrated impact, progress and evolution in the development of the tourist system, mainly because of new perspectives and trends, as well as identified challenges.

This theme is relevant due to the recovery and value of historical and cultural heritage of wine cellars, wine houses, farms and wine hotels that have started looking to wine tourism, not only as a complementary activity, but as their central economic activity. The wine industry is probably one of the few activities in the primary sector that continues to show sustainable growth, internally and externally, along with the ability to generate wealth and help fix populations in the interior of Portugal, valuing heritage and landscape. The production of wine states itself as a growing, global industry. Wine tourism units are both a wine touristic destination and a product, which are increasingly visited and appreciated by national and international wine tourists, due to all factors, elements and attributes involving the wine product.

Wine tourism experiential activities consist, above all, of wine tastings and visits to cellars, wine houses and wine museums. Currently, wine tourism has provided and boosted the creation of genuine and unique tourist experiences and will continue to do so in the future, with increasingly differentiated and tailor-made experiences. These result from what wine tourism destinations have to offer and they contribute to the constant and increasing catchment, attraction and permanence of national and international wine tourists. Furthermore, these wine tourism experiences are memorable and they contribute to the optimization of the experience, making it more stimulating and enriching.

The special interest in the wine tourism theme comes from the ancient practice and long tradition of wine and vineyards, strongly related to the local culture. Wine is the central product of wine tourism, which has an experimental dimension based on the wine tourism experience, and is essentially related to the holistic and hedonic perspective, as it

involves sensations, using the five senses: taste, smell, touch, sight and hearing. After all, wine experiences are the core of all wine tourism activity and they are crucial to the wine tourism offer, but are always connected to the place (wine house, cellar, farm, cellar door, among others) and the landscape.

Scientific research on wine tourism experiences remains underdeveloped, despite considerable advances in this area. Wine tourism is precisely one of the best examples of this limitation, because academic and scientific research continues to remain very scarce, mainly in the prism of analysis and measurement techniques, particularly scales focused on wine tourism activity, still reflecting in a certain way an underlying and quite sharp dispersion. In practice, wine tourism is seen as a system which is essentially centred on wine tourism activity and experience.

In fact, through previous surveys carried out in recent years, it has been found that there are gaps in the scope of wine tourism features and appropriate measurement scales applied to wine tourism, more specifically a scale that measures the experience of wine tourism. The scales that exist in the literature were not designed with the specific purpose of measuring the experience of wine tourism in wine tourism activity. Hence it is necessary to develop a better, more appropriate scale that measures the wine tourism experience.

This, therefore, is the first scientific study that demonstrates the need to develop and validate a wine experience measurement scale, thus presenting a new scale, as the result of recent scientific paper, which is, to a large extent, the balance of previous ones. These three scientific articles can be seen as the main antecedents of this. Scientific advancement in the field of wine tourism becomes fortified when it is jointly grounded in the development of new measurement tools understood as anchors of scientific knowledge, as is the case with this new scale that is consciously proposed.

The main justification of the research theme to be investigated – wine tourism: wine and wine tourism experience – is the contribution that this proposed theme offers and adds to the scientific community, which is undoubtedly its originality and value, due to its particular approach and respective conceptualization, for the advancement of scientific research in the wine tourism area.

## **ii. Objectives of the doctoral thesis**

The aim of this research is to contribute to adding better and more advanced scientific knowledge about wine tourism, focused on wine and wine tourism experience in the wine tourism settings, namely wine cellars, in order to enrich the growing body of dominant literature on wine tourism experience.

- i. To contribute to the enrichment and advancement of wine tourism research in different crossed fields, both wine experience and wine tourism experience, analysing the drivers that boost and map the performance of wine tourists in their visits to and experiences of wine tourism products and destinations;*
- ii. To profile wine tourist segmentation, taking into account the wine product involvement segmentation in Porto wine cellars;*
- iii. To define the boundaries within wine tourism based on the identity of the main challenges, trends and opportunities for wine tourism in Portugal, closing with a strategic agenda and plan for the future, identifying the critical and successful components in the wine tourism industry;*
- iv. To provide a theoretical and conceptual critical analysis of wine and wine tourism experience review with key research directions and future approaches highlighted, in order to acquire further scientific advances related to new measurement tool;*
- v. The construction, development and validation of a new scientific scale to measure the wine experience in the wine tourism context, via a holistic perspective;*
- vi. To provide contributions in terms of the implications for more competitive strategic management and planning of wine tourism destinations, contributing to better integrating wine and wine tourism experience into visits within wine tourism settings, namely wine cellars (as well as in other cellars), wineries, cellar doors, wine hotels and wine estates.*

## **iii. Methodology of the doctoral thesis**

The elaboration of this thesis is based on the system of publication of scientific papers, through the compendium of publications. Within the scope of the scientific methodology used in each of the four papers published, relevance to varied methodologies is given to enrich the research, and is presented as follows:

According to the purpose defined in terms of the kind of research developed in the scientific methodology, regarding the scientific paper 1 (*Main challenges, trends and opportunities for wine tourism in Portugal*) and 3 (*Wine and wine tourism experience: a*

*theoretical and conceptual review*), the simultaneous use of literature review and content analysis was mandatory. These two methodologies – literature review and content analysis – were applied in this research as an objective and systematic tool, using generalisable descriptions derived from a global review of the dominant prior research approaches for the main wine tourism fields covered within the research, such as: wine tourist, wine tourism experience and wine experience.

These two interrelated methodologies presented in paper 1 (*Main challenges, trends and opportunities for wine tourism in Portugal*) and 3 (*Wine and wine tourism experience: a theoretical and conceptual review*), represent a major topic on the role of both literature review and content analysis based on definitions, perspectives and detailed studies, respectively. Thus, by integrating the set of studies in terms of themes, it is better positioned to describe current knowledge and practice, evaluate theoretical progress, identify scientific gaps and weak points in the research that remain, and plot a course for future research. Moreover, these methodologies have long been described as vital and popular techniques in the researcher's toolkit.

Methodologically, these two papers demonstrate the effective use of literature review and content analysis through the differentiation of the bibliographic search conducted across different widely referenced databases such as Web of Science, Scopus, SciELO and Google Scholar. Therefore, the literature review and content analysis contributed to a deeper and better understanding of the issues that comprise the amalgam of the dimensions and constructs underlying wine tourism and the wine tourism experience.

With regard to the methodology applied in scientific paper 2 (*Wine tourist profiling in the Porto wine cellars: segmentation based on wine product involvement*), priority was given to cluster analysis. An exploratory factor analysis and discriminant function were performed with all the wine product involvement items in order to profile the wine tourist based on wine product involvement and they were grouped into segments. Regarding sample design, the data was collected from a target study population of international wine tourists with a minimum age of 18 that were visiting Porto wine cellars. The self-reported questionnaires were applied in five languages: English, Spanish, French, Portuguese and German. In order to achieve a considerable sample size, data was collected in four Porto wine cellars (Graham's, Taylor's, Croft and Ramos-Pinto) in three different weeks between late July and September 2018 (the high season, when there is more affluence and attraction with high visitation rates). The choice of a self-administrated questionnaire (one-to-one site surveys) as the data collection method was

due to its great precision and higher response and completion rates, and the advantage of being more “user-friendly”. A total of 918 self-administrated questionnaires were completed and considered valid for data analysis.

A list of eight items is considered to measure wine product involvement on the basis that they best represent the product involvement of the wine tourists with Porto wine. These are: (1) I am knowledgeable about wine; (2) Much of my leisure time is devoted to wine-related activities; (3) I have invested a great deal in my interest in wine; (4) Porto wine represents a central life interest for me; (5) For me, the Porto wine tastings are a particularly pleasurable experience; (6) I wish to learn more about wine; (7) I have a strong interest in Porto wine; (8) My interest in Porto wine makes me want to visit the cellars. All items of the wine involvement scale were measured on a Likert scale format (adapted to 7 points: 1 = strongly disagree and 7 = strongly agree), and items were adapted for the wine tourism context, but with minor adaptations.

Considering the intent of the scientific paper 4 (*Wine Experience Scale Development: a new strategy to measure holistic behaviour of wine tourists*), a new measurement scale – Wine Experience Scale – was developed and validated through structural equation modelling (SEM-AMOS). This is the main analysis and validation tool to analyse and evaluate the wine experience of wine tourists in their holistic behaviour perspective.

Consequently, in the development process of the scale, for reliability and validity of the procedure of the construction and validation of the scale to be ensured in this current study, four stages were taken into account: 1) domain of construct, 2) item generation, 3) purifying the measurement, and 4) finalising the measurement, comprising the development process of the scale through the major methodological stages focused on in the process.

The final survey (multilingual: English, Spanish, French, and Portuguese) was administered by the researcher to a convenience sample of wine tourists visiting Porto and Madeira wine cellars between July and September 2019. A total of 647 self-administrated questionnaires were considered valid and usable for data analysis. The data analysis was carried out in two stages: An (1) EFA, followed by a (2) confirmatory factor analysis (CFA), using SPSS (version 26) and AMOS (version 26). An exploratory factor analysis (EFA) using the generalised least squares as extraction method with a varimax rotation and Kaiser normalisation was undertaken. A multigroup analysis was also applied to analyse and evaluate how the Porto and Madeira wine cellars differ from



each other from the wine tourists' perspective within these two wine tourism destinations, based on the proposed scale.

#### ***iv. Structure of the doctoral thesis***

This doctoral thesis is structured with a general introduction, four chapters, summary and conclusion of the global results, and the final conclusions, briefly presented as follows:

**Introduction** – The general introduction gives the justification of the research theme, the identification of the objectives and explains the methodology used to achieve the outlined goals. This section concludes with a presentation of the structure of this doctoral thesis.

#### **Chapter I – Scientific Paper 1 – *Main challenges, trends and opportunities for wine tourism in Portugal***

With the growing demand and consequent improvement in the offer of wine tourism in Portugal, it has become important to project the future of wine tourism, based on the analysis of the current situation of this industry, mainly from a perspective of planning, managerial support, supply, marketing and promotion. Therefore, the main challenges, trends and opportunities of wine tourism are advanced and performed.

#### **Chapter II – *Scientific Paper 2 – Wine tourist profiling in Porto wine cellars: segmentation based on wine product involvement***

The second paper appeared following a set of directions for future research in previous paper (scientific paper 1), strictly related to the wine tourist segmentation, and also taking into account the special interest in Porto wine cellars due to their history, always at the international level, regarding wine tourism in the context of its cellars.

Thus, and in view of the many thousands of annual visits that the cellars receive, an understanding of the main profile of the wine tourists who visit Porto wine cellars was crucial, not least because there are so many visitors. It was therefore necessary to analyse and evaluate the profile and the segmentation of national and international wine tourists based on the construct – wine involvement – that had the most impact and effect on the flows of visits to this type of wine cellar. This wine – internationally known as Porto wine – is particularly unique, as it is the core product of the cellars and there is no other like it.

### **Chapter III – Scientific Paper 3: *Wine & wine tourism experience: a theoretical and conceptual review***

It has been previously proved (scientific paper 2) that wine tourists are involved with wine and the respective wine cellars, presenting various profiles and segments. As a consequence of this, it was of interest to explore the aspect of the experience associated directly with wine and also wine tourism, which results and predicts wine product involvement as antecedent and precedent.

In addition, and as a solid and robust complement, it was mandatory to review the systematic literature on the current state of the art of wine and wine tourism experience, through a theoretical and conceptual review.

### **Chapter IV – Scientific Paper 4: *Wine Experience Scale Development: a new strategy to measure wine tourist holistic behaviour***

This paper came as a direct follow-up to the previous research suggestion (scientific paper 3), which consisted of an approach to construct a new measuring tool applied to the wine experience in wine tourism industry in order to advance a proposal of preliminary selection of five following dimensions of the future scale.

Thus, this paper consists of the construction and development a new measurement tool applied to wine tourism, specifically in wine experiences, encapsulating the main four wine experience dimensions: wine storytelling, wine sensory excitement, wine involvement, and winescape. The wine experience of wine tourists can thus be assessed through a holistic approach, in a wine tourism setting.

The choice of Porto and Madeira wine cellars is explained due to the fact that these are world-renowned wine tourism destinations. Moreover, this makes these two wine regions the most historically significant regions for fortified wines not only in Portugal, but also globally.

Methodologically, the wine experience scale was validated in Porto and Madeira wine cellars, and structural equation modelling (SEM) was applied. Data were collected in these two wine tasting cellars, from two random samples of 647 wine tourists in total, to which structural equation modelling (SEM) was applied. This scale offers a diagnostic

tool to evaluate wine experience, revealing a wide range of different wine experiences in wine tourism-related travel.

**Summary and discussion of the general results** – The theoretical and practical contributions of the research to the scientific community are summarised and also discussed in this section.

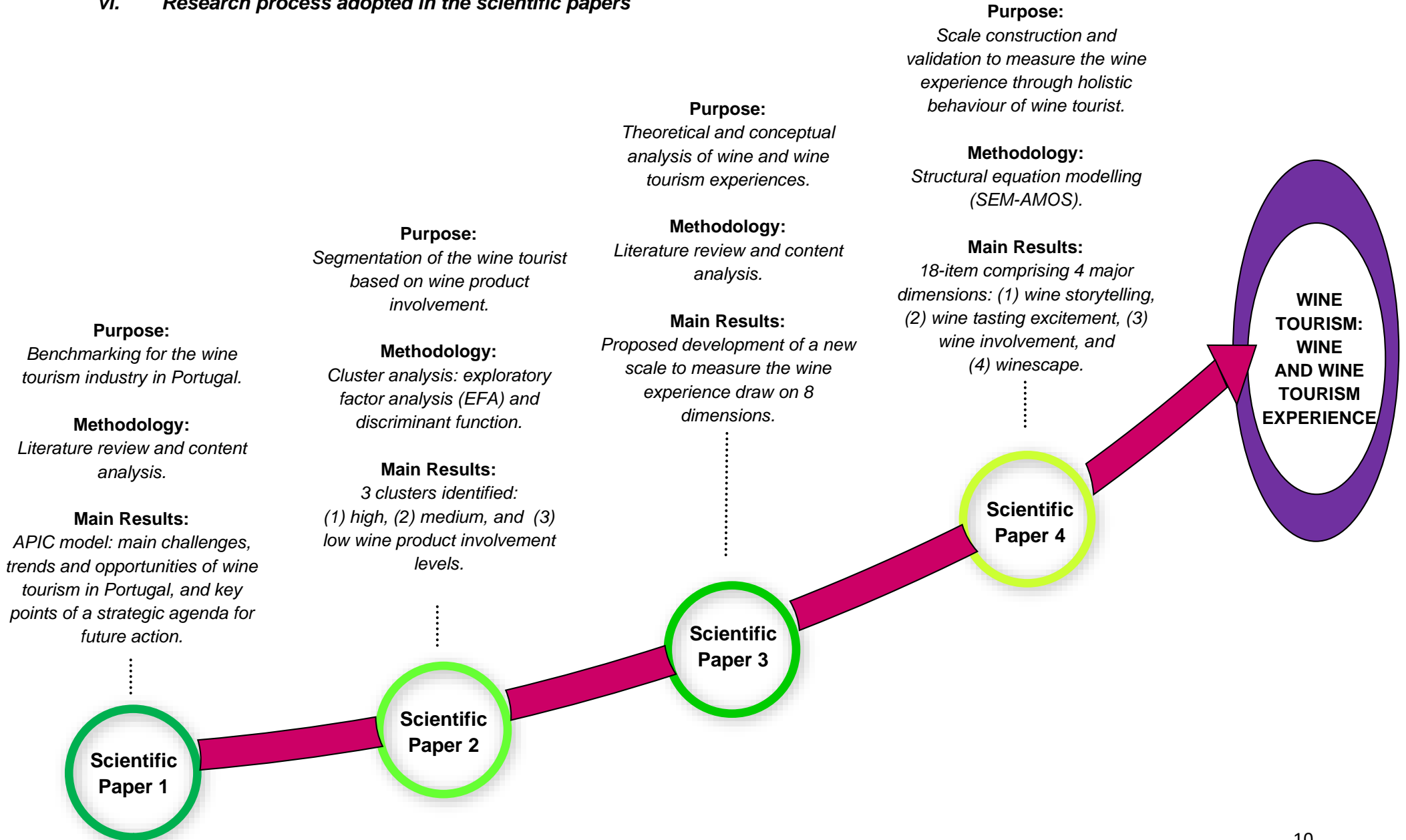
**Final conclusions** – The thesis finishes with the final conclusions that stem from the theoretical and empirical evidences of this scientific research, taking into account the main outcomes resulting from the current study. This section includes the management implications for managers of wine tourism destinations and wine tourism activities. Likewise, the research limitations of the study and suggestions for future research subjects to carry out also are presented.

To sum up, it is highlighted that this research required an integrated approach, consisting of four chapters (corresponding to four scientific papers, respectively) with a logical and evolutionary sequence, obtaining a complemented research in combined research fields. Hence, the four chapters, through interrelated scientific papers, start from a more global approach, from wine product involvement to wine tourism experience, funnelling towards the construction and validation of a scale to measure wine experience in the wine tourism context.

v. *Framework summarizing the logical flow of the scientific papers*



vi. **Research process adopted in the scientific papers**





## CHAPTER I

**Scientific Paper 1: *Main challenges, trends and opportunities for wine tourism in Portugal***



# Main challenges, trends and opportunities for wine tourism in Portugal

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## Abstract

**Purpose** – This paper aims to define the boundaries of wine tourism to identify the main challenges, trends and opportunities of wine tourism in Portugal, providing some critical recommendations for those operating in this sector.

**Design/methodology/approach** – The paper draws on a literature review and content analysis of prior and ongoing work.

**Findings** – The main challenges, trends and opportunities for the wine tourism industry in Portugal are identified, as well as suggestions and practical recommendations/contributions for managers, stakeholders, players and marketers. The paper concludes with some key points that could form the basis of a strategic agenda for future action.

**Originality/value** – Based on the reviewed literature, some benchmarks for the wine tourism industry in Portugal were developed.

**Keywords** Trends, Challenges, Opportunities, Wine tourism, Wine tourist

**Paper type** General review

## Wine tourism perspective analysis – challenges, trends and opportunities

### *Context and relevance of wine tourism in Portugal*

Portugal is no longer just a sun and sea destination. Some touristic products and attributes like wine, city breaks and value for money are now more aligned with the country's tourism image than ever before (Costa *et al.*, 2014). There is also a greater need to understand the different types and motivations of tourists that explore specific areas, where wine tourism is one of the key offers. In this context, Carvalho *et al.* (2018) conclude that the effects of brand image and satisfaction explain tourist loyalty and have direct implications for brand performance evaluation, consumer behaviour and tourist profiling. The understanding of wine tourism and its branding success reinforces the need to make continuous efforts to unify marketing collaboration among stakeholders. This should contribute to the creation of a consistent wine-related image. The success of a wine region also has to take into consideration the associative relationship around the critical factors success – CFS (Singh and Hsiung, 2016). For example, when a particular region is analysed as a wine tourism destination, the CFS could be the interrelatedness of the product, lifestyle, branding, land



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protection, entrepreneurs/individuals, partnerships and community involvement and support (Jones *et al.*, 2015). Following this line of thought, Portugal seems to be on the right track: “The wine tourism units introduce a traditional and authentic image of Portugal. However, simultaneously, the modern cellars that have arisen in some wine regions of the country also introduce a more contemporary and technological side. These units also have a relevant role in enriching the tourism experience associated with the discovery of regional territories and cultures”. (Turismo de Portugal, 2014, p. 1).

The Porto wine cellars can provide a very useful insight and benchmark for other forms of wine tourism in Portugal. They are the oldest and, for many years, the most dynamic driving force in the Portuguese wine tourism sector. They are still a strong and growing wine touristic product, much visited by national and international wine tourists. The relevance of the Porto wine cellars as a product and tourist destination derives from its historical and cultural heritage and its proximity to the city of Porto, now a major Portuguese tourist destination with around 1.6 million tourists (IPDT, 2018). These are key elements and characteristics that continue to make a significant contribution to ensuring that Porto’s wine cellars are a trendy destination. Santos, Ramos and Almeida (2017) conclude that involvement, destination emotions and place attachment are positively related to the behavioural intentions of the wine tourist. Furthermore, they argue that there is a synergetic effect between these constructs that allows for a more holistic view of tourist wine behaviour, reflecting on the specific dynamics of the wine tourist. Hence, it allows us to extrapolate some perspectives relating to the global wine tourism sector in the country that also have more general implications worldwide.

#### *Strategic analysis of the worldwide wine tourism system*

Wine tourism is a modern phenomenon that has relatively recently emerged. In a world context, the European continent was aware of wine tourism and its practice much earlier than other continents. Soon after, the new world appeared and now wine tourism options facilitated by prior investment in wine tourism development. Getz (2000) states that the success of wine tourism depends on the good operation of the components of the wine tourism system. This implies a harmonious integration of consumers’ needs and expectations and the resources of the key organizations at wine tourism destinations. Wine tourism has undoubtedly been a trend consolidated by the quality and diversity of the offer. It has, therefore, attracted a growing number of wine tourism operators who visit and explore wine tourism destinations serviced by new products and services and wine tourism destinations that are becoming more competitive and attractive. The future perspective is that wine tourism (wine, gastronomy and accommodation) will have a more prominent presence in the tourism sector. Cellars, wineries, wine estates and winemakers have all invested in an integrated and sustained way in the continuous improvement of their services and associated infrastructures to provide wine tourists with an excellent tourist experience.

Getz (2000) emphasizes the importance of wine tourism through the “value chain of wine tourism”: (Stage 1) basic resources, (Stage 2) viticulture, (Stage 3) production of wine (wineries) and (Stage 4) simultaneously comprising wine exports and wine tourism. Moreover, it is possible to make the wine available in the tourist’s country, as this is one of the main limitations of selling wine to tourists. Afonso *et al.* (2018) recently presented relevant results with both marketing and managerial implications with reference to understanding the wine tourists’ involvement and motivation to return to a wine region. They suggest that wine tourism managers should promote activities that encourage involvement in wine tourism and participations in wine-related events, such as wine

festivals. Given this finding, it can be argued that wine tourism should not be solely based on its attractiveness as an offer, but also on the enhancement of tourist demand through its wine activities. The experience and practice of wine tourism can be provided in a number of ways, from events and festivals, cultural and natural heritage, gastronomy, hospitality, wine tasting, visits to wineries and vineyard tours.

Getz and Brown (2006, p. 156) argue that core wine products (visitor friendly wineries, knowledgeable winery staff, wine festivals, family wineries), the core destinations appeal (attractive scenery) and the cultural product (unique accommodation with regional character, fine dining and gourmet restaurants, traditional wine villages) are three critical features of the wine tourism experience from a consumer perspective.

*Perspectives on wine tourism – a new definition*

Given the array of developments to date, wine tourism is still a broad field of research. For example, a consensus has yet to be agreed regarding its boundaries and the perception and expectations that many tourists have. In Table I, we can find the most cited definitions of wine tourism. Some would put the emphasis on the demand like Getz (2000), Getz et al. (2007) and Hall, et al. (2000), while others define it in terms of the supply of wine related resources and activities offered to the tourists (ECWT, 2006; Brown and Getz, 2005). By far the most holistic definition is by Getz and Brown (2006) and this encompasses both the supply and demand while also defining the main opportunity as of a marketing nature (to promote, educate and sell).

Six mostly cited wine tourism definitions in dominant 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 et al. (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 and to sell their products directly to consumers”;	Getz and Brown (2006, p. 147)
“The development and marketing of wineries as places to visit, and of destinations based on the appeal of wine”	Brown and 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 et al. (2000, p. 3)

**Table I.**  
Most cited wine  
tourism definitions

So what really is wine tourism? There seems to be a need to develop the concept of wine tourism from the tourist's perspective and from the main motivations that they seek in terms of involvement and emotions. It is still important to consider how some constraints can affect certain types of tourism, such as wine tourism (Cho *et al.*, 2017). This provides a perspective on the experience that was proposed by Hall *et al.* (2000). But there are still some behavioural aspects that need to be enhanced. Hence, it is proposed that wine tourism consists of an activity directly related to wine which provides a dynamic and versatile experience that integrates wine culture and heritage, to create emotions, sensations, attachment and sensory impressions through the visit, allowing the wine tourist to become an advocate of that particular cellar, brand or wine region.

#### *Wine tourism main trends and opportunities*

After defining the boundaries and purpose of wine tourism, the next step for managers is to answer to "How can the wine tourism experience be enhanced?" In relation to this, another question also needs to be addressed: "How has the paradigm of the old wine tourism consumer vs new wine tourism consumer changed?" and "What kind of wine tourist do we wish to attract?" In a wine tourism context, attracting the right type of wine tourist seems to be more important than just attracting large numbers. These global questions and their answers are related to perspectives on and the future of wine tourism that are addressed in this paper.

The main trends and opportunities that characterize the Portuguese wine tourism sector are presented and listed below, taking into account the supply perspective, governmental support, marketing, promotion and production:

##### Supply:

- Wine tourism in Portugal has reached a higher level of quality and it's now more aligned with a modern wine tourism image than before.
- Wine tourism is a developing product and wine tourism destinations are in high demand – performing much better than expected in recent years.
- Growth and development of supply and demand is occurring in relation to wine tourism activities and widely known experiences.
- There is now continuous promotion of wine tourism in some areas of Portugal; for example, wine tourism is now a very significant component of tourism in areas like Douro.

##### Governmental support:

- Wine tourism is now considered one of the priority areas for governmental action and public policies: as reflected by the allocation of measures, support and financing mechanisms.
- There has been new EU economic support for wine tourism-related investment.

##### Marketing and promotion:

- Coordinated actions in digital promotion and in marketing actions reflect the importance of wines in the promotion of wine tourism destinations.
- Now, most wine producers consider the critical role of wine tourism in their overall promotional effort.
- Portugal's wine reputation has grown significantly – as reflected by an increasing number of prizes in the most reputed wine competitions and high scores by the main

wine reviewers worldwide. This has led to increased demand from the more knowledgeable tourists.

Production:

- Wine production is one of the few activities that continues to assert itself competitively and is capable of generating wealth in the economy, especially in areas where there is limited economic activity.

The trends' highlights listed above are based on prior research and on a report on Wine Tourism in Portugal that characterizes supply and demand (2014). A further source is the Book of Good Practices in Wine Tourism ([Douro Wine Tourism, 2013](#)) that includes key indicators and principles for good practices in the implementation of wine tourism.

### **Practical suggestions, recommendations and contributions for managers, stakeholders, players and marketers**

The wine tourism industry opinion makers and leaders should analyse and deal with all the main challenges, trends and opportunities that characterize the wine tourism market, focusing their contribution more specifically on the growth and progress of the wine tourism at a global level, by exploring the full range of opportunities that have recently emerged. Regarding the challenges, it might be important to develop a national strategic plan with practical strategic guidelines for the promotion of wine tourism as part of an added value chain. It is important to invest in the facets of wine tourism service and specifically the guides' performance. On-going development is needed in relation to technical knowledge of winemaking, culture and heritage, as well as languages and the diversity and personalization of the guided tours, taking into account the different profiles of the wine tourists. One of the challenges for wine tourism relates to traditional local wine, which is not as well promoted as international products, and so, travellers may still prefer other products, even during their wine tourism visits ([Okumus and Cetin, 2018](#)).

Given this wine tourism industry analysis and the resulting challenges, trends and opportunities, a set of practical and operational suggestions, recommendations and contributions, based on an APIC model, are now provided:

Analysis and control:

- Evaluate the perceptions of wine tourists according to socio-demographic variables: age, education level, country of origin and job (among others) to develop wine tourist segmentation.
- Analyse the socio-economic impact of the visits in terms of expenditure, number of visits, duration and nationalities.
- Explore and analyse the differences and/or similarities of wine tourists from different segmentation perspectives: wine lovers and those who are interested and curious wine tourists ([Hall et al., 2000](#)) wine lovers, interested wine connoisseurs, wine novices and hangers-on ([Charters and Ali-Knight, 2002](#)).
- Continuously analyse wine tourism trends, consumption patterns and wine-related travel options to respond quickly.
- Aim to address information gaps relating to what drives the wine tourist when visiting wine tourism products and destinations (in particular, travel behaviour and predicting the behavioural intentions).

- Improve the infrastructure and conditions of wine tourism units: wineries, cellars, farms, wine service, availability of information, multilingual reception, wine shops [...].
- Strengthen tourist information on digital channels and platforms on the provision of wine tourism services (Web channels, social networks and Apps, technological tourism equipment and mobile devices).

#### Planning and implementation:

- The key point should be to develop a national strategic plan for the promotion of wine tourism in an added value chain, with practical strategic guidelines (this is further explained below).
- Create, develop and retain the wine brands' loyalty, in order to forge enduring wine consumer relationships; make best use of the attributes and critical success factors of wine tourism products and destinations for the future by emphasizing authenticity, wine cultural and heritage value, cellar doors, wine cellars and vineyard tours, wine tastings, wine activities and events, among others.
- Wine tour guides should take full advantage of their close contact with wine tourists and visitors to monitor responses so that wine guided tours can be improved for better future engagement.
- From a marketing point of view, the best fit promotion and positioning strategies for the wine tourism market are needed (strategic, tactical and operational levels).
- Aim to attain best practices in benchmarking as well as yield management and to maximize gains in sales via wine offers and distinctive services, given that the wine market is increasingly competitive.
- Promote unique, exclusive and memorable wine experiences (activities in the vineyard, vintage, wine tours, wine tastings, wine events, wine courses, lunches and wine dinners [...]).
- Explore the potential for cross selling with other offers in the same territory (historical, cultural and landscape heritage, leisure, well-being, nature [...]).
- Plan for diversified promotional action in priority markets (visits of wine journalists, wine critics, sommeliers, tour operators, social networks, wine and tourism competitions and fairs [...]).
- Prepare and apply a good practices manual for wine tourism, supported by a wine tourism technical guide.

#### **Closing remarks and a strategic agenda for future action**

Regarding the role and impact of worldwide wine tourism it is evident that distinctive characteristics, attributes and critical success factors, such as authenticity, cultural and heritage value are highly appreciated by wine tourists. In view of this, it is possible to propose an outline agenda for future actions.

We believe that there is potential for managers, stakeholders, players, opinion makers/leaders and marketers to enhance the value of wine tourism by focusing on six key action points:

- (1) Position indigenous wine tourism as a key strategic sector in the economic policy of emerging countries.



- (2) Create synergistic cooperation amongst public and private decision-makers at each destination.
- (3) Invest in continuous training of staff to enhance the quality of service, thereby improving the attractiveness of and participation in the wine tourism experience.
- (4) Involve the local community to foster collaboration and participation in the offer of services and products that support wine tourism activity.
- (5) Align the tourism destinations' offer to the changing needs, expectations, motivations and travel behaviour of wine tourists and visitors.
- (6) Ensure sustainability and rationality of wine tourism supply.

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## CHAPTER II

**Scientific Paper 2: *Wine tourist profiling in the Porto wine cellars: segmentation based on wine product involvement***



## Wine tourist profiling in the Porto wine cellars: segmentation based on wine product involvement

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## Wine tourist profiling in the Porto wine cellars: segmentation based on wine product involvement

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### ABSTRACT

This paper segments a sample of 918 Porto wine cellars visitors based on their wine product involvement. A segmentation methodology was applied to the wine product involvement of wine tourists. Three clusters were identified with high, medium and low wine product involvement levels. The relevant theoretical contribution of this study was to provide new evidence of segmentation based on product involvement studies in the wine tourism market field in an area where empirical studies still remain scarce. The findings offer managerial implications regarding the wine tourists' identification and how to better adapt the visits. This is also the first study demonstrating wine tourist profiling and segmentation specifically applied to involvement with the Porto wine product.

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Tourist segmentation; wine cellars tourists; wine product involvement; cluster analysis

## Introduction

Wine tourism have been studied in various international contexts such as Australia (Mitchell et al., 2012); Canada (Getz & Brown, 2006); New Zealand (Alonso, 2009); Chile (Kunc, 2009); Spain (Gómez & Molina, 2012); United States (Bruwer & Johnson, 2010; Bruwer & Thach, 2013) and Portugal (Brás et al., 2013), among others.

Alebaki and Iakovidou (2011) noted a need for more quantitative research in this area, particularly in Europe. Charters and Ali-Knight (2002), pointed out a lack of research in the nature of wine tourists and their motivations as well as their segmentation. Recent authors also corroborate the fact that segmentation studies in the wine market yet have not reached maturity (Bruwer et al., 2017; Cuomo et al., 2016; Getz & Brown, 2006; Johnson et al., 2017; Lockshin & Corsi, 2012).

Several authors have contributed to the research in consumer profiling and segmentation regarding the wine context and wine tourism industry. Most researches are based around one or several wine products (Charters & Pettigrew, 2006; Domenic & Arnie, 2013; Schiefer & Fischer, 2008). Nevertheless, not much research has yet been conducted about the wine market, namely focusing on the Porto wine cellars. This research is based on a cluster analysis of Porto wine visitor's involvement.

Bruwer and Buller (2013) argue that analysing the wine product involvement is critical for a better understanding of the wine tourist's behaviours. Wine tourists should not be treated as a homogeneous group because there is no standard stereotype of what is a wine tourist (Charters &

Ali-Knight, 2002; Galloway et al., 2008; Yuan et al., 2008). An identification of the main characteristics, and differences among wine tourists still constitutes a marketing challenge (Pomarici et al., 2017) being the market segmentation as a valuable tool to boost market growth.

The main aim of this paper is to provide a better understanding of the role that different levels of involvement of the wine tourist segments can help in the understanding of the different profiles and their main characteristics associated with them.

## Literature review

The world wine market encapsulates a complex world with a great variety of producers, product, brand and grapes varieties trying to capture the consumers attention and income (Johnson et al., 2017). In the wine market, there are several criteria to consider as a targeting basis. From Brunner and Siegrist (2011) perspective, there are nine major variables of segmentation in the wine market: (1) quality, (2) consumption, (3) risk reduction, (4) occasion, (5) cultural, (6) behavioural, (7) involvement, (8) geographical, and (9) lifestyles. Hristov and Kuhar (2014) considered 13 attributes of wines in their study targeted at young adult consumers: (1) wine price, (2) grape variety, (3) type of wine, (4) alcohol content, (5) label design, (6) barrel-aged wine, (7) brand, (8) sugar content, (9) wine closure, (10) wine age/vintage, (11) medals/awards, (12) bottle design, and (13) country of origin, but it was not clear that these attributes were the most influential in wine choice behaviour. Pomarici et al. (2017) used product attributes on the basis of psychographic characteristics such as involvement, subjective knowledge, innovativeness and loyalty proneness through the best-worst scaling and identified four segments: (1) experientials, (2) connoisseurs, (3) risk minimizers and, (4) price-sensitive. Cho et al. (2017) identified and characterized five specific constraints clusters to visit wine regions: (1) interest, (2) information & knowledge, (3) money & time, (4) accessibility, and (5) social, to select target markets based upon behavioural similarities and attitudes of consumers.

In general, lifestyle (Bruwer et al., 2002; Bruwer & Li, 2007), behaviour (Barber et al., 2008a; Goodman, 2009), and involvement (Barber et al., 2008b; Charters & Pettigrew, 2006; Dodd et al., 1996; Lockshin et al., 2001; Quester & Smart, 1996) are the most common types of wine segmentation. Bruwer et al. (2002) found five segments in their segmentation process research using a wine-related lifestyle approach for the wine market segmentation, namely (1) enjoyment-oriented social wine drinkers, (2) fashion/image-oriented wine drinkers, (3) ritual-oriented conspicuous wine enthusiasts, (4) purposeful inconspicuous premium wine drinkers, and (5) basic wine drinkers. In addition to this, Bruwer and Li (2007) later adopted a similar approach to which they added two more segments: mature time-rich wine drinkers and young professional wine drinkers. In a more current and advanced perspective, three new bases have already emerged in recent years in segmentation: (1) biological segmentation (Pickering & Hayes, 2017; Thibodeau et al., 2017), (2) sustainability segmentation (Pomarici et al., 2016; Schäufele & Hamm, 2017), and (3) social media segmentation (Cuomo et al., 2016).

Each consumer has their own perceptions about wine and the producers as well, which contributes to the fact that most consumers are overloaded with the usual technical, wine-related communication, which is understood as not at all accessible (Ramos et al., 2011). According to Yuan et al. (2005), wine drinkers exhibit differences according to their needs and desires, and in fact not only an understanding of consumer behaviour, but also the most appropriate targeting for a certain group is a barrier for wine companies. Furthermore, Goodman et al. (2005) state that a wine company may have difficulty in understanding which attributes of the product influence the consumer's purchasing decision, as a consequence of the wide variety of wine products.

In an approach to a global segmentation of the wine industry, Goodman (2009) used 13 attributes of high influence on the wine choice and compared the similarities and differences between 12 countries. Alebaki and Iakovidou (2011) questioned if wine has or not the motive for visiting a wine region and how wine tourism could be related to a single type of tourist.

## Wine tourist profile and segmentation

“The wine tourist is a person with needs to relate to both wine and the location (wine region) where wine is produced” (Bruwer & Alant, 2009, p. 3). In light of this, wine tourism development has been increasingly international, and the need to better understand the nature of the wine tourist has been a major theme in the literature (Brown & Getz, 2005). There are several concepts and perspectives to define the concept of the wine tourist. However, Galloway et al. (2008) define the wine tourist according to his/her degree of interest and knowledge about wine. Wine tourists are mainly consumers of wine (Brown & Getz, 2005). While for many other scholars (Alebacki & Iakovidou, 2011; Getz & Brown, 2006) the wine tourist is defined and segmented by psychographic and demographic criteria, such as: age; education level; gender; income; lifestyle; personality; attitudes, interests and values. Charters and Ali-Knight (2002) classified tourists into four segments: “wine lovers” (high interest), “wine interested” (interested), “wine novice” (limited interest), and “hangers on” (not interested), who are included in a group but do not have or show any interest in wine. Kelley et al. (2019) conclude that the nature of the relationship between members of visit groups influences motivation-based segmentation, and socio-demographic group interaction effects exist in wine tourism.

Nella and Christou’s study (Nella & Christou, 2014) confirm that it is meaningful to segment winery visitors on the basis of their involvement with wine, divided into three groups of low, medium, and high involvement levels. Pomarici et al. (2017) identified four segments, namely (1) experientials, (2) connoisseurs, (3) risk minimizers and (4) price-sensitive, with significant differences for both their preferences towards wine and psychographic characteristics. Johnson, Danner and Bastian (2018) developed a comparison of real-world examples about wine market segments focused on the Australian market. These authors suggest that there are three stable segments concentrated on the domestic wine market: (1) connoisseurs, (2) social wine drinkers, and (3) basic wine drinkers. A cluster analysis about wine-related lifestyle segmentation in the context of urban Indian consumers resulted in a three-cluster solution, namely: cautious social drinker, loner regular drinker and highly engaged drinker (Sharma et al., 2020). In another segmentation study of sustainable wine consumers from the US, UK, and Germany, were segmented into four categories: (1) apathetic consumers; (2) health-conscious diners; (3) holistic perfectionists; and (4) ethical advocates (Ghvanidze et al., 2019). Yabin and Li (2019) identified five distinct segments within China’s online wine market, based on the wine-related lifestyle: (1) wine business consumption type; (2) wine enthusiast consumption type; (3) wine enjoyment consumption type; (4) wine fashion consumption type; and (5) wine novice consumption type. Another perspective, related to a constraint-based approach to wine tourism market segmentation, Cho et al. (2017) generated five homogenous subgroups: (1) highly constrained; (2) cost & time conscious; (3) family togetherness; (4) unmotivated; and (5) minimally constrained. Consequently, some differences have been identified in preference and intentions to visit wine regions among all these clusters above.

## Wine product involvement based on segmentation

Wine product involvement is stated as “a motivational state of mind of a person with wine or wine-related activity . . . which reflects the extent of personal relevance of the wine-related decision to the individual in terms of one’s basic values, goals and self-concept” (Bruwer & Huang, 2012, p. 463). Several studies suggest that the level of involvement with wine affects wine tourism pursuits (Brown et al., 2007; Getz & Carlsen, 2008) and consumer behaviour (Wilson & Schamel, 2010).

Dodd et al. (1996) established that the more involved wine drinkers are, the more they consume, and the more they are willing to spend on a bottle of wine. To Bruwer and Alant (2009), the wine tourist is a kind of consumer that is characterized by the need to get involved with both the wine and the wine region where the wine is produced. Bruwer and Buller (2013) have used the level of involvement to segment wine consumers. Quester and Smart (1996) found that wine region, price,



grape variety and wine style were the product attributes which were most relevant, both in the decision process of wine purchase, as well as in consumer involvement. Charters and Pettigrew (2006) emphasized the relationship confirmed between the evaluation of wine and product involvement, based on groups and individual personal in-depth interviews. For these authors it was clear that there is a higher likelihood of especially poorly involved wine drinkers to focus more on sensory attributes of product quality, such as taste and flavour. The highly engaged consumer's tend to value attributes more of cognitive nature, such as interest and complexity. The wine involvement category, namely "the emerging wine learner" as a new wine consumer, was already suggested by Barber et al. (2008b) were the emerging wine learner desires two goals: to gain more interest in the wine area and also to learn about wine in order to become a wine enthusiast.

Nella and Christou (2014) confirmed that it makes sense to segment winery visitors based on their involvement with wine. They considered three groups of low, medium and high involvement. Brown et al. (2007) used ego involvement with wine as a segmentation basis for the wine tourism market in 4 segments: (1) hedonic aficionados, (2) cautious enthusiasts, (3) fastidious epicureans, and (4) functional differentiators. Identically, Yuan et al. (2008) segmented wine festival visitors into three groups, namely the low, medium, and high involvement groups, using a personal involvement inventory scale version as the adopted methodological criterion. Recently, Gu et al. (2018) segmented Chinese wine tourists based on four segments: (1) low involvement wine tourists, (2) highly involved wine tourists, (3) interest-driven wine tourists, and (4) high-risk perception wine tourists.

## Methodology

Regarding sample design, the data was collected from a target study population of international wine tourists with a minimum age of 18 that were visiting Porto wine cellars. The self-reported questionnaires were applied in five languages: English, Spanish, French, Portuguese and German. In order to achieve a considerable sample size, when there is more affluence and attraction of high visitation, data were collected in four Porto wine cellars (Graham's, Taylor's, Croft and Ramos-Pinto) in three different weeks between late July and September 2018 (the high season). The choice of a self-administrated questionnaire (one-to-one site surveys) as the data collection method was due to its higher precision and higher response and completion rates, and the advantage of being more "user friendly" (Veal, 1992). Therefore, a total of 918 self-administrated questionnaires were conducted and considered valid for data analysis.

### *Wine product involvement measure*

The wine involvement scale was developed by Brown et al. (2007) based on the consumer involvement profile scale of Laurent and Kapferer (1985). This scale was chosen due to its validity and reliability ranging from .90 to .79 in order to measure wine product involvement. This scale was therefore regarded as more suitable. Accordingly, the intention of this scale is to measure more product-related nuances (namely the involvement with wine), in order to test whether the consumer interest in wine would lead the wine tourist to travel to the wine region. A list of eight items is considered to measure wine product involvement on the basis that they best represent the product involvement of the wine tourists with Porto wine, such as: (1) *I am knowledgeable about wine*; (2) *Much of my leisure time is devoted to wine-related activities*; (3) *I have invested a great deal in my interest in wine*; (4) *Porto wine represents a central life interest for me*; (5) *For me, the Porto wine tastings are a particularly pleasurable experience*; (6) *I wish to learn more about wine*; (7) *I have a strong interest in Porto wine*; (8) *My interest in Porto wine makes me want to visit the cellars*. All items of the wine involvement scale were measured on a Likert scale format (adapted to 7 points: 1 = strongly disagree and 7 = strongly agree). Respondents rate their level of agreement or disagreement with each statement, and items were adapted for the wine tourism context, but with minor adaptations.

## Results

Cluster analysis was performed using SPSS Statistics procedures (Charry et al., 2016; Marôco, 2018a). The representativeness of the sample that conducted this study allowed the results to be more robust and reliable. A K-Means cluster analysis of the wine product involvement (WPI) indicators determined the existence of three separate clusters. Cluster 1 has low averages in three indicators (“Much of my leisure time is devoted to Porto wine-related activities” (2.60), “I have invested a great deal in my interest in Porto wine” (2.72) and “Porto wine represents a central life interest for me” (3.08)) that have a higher product involvement with Porto wine, an intermediate average in one indicator and high averages in the remaining four. Cluster 2, which represents 64.7%, demonstrates strong indicators regarding WPI (Table 1). This cluster has the strongest involvement with wine products. Cluster 1 shares the same level of interest in wine cellars and in Porto wine, while lacking the same levels of knowledge or everyday involvement with the product. Cluster 3 presents the lowest means in all indicators. WPI2, WPI3 and WPI4, similarly to Cluster 1, have less involvement with Porto wine. The indicator “I am knowledgeable about Porto wine” presents a low 2.85 average as well (with a median of 3 and a standard deviation of 0.178). Cluster 3 ranks higher in the other four WPI, but still below in comparison to the other two clusters, suggesting that it is made of wine tourists with lower knowledge of Porto wine, but with an average interest in Porto wine and wine cellars. We applied a one-way ANOVA in order to understand if these clusters present significant differences, which was followed by the Scheffe post hoc tests. All eight indicators of WPI differ significantly among three clusters supported by homogeneity test of variances. The follow-up Scheffe post hoc test details those differences, by analysing each of the eight indicators and if there are significant differences in relation to the three clusters. All of them present significant differences, as  $p = 0.000$ .

### *Cluster characterization regarding sex, age and nationality*

Cluster 1 has a medium involvement (MI), followed by Cluster 2 with a higher level of involvement (HI), and lastly Cluster 3 with a low involvement (LI), as shown in Table 2. Regarding gender, there is a strong balance between Clusters 1 and 3, and less with Cluster 2. But the three clusters present a similar structure, with near 50% men and 50% women. There is a significant difference between age in each cluster. Cluster 2 (highly involved) is the oldest subgroup of the sample, with 45.19, and lastly Cluster 3 (low involved) with 36.50. These results suggest that global WPI means tend to rise as the sample is composed of older individuals. When dividing ages into groups (35 – younger, 36 to 50 – young adult, 51 to 65 – adult, and 66 or older), one can once again conclude that Cluster 2 has the highest percentages among the three oldest groups and the lowest percentage among the youngest group. Cluster 3 is in a symmetrical position, while Cluster 1 is in the middle position in all four age groups.

Table 5 characterizes the clusters regarding the country of origin. There is a difference between these clusters in the weight of the category “Other countries”, which is around 35% in Cluster 1 and 2, but reaches almost 63% in Cluster 3. The other main difference is the relevance of French tourists in these clusters. Cluster 2 is the one with the strongest percentages of tourists coming from Spain (12.7%), from Germany (7.9%) and from the United Kingdom (14.4%), in what is a subgroup composed of a significantly high level of European citizens.

In Table 4, the results show a dominance of European wine tourists in all clusters, particularly French wine tourists. Therefore, these results may suggest that European citizens have more interest, more knowledge and more investment in wine products, mainly due to the fact that more tourists came from these countries. As we progress to the clusters with the strongest performance in WPI indicators, the presence of Europeans also increases significantly.

Table 1. Cluster characterization regarding WPI indicators.

Number of the cluster	WPI1. I am knowledgeable about Porto wine	WPI2. Much of my leisure time is devoted to Porto wine-related activities	WPI3. I have invested a great deal in my interest in the Porto wine	WPI4. Porto wine represents a central life interest for me	WPI5. For me the Porto wine tastings are a particularly pleasurable experience	WPI6. I wish to learn more about Porto wine	WPI7. I have a strong interest in the Porto wine	WPI8. My interest in Porto wine makes me want to visit the cellars
<b>1 Medium Involvement</b>	N Valid Mean Median Standard deviation	235 <b>2.60</b> 2.00 0.082	235 <b>2.72</b> 3.00 0.080	235 <b>3.08</b> 3.00 0.092	235 <b>6.43</b> 7.00 0.056	235 <b>6.43</b> 7.00 0.050	235 <b>6.26</b> 7.00 0.059	235 <b>6.58</b> 7.00 0.044
<b>2 High Involvement</b>	N Valid Mean Standard deviation	595 <b>6.79</b> 7.00 0.021	595 <b>6.76</b> 7.00 0.024	595 <b>6.73</b> 7.00 0.026	595 <b>6.89</b> 7.00 0.015	595 <b>6.86</b> 7.00 0.016	595 <b>6.87</b> 7.00 0.017	595 <b>6.91</b> 7.00 0.013
<b>3 Low Involvement</b>	N Valid Mean Median Standard deviation	67 <b>2.85</b> 3.00 0.178	67 <b>2.00</b> 2.00 0.146	67 <b>1.79</b> 2.00 0.116	67 <b>4.94</b> 5.00 0.185	67 <b>4.66</b> 5.00 0.144	67 <b>3.88</b> 4.00 0.150	67 <b>4.67</b> 5.00 0.152
One-way ANOVA test	F	745.726	2483.182	2474.042	269.977	424.458	629.801	513.870
Sig		.000	.000	.000	.000	.000	.000	.000
Scheffe post hoc test:	C1+ C2	2.848*	4.237*	4.124*	.349*	.261*	.451*	.186*
mean difference	C1+ C3	3.547*	4.509*	4.495*	1.834*	2.155*	2.799*	2.113*
	C2+ C3	.699*	.272	.375*	1.486*	1.895*	2.348*	1.927*

\* The mean difference is significant at the 0.05 level.

**Table 2.** Cluster characterization regarding gender and age of sample participants.

Number of the cluster		Cluster 1 (MI)	Cluster 2 (HI)	Cluster 3 (LI)
Age	N	233	591	66
	Valid Omission	2	4	1
	Mean	<b>40.65</b>	<b>45.19</b>	<b>36.50</b>
	Median	39.00	46.00	33.00
	Error deviation	11.738	12.047	13.343
	Variance	137.788	145.124	178.038
	ANOVA	ANOVA between age and cluster: Significance: p =.000		
	to 35 – <b>younger</b> – N	89	147	38
	35 or younger – %	38.2%	24.9%	57.6%
	36 to 50 – <b>young adult</b> – N	92	244	18
	36 to 50 – %	39.5%	41.3%	27.3%
	36 to 50 – <b>adult</b> – N	47	168	9
	51 to 65 – %	20.2%	28.4%	13.6%
	66 or more – <b>older</b> – N	5	32	1
66 or – %	2.1%	5.4%	1.5%	
Gender	Total – N	234	592	66
	Total – Percentage	100.0%	100.0%	100.0%
	Female – N	118	284	33
	Female – Percentage	50.4%	48.0%	50.0%
	Male – N	116	308	33
	Male – Percentage	49.6%	52.0%	50.0%

**Table 3.** Cluster characterization regarding nationality of sample participants.

Cluster	Cluster 1 Percentage	Cluster 2 Percentage	Cluster 3 Percentage
Valid	100	100	100
Missing	0	0.1	0
Portugal	4.7	2	0
Spain	8.1	12.7	4.5
France	28.9	24.5	17.9
Germany	6.4	7.9	4.5
United Kingdom	8.9	14.4	9
Brazil	5.5	3.7	1.5
Italy	5.5	5.4	9
Japan	7.2	3.7	3
Canada	4.7	2.9	11.9
Netherlands	0.4	5.4	4.5
USA	3.8	3.5	6
Other countries	37.4	34.8	62.7

Wine tourists' country of origin distribution per cluster was not homogenous;  $\chi^2(12) = 36.285$ ;  $p < .001$ .

**Table 4.** Cluster characterization regarding continent of origin of sample participants.

Number of the cluster	Cluster 1 Frequency	Cluster 1 Percentage	Cluster 2 Frequency	Cluster 2 Percentage	Cluster 3 Frequency	Cluster 3 Percentage
N Valid	235	100.0	592	100.0	67	100.0
Omission	0	0.0	3	0.1	0	0.0
Europe	173	<b>73.6</b>	491	<b>82.9</b>	43	<b>64.2</b>
North America	20	8.5	38	6.4	12	17.9
South America	13	5.5	22	3.7	1	1.5
Asia	22	9.4	33	5.6	6	9.0
Africa	4	1.7	2	0.3	1	1.5
Australia	3	1.3	6	1.0	4	6.0

### Exploratory factor analysis

An exploratory factor analysis (EFA) with a varimax rotation (Wedel & Kamakura, 2000) was performed with all the wine product involvement items. A second EFA using the same criteria was made with the behavioural intention (BI) indicators. This analysis allowed an exploration of latent

**Table 5.** Exploratory factor analysis of wine product involvement indicators and correlations with behavioural intentions.

	Factor Matrix <sup>a</sup>		Rotated Factor Matrix <sup>b</sup>	
	1	2	1 Prior acquired knowledge	2 Future learning/activities
% of Variance	65.41%	18.86%	44.49%	39.77%
WPI1.I am knowledgeable about Porto wine	.814	-.377	<b>.857</b>	.266
WPI2.Much of my leisure time is devoted to Porto wine-related activities	.858	-.436	<b>.929</b>	.252
WPI3.I have invested a great deal in my interest in Porto wine	.871	-.433	<b>.936</b>	.262
WPI4.Porto wine represents a central life interest for me	.874	-.380	<b>.903</b>	.304
WPI5.For me the Porto wine tastings are a particularly pleasurable experience	.697	.419	.237	<b>.778</b>
WPI6.I wish to learn more about Porto wine	.775	.485	.250	<b>.879</b>
WPI7.I have a strong interest in Porto wine	.811	.411	.326	<b>.849</b>
WPI8.My interest in Porto wine makes me want to visit the cellars	.754	.515	.214	<b>.888</b>
<b>Correlations between factor and behavioural intentions</b>				
	<b>Group</b>			
<b>Behavioural Intentions</b>	All		<b>.195**</b>	<b>.549**</b>
	C1: Medium Involvement		<b>-.323**</b>	<b>.427**</b>
	C2: High Involvement		.030	<b>.296**</b>
	C3: Low Involvement		-.134	.212
	<b>Function 1</b>		<b>Function 2</b>	
	<b>Prior acquired knowledge</b>		<b>Future learning/activities</b>	
<b>Structure Matrix of all Clusters</b>				
WPI3.I have invested a great deal in my interest in Porto wine		<b>.770*</b>		-.324
WPI2.Much of my leisure time is devoted to Porto wine-related activities		<b>.767*</b>		-.437
WPI4.Porto wine represents a central life interest for me		<b>.661*</b>		-.144
WPI1.I am knowledgeable about Porto wine		<b>.425*</b>		-.060
WPI8.My interest in Porto wine makes me want to visit the cellars		.275		<b>.786*</b>
WPI7.I have a strong interest in Porto wine		.325		<b>.768*</b>
WPI6.I wish to learn more about Porto wine		.264		<b>.647*</b>
WPI5.For me the Porto wine tastings are a particularly pleasurable experience		.220		<b>.461*</b>

Pooled within-groups correlations between discriminating variables and standardized canonical discriminant functions. Variables ordered by absolute size of correlation within function.

\*Largest absolute correlation between each variable and any discriminant function.

factors defined by the WPI and BI sets of indicators. The values of the Kaiser-Meyer-Olkin (KMO) and Bartlett's test of sphericity (Hair et al., 2019; Johnson & Bruwer, 2003; Bruwer & Li, 2007) confirmed the sampling adequacy for performing factor analysis. The KMO presented high values for both groups of indicators (0.884 for WPI and 0.789 for BI), which confirmed that EFA is a suitable tool to explore the latent structure of the data. As for Bartlett's test of sphericity, both groups of indicators have a significance below 0.05, once again indicating relevancy of the EFA. Table 5 presents the EFA results for wine product involvement (WPI). The EFA determined that BI is a single factor construct. Within the two WPI components, an analysis division into two separate factor suggests the existence of a first factor related to the prior knowledge about Porto wine acquired before the visit to the cellars, while the second factor is related to future learning/activities and is more related to a willingness to learn more in the visit.

The correlations between these two factors of the WPI and the BI allow us to explore and to find quite significant differences in relations between the three clusters and these factors. The correlation between behavioural intentions and prior acquired knowledge about port wine is weaker in general, but significant and negative with the medium involvement cluster and non-significant in the high and low involvement clusters. This gives evidence for these separate analyses. Regarding the relation

between behavioural intention and future learning/activities, correlations are stronger, but still moderate and it is again in Cluster 1 that the strongest correlation is presented.

### **Discriminant function analysis**

A discriminant function analysis was performed in order to build a predictive model of group membership, which shows statistically significant differences across the groups (Hair et al., 2019). The results of the discriminant function analysis contribute to an accurate quality performed for validation of the cluster analysis (Carvalho et al., 2015). Regarding the tests of equality of group means, all WPI variables demonstrate significant differences, with WPI2 and WPI3 presenting the greatest discriminatory power (Wilks' Lambda = 0.153). The correlation matrix points out a strong relationship between WPI3 (I have invested a great deal in my interest in Porto wine) and WPI4 (Porto wine represents a central life interest for me), with 0.638. Regarding Box's test of equality of covariance matrices, the p value ( $= < 0.05$ ) suggests there is non-equality of the matrixes of variance-covariance for the groups being studied. The Bartlett test shows the values are similar, therefore with no violation of homogeneity. The first function obtained through the canonical discriminant functions explain 92.6% of the variance of our dependent variable – the clusters with an eigenvalue of 9.214. Table 6 summarizes key data for the WPIs, helping to understand the relative importance of each of them in explaining the predicting variable. WPI2 and WPI3 emerge as the ones with the greatest importance.

The canonical discriminant function plot is a visual representation of the two functions generated from the structure matrix of the discriminant analysis. The previous table has the structure matrix for all clusters, identifying two functions. These two functions share the same divisions of indicators as in the rotated varimax factor matrix. Table 6 shows that the centroids from the three clusters groups (means of all variables in each cluster) are fairly detached among each other, suggesting that possible errors of classifications of cases into the clusters are less likely to happen. It is in the Function 1 axis that the differences between clusters are more prominent: Cluster 2 has the highest values, suggesting a stronger correlation to WPI indicators 5 to 8. As for discriminant function 2, all cluster centroids are close to zero indicating that this function does not discriminate the clusters. Hence, this means that Function 1 is the one that best contributed to discrimination.

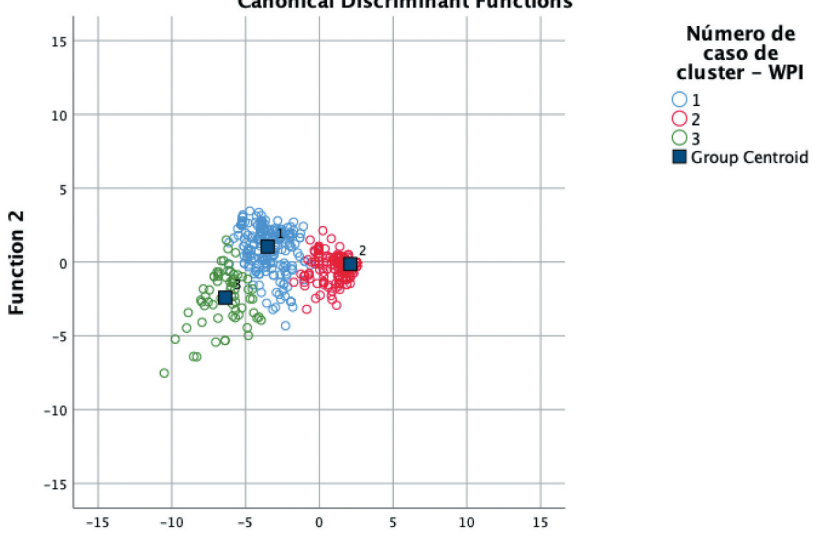
Globally, the empirical findings of this study confirm that it is a sound approach to distinguish different segments/clusters of different wine involvement levels for Porto wine cellars visitors. The results of this study shed light on the different importance and involvement that the Porto wine product has for wine tourists. The results are in line with those of Pomarici et al. (2017), who argued that consumers display different preferences towards wine. And it is common that through the criteria implemented in the various segmentation studies, the consumer profiles may differ considerably (Pomarici et al., 2017). Also, it is in keeping with Nella and Christou's study (Nella & Christou, 2014) that suggested that it is meaningful to segment winery visitors on the basis of their involvement with wine, supporting that involvement with wine can provide a useful segmentation basis for the wine tourism market. Thus, the results of this study can help reduce the gap in the understanding how different wine involvement profiles may help explain the different types and levels of wine involvement. When the wine product involvement factor of "prior acquired knowledge" about Porto wine, although generally correlating with behavioural intentions, is broken down by cluster, the relationships between them are significantly different. This relationship with the medium involvement clusters is negatively correlated. That might suggest that the higher the involvement (which implies higher and previously acquired knowledge) the lower the behavioural intentions (recommending and returning). That suggest that this segment can consider that there is not much more to learn about Porto wine on a standard visit to a Porto wine cellar. Conversely the experience factor seems to motivate more future behavioural intentions. That implies that the experiential side of the visit, namely the tasting, is critical for enhancing future behaviours. This is reinforced by the fact that for those highly involved with Porto wine (Cluster 2), the acquired

**Table 6.** Key data from canonical discriminant function and plot with canonical discriminant functions.

	Standardized Canonical Discriminant Function Coefficients	Structure Matrix	Canonical Discriminant Function Coefficients
WPI1.I am knowledgeable about Porto wine	.024	.770*	.021
WPI2.Much of my leisure time is devoted to Porto wine-related activities	.496	.767*	.573
WPI3.I have invested a great deal in my interest in Porto wine	.418	.661*	.489
WPI4.Porto wine represents a central life interest for me	.205	.425*	.218
WPI5.For me the Porto wine tastings are a particularly pleasurable experience	.185	.275	.277
WPI6.I wish to learn more about Porto wine	-.013	.325	-.022
WPI7.I have a strong interest in Porto wine	.147	.264	.221
WPI8.My interest in Porto wine makes me want to visit the cellars	.246	.220	.453
Constant			-13.085

**Canonical Discriminant Functions**



**Número de caso de cluster - WPI**

- 1
- 2
- 3
- Group Centroid

knowledge factor is not associated with future behavioural intentions. Nonetheless the learning activities seems to impact these behavioural intentions, although to a lesser extent than in Cluster 1 (medium involvement). As expected, in the low involvement Cluster (3) there is no significant relation with behavioural intentions.

## Conclusion and implications

Market segmentation based on wine product involvement has been recognized as a valuable tool in profiling and segmentation consumers with similar needs and wants who are very likely to respond and behave in a similar way to marketing promotion and strategies from the wine and wine tourism business. Regarding the conclusions of the previous studies mentioned above in literature review, the findings of this research corroborate and reinforce the need for and high importance of recognition of the different wine involvement target markets. In this case the identification of different profiles of the wine tourists during their visits to the Porto Wine Cellars. This was done through the identification and characterization of different groups of wine tourists according to their wine involvement.



The main goal of the study was to profile the wine tourists in the Porto wine cellars through segmentation based on wine product involvement. According to the results, three wine tourist clusters were identified in this study according to three clearly different levels of wine involvement: Those with a high wine product involvement (Cluster 2) with a medium wine product involvement (Cluster 1), and with low wine product involvement (Cluster 3). The chi-square test results showed the cluster differences in their behavioural characteristics with the Porto wine involvement. Cluster 1 comprises wine tourists with medium wine product involvement, representing 25.6% of the total sample. Cluster 2 includes wine tourists who were highly involved with Porto wine and accounted for 64.7% of the total sample. Cluster 3 shows the remaining respondents who are characterized by low wine product involvement with the lowest percentage (7.3%). These results demonstrated the main different clusters based on wine product involvement attributes of the wine tourists that visited the Porto wine cellars. The major recommendation of this study, in terms of theoretical and managerial implications, consists of carrying out visits to the cellars on at least two levels. The first should be based on basic level and another for a higher level for connoisseurs. Therefore, it is suggested that the visits should be oriented according to the levels of involvement and knowledge that the visitors have regarding Porto wine. It is, therefore relevant that their level of interest should be assessed before the visit. This allows practical implications to be identified for wine and wine tourism marketing business and strategy management, namely the need to adapt the visits according to different levels of involvement that imply different levels of knowledge and expectations regarding the experiences provided by the visit.

The results provide direct implications for managers, tour guides and marketers to a successful targeting of the wine consumers in order to increase sales and positive word-of-mouth. The research has practical implications related to wine tourists' profile and segmentation to achieve a better competitive positioning of the visits and the wine activities and events.

Another targeting strategy for wine cellars could entail the use of the wine cellar experience during the visits as a tool to increase interest among wine tourists. This is particularly relevant for the low and medium involvement levels that could become more involved wine tourists. The wine cellar experience is, consequently, a great opportunity to create a stronger bond between the cellar and the wine tourist.

Ultimately, it is possible to uphold that involvement with wine can provide a very useful segmentation basis for the wine tourism market, and can also simultaneously be used as the basic input for newly designing their targeting, positioning and wine marketing mix strategies.

Regarding research limitations, the generalization of the results may be limited because the sample and data collection only occurred in a unique geographic and wine tourism point, Porto wine cellars. This study suggests directions for future research. The limitation regarding the identified reduced time period for data collection suggest a longitudinal evaluation of the wine product involvement of the wine tourists in wine tourism, not only in Porto wine cellars, but also in other types of wine products such as the Champagne, Madeira, Bordeaux wine and Mosel wine, among others.

## Disclosure statement

No potential conflict of interest was reported by the authors.

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## CHAPTER III

Scientific Paper 3: *Wine & wine tourism experience: a theoretical and conceptual review*



# Wine and wine tourism experience: a theoretical and conceptual review

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## Abstract

**Purpose** – This paper aims to provide a theoretical and conceptual analysis of wine and wine tourism experiences evidencing the current state of the art and providing some directions for future research.

**Design/methodology/approach** – The paper provides an in-depth literature review and content analysis of prior work.

**Findings** – The experience focussed on wine and wine tourism requires further exploration. The boundaries of the wine and wine tourism experience were identified, together with highlights and strategic agenda for future actions.

**Originality/value** – Based on some key prior literature on the topic of wine and tourism experience, future research directions and approaches were proposed.

**Keywords** Wine experience, Wine tourism experience, Wine tourism, Wine tourist

**Paper type** Literature review

## Introduction

This article aims to provide a state of the art review of the wine and wine tourism experience. The most relevant issue for this theoretical and conceptual analysis lies in the experience that wine and wine tourism provides to tourists. The paper is structured as follows: global review related to the experience construct, tourism experiences model and the wine tourism system; global analysis of the wine and wine tourism experience; characterization of the wine and wine tourism experience; conclusions, managerial and practical implications, and finally, directions for further research.

## A global review – experience construct, tourism experiences model and the wine tourism system

### *Conceptualizing the experience construct*

According to Walls *et al.* (2011), the concept of experience has been explored by various sciences such as consumption, tourism, economics and marketing, among others. In the present research, the set of main definitions of experience in various contexts was compiled



and mentioned because of their relevance and contribution to the study of the theme over the years. Thereby, to [Oh et al. \(2007\)](#) experiences are enjoyable, engaging and memorable encounters for those consuming these events from a consumer's perspective. In line with [Berry et al. \(2002, p. 1\)](#), the experience means orchestrating all the "clues" that people pick up in the buying process. [Lewis and Chambers \(2000\)](#) define the experience construct as the total outcome to the customer from the combination of environment, goods and services purchased. Experiences are private events that are not self-generated but rather occur in response to some staged situation and involve the entire being ([Schmitt, 1999](#)). An experience occurs when a customer has any sensation or knowledge acquisition resulting from some level of interaction with different elements of a context created by a service provider ([Gupta and Vijic, 1999](#)). To [Pine and Gilmore \(1999\)](#), a distinct economic offering that is as different from services as services are from goods; successful experiences are those that the customer finds unique, memorable and sustainable over time, would want to repeat and build upon, and enthusiastically promotes via word of mouth. To complete the most commonly experience construct definitions, in perspective of [Holbrook and Hirschman \(1982\)](#), the facets of consumer behaviour that relate to the multisensory, fantasy and emotive aspects of one's experience with products. One of the most significant contributions of these authors was the classification of the experience according to several perspectives and the interaction of the client as the point common to all of them. These seven definitions above are considered as the most relevant because they are those that the authors of other studies use most in their research in the dominant literature.

From these definitions, an experience seems to have three key dimensions as follows: situational, knowledge decoding and emotional response. Therefore, we can synthesize that experience can be summarized as a response to a situation or environment where the consumer decodes cues and gains some extra knowledge that can provide an enjoyable, memorable or unique emotional response that can be transmitted to others.

#### *The setting of the tourism experiences model*

In the logical sequence that previously approached the experience to construct from a global and aggregate perspective, it is important to understand how the process of the experiences occurs. [Pikkemaat et al. \(2009\)](#) analysed the staging of experiences in the wine tourism context, specifically in the South Tyrolean wine route in Italy, applying [Mueller and Scheurer's \(2004\)](#) experience setting model. This model is focussed on the experience of visitors in a defined tourism setting, containing seven instruments and tools developed to stage experiences appropriately ([Mueller and Scheurer, 2004](#)): theme; concept of staging; visitors; guidance of visitors at the same level that; well-being; attractions/activities; and scenery, being also these last two at the same level.

One of the most recent findings on tourism experiences related to core processes of memorable trips is stated by [Coelho, Gosling and Araújo \(2018\)](#). The authors propose a theoretical framework by identifying the core processes that are sense-making and meaningful in a memorable tourism experience (MTE). The MTE has three dimensions as follows:

- (1) Personal: the degree of perceived novelty, dreams and desires fulfilment, live emotions and also travel motivations;
- (2) Relational: travel planning, travel companionship and interpersonal interaction; and
- (3) Environmental: tourism attractions and cultural exchange.



It can be inferred that these nine variables, which appear to be crucial to memorable experiences, and that without all three simultaneously the experiences will not be totally memorable.

*Wine tourism system*

Hall *et al.* (2000) propose a framework – wine tourism system – with the aim of analysing the complex nature of wine tourism that integrates consumer demand for wine tourism and the wine tourism industry. The central point of the model is the wine tourism experience. This experience is happening when they come into contact with the elements and context of the wine tourism product, i.e. the experience that the wine tourists have had while in contact with the several elements that comprise the wine tourism products such as wines, wineries, vineyards, festivals and winescape. The wine tourism system integrates two sides to produce the wine tourism experience, namely, demand and supply. The consumer demand side of wine tourism comprises the perceptions, motivations and expectations of the wine tourist. The other side is the industry supply of wine tourism that includes all the resources used by wine tourists for the purpose of wine tourism and the businesses and institutions, which transform those resources into a wine tourism product.

**Global analysis of the wine and wine tourism experience**

*The special interest in wine and wine tourism experience – context and relevance*

Some prior studies established that visits to wine cellars by tourists, in a wine region, are still the main wine tourism activity, and consider that the wine region as a whole is the main wine tourism activity (Alant and Bruwer, 2010; Bruwer and Alant, 2009). The tasting room is, similarly, a tourist destination and “the places are places for tourism experiences” (Snepenger *et al.*, 2007, p. 310). Roberts and Sparks (2006) say that cellar visitors stated that the scenario had a crucial role in attracting and improving their experiences. Furthermore, the main destination includes resources such as attractive scenarios, enjoyable climate, lodging with affordable prices, easy to get information and wine paths, which are well signalled and a variety of things to see and do (Getz and Brown, 2006, p. 155).

The overall experience occurs in a context, which is known as the “winescape” (Hall *et al.*, 2000; Nowak and Newton, 2006). Johnson and Bruwer (2007, pp. 6-7) refer to the definition of “winescape” as an interaction between natural landscape and scenario; heritage architecture and artifacts in a wine cellar; the vineyards; the wine cellar door and wines; complimentary products and services; signs; and people in a wine cellar. There are three components that constitute a “winescape” as follows: presence of vineyards, wine production activity and wineries, where the wine is produced and stored (Telfer, 2001). In this sense, Getz and Brown (2006, p. 147) argue that:

[...] wine tourism is, at the same time, a behavioural way of the consumer, a strategy from which destinations develop and commercialize attractions and images related to wine and a marketing opportunity for the cellars so as to educate and directly sell their products to consumers.

Therefore, wine tourism has to be seen as a system centred on wine tourism experiences and activities. Wine tourism activities are mainly based on wine tastings and visits to wine museums, wine houses and cellars. More recently and probably more in the future, wine tourism has to provide for the creation of unique and genuine tourism experiences, which must be more personalized and differentiated. These experiences are the result of what wine tourism destinations have to offer to attract and make loyal national and international wine tourists. Furthermore, these wine tourism experiences are memorable experiences and contribute, simultaneously, to optimizing the experience, making it more enriching and

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stimulating. In so doing, it creates a memorable or unique emotional response that can be transmitted to others that we defined as a key consequence of experience.

Our special interest in wine experience and wine tourism arises from an ancient practice and old traditions of wine and vineyards, strongly linked to the local culture. Wine is, therefore, the central product of wine tourism, which on its own, has an experimental dimension based on the wine tourism experience, essentially related to the hedonic perspective, as it involves sensations, through the five senses, namely, taste, smell, touch, sight and hearing. After all, the wine experiences are the central core of all wine tourism activities and are crucial to the wine tourism offer, though always linked to the place (cellar, farm, manor, etc.) and landscape. Wine tourism experiences mean and express much more than only drinking wine and/or enjoying the experience of wine, as well as another set of benefits such as visiting the area, enjoying scenery and visiting other local attractions (Dodd, 1995; Charters and Ali-Knight, 2000; Hall *et al.*, 2000; Charters and Ali-Knight, 2002; Mitchell and Hall, 2004).

Setting again the wine tourism in the experiential context, the experience related to consumption comprises a period of time that can be divided into four major stages (Arnould *et al.*, 2002) as follows:

- (1) pre-consumption experience (searching and planning);
- (2) purchase experience (choice and encounter with the environment);
- (3) core consumption experience (sensation); and
- (4) remembered/nostalgia experience (reliving the past experience).

These four major stages have similarities with the new own definition of experience mentioned previously, thus it is possible to converge them with the three key dimensions (situational, knowledge decoding and emotional response). To Thomas *et al.* (2016, p. 1), when a tourist engages positively in wine attributes, “a favourable winery experience eventuates”. Pivac (2012) attests that “total wine experience” includes 10 features as follows:

- (1) wine tasting and buying;
- (2) socializing with friends;
- (3) enjoying the day outdoors;
- (4) enjoying the rural environment and vineyards;
- (5) becoming familiar with wine production;
- (6) learning about wine;
- (7) wine tasting in restaurants;
- (8) tour of the winery;
- (9) visitor experience of other attractions and activities; and
- (10) relaxation.

Thus, as can be inferred, 10 features of “total wine experience” determine and enrich the potential of participation in the wine tourism experiences available in wine tourism destinations, benefiting future behaviour of wine tourists in terms of revisiting and recommendations.

### **Characterization of the wine and wine tourism experience**

The experience with wine tourism is not limited to one place or a specific attraction because the complete experience has a positive and significant impact during the pre-visit, visit and

after a visit to a wine region (Hall, 1996). The wine tourism activity involves the participation of a certain group of people called wine tourists who look for experiences regarding wines and wineries, in wine tourism destinations (Yuan *et al.*, 2008). Wine tourists are mainly wine consumers (Brown and Getz, 2005), who look for pleasurable experiences (Pan *et al.*, 2008). It is widely accepted and used that there are five stages to the tourist experience, namely, pre-visit (anticipation), trip, destination/visit, trip in the place and after-visit (revisit) (Pearce, 1982).

Charters and Ali-Knight (2002, p. 312) consider that:

[...] the wine tourism experience can be provided in many ways, the most notable being events and festivals, cultural heritage, cuisine, hospitality, education, tastings and cellars, wine sales at the cellars and winery walks.

Tourists who look for historical and cultural values in iconic places, who appreciate real and notable experiences, look for wine, wine harvests, vineyards, cellars and what the landscape has to offer (Bruwer and Alant, 2009; Bruwer and Reilly, 2006; Hall *et al.*, 2000). According to Hall *et al.* (2004), there is a bigger appreciation of wine as a differential and specialized element, making it a potential attraction to tourists who visit the wine regions. As such, wine can be tasted in many places (before, during and after the visit to wine tourism destinations) (Figure 1). Like many tourism experiences, the wine tourism experience is a multiphase paradigm that comprises the anticipation period, the trip experience, participation in the place, return trip and collection phases (Mitchell and Hall, 2003).

With regard to experimental studies, the temporal issue has a significant role and impact on wine tourism (Mitchell *et al.*, 2000). As mentioned before, according to the authors, seasonality is a factor that must be considered in the wine tourism regions. Mitchell and Hall (2003) concluded that visitors prefer the end of summer and the beginning of autumn to go on cellar visits (coinciding with wine harvest activities). Charters and Ali-Knight (2002) argue that the wine tourist's expectations differ from region to region, depending on a set of critical success factors that are applied in places such as specific geographical and cultural differences.

In regard to wine tourists' attitudes, behaviours and preferences, there are many authors that explore the factors, which contribute to the wine tourist experience as being significant

<i>Stage of travel experience</i>	<i>Wine experience</i>	<i>Opportunities</i>	
<b>Pre-visit (anticipation)</b>	Wine from destination/winery at home, restaurant or wine club Previous experience at winery/wine region	Positive on-site experiences (past)	<b>Future behaviour</b> 
<b>Travel to</b>	Wine en route		
<b>Destination/on-site visit</b>	Winery experience Wine at hotel or restaurant in region	Positive winery experience	
<b>Travel from</b>	Wine en route home		
<b>Post-visit (reminiscence)</b>	Wine from destination/winery at home, restaurant or wine club Previous experience at winery/wine region	Positive on-site experiences (past)	

**Figure 1.**  
Wine tourist  
experience trip stage

**Source:** Adapted from Mitchell *et al.* (2000)

(Ali-Knight and Carlsen, 2003; Cohen *et al.*, 2013; Asero and Patti, 2009; Mitchell *et al.*, 2012; Ben-Nun and Cohen, 2008; Saayman and Merwe, 2015; Pikkemaat *et al.*, 2009).

As a matter of fact, according to the literature review regarding wine tourism experience studies, there are three essential aspects as follows: framework factors, influence factors and success factors (Figure 2).

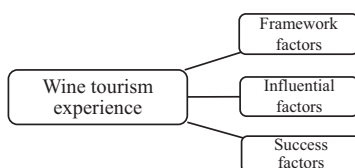
Framework factors refer to wine tourism experience characteristics and their particularities. According to Getz (2000, p. 2), the wine tourism experience is a complete sensorial experience, where we can find the five senses as follows:

- (1) *Taste*: wines and regional cuisine and fresh grapes and other regional products;
- (2) *Smell*: the land and the grapes, the countryside's fresh air, wine fermentation, cellars where the wine ages, the cooking, and roses and herbs from the garden;
- (3) *Touch*: from the interpretation of wine production processes, the bottle and glass, cooking with wine and grape catching;
- (4) *Sight*: the vineyards and the blue sky, unique regional architecture, the people having fun, traditional festivals and wine colours; and
- (5) *Hearing*: bottling, opening a bottle of wine, festive music, wine production equipment's, and cooking and kitchen.

It is a culturally authentic experience in an ideal scenario, involving lifestyles that are connected to wine and food; romantic, settled on the notion that wine, food and an attractive atmosphere promote romance; funny; educational, as consumers search to learn the wine culture and the local culture (Getz, 2000, p. 3; Getz and Brown, 2006, p. 156). The wine tourism experience is not only the visit to cellars and wine tastings but also experiencing unique experiences linked to local culture and focussing on authentic (and therefore, unique) experience often grounded in the culture of a region or place.

In summary, the wine tourism experience is total and unique, according to the key framework factors pointed out by Carlsen and Charters (2006) and Inácio (2010) as follows:

- *Authenticity*: observe and have the opportunity to participate in a productive process of a product, which has a very high social value – the authentic one;
- *Money value*: the attributed value is higher than the money value spent in buying and consuming this product;
- *Service interaction*: interdependence of all involved agents and actors at the destination place and tourist emission place;
- *Surrounding scenario and atmosphere*: landscape and surrounding scenario where it happens;



**Source:** Adapted from Hall *et al.* (2000), Inácio (2010), Getz and Brown (2006)

**Figure 2.**  
Wine tourism  
experience analysis  
aspects

- *Product offers, goods and services conceptions*: which is sold and promised to the tourist;
- *Information dissemination*: dissemination of these products and contexts and their effective difference;
- *Personal growth*: provided by the learning experience; and
- *Lifestyle*: connected to a healthy, elitist lifestyle, with good taste and a cultured class.

Contextualizing and analysing the previous factors, the total and unique wine tourism experience demonstrates and implies an equal synergy between all, e.g. implies a series of players, stakeholders, actors and sectors that contribute to it and that also benefit from it (exceptional wine tourism experience). To reinforce this, it is valid both for the person who does it, who manages it and who participates in this concept of experience.

In the study and development of wine tourism experiences, it is fundamental to know their influential factors, as wine tourism experience can result in an increase in wine sales, increase in the number of visitors and what is spent in the region (Saayman and Merwe, 2015, p. 373). The wine tourism experience is also a result of the personal characteristics of the consumer; the characteristics of the visited place (location, architecture, decor and hygiene); the visit's dynamic (socializing with wine personalities, producers and winemakers, other visitors, wine cellar employees, service and developed activities); interaction with other elements of the experience such as hospitality and lodging; characteristics of the visited region (landscape, cultural heritage, festivals and events and other local attractions) (Hall *et al.*, 2000, p. 130; Pikkemaat *et al.*, 2009, p. 239; Cohen *et al.*, 2013, p. 3).

#### *Success factors of the wine tourism experience*

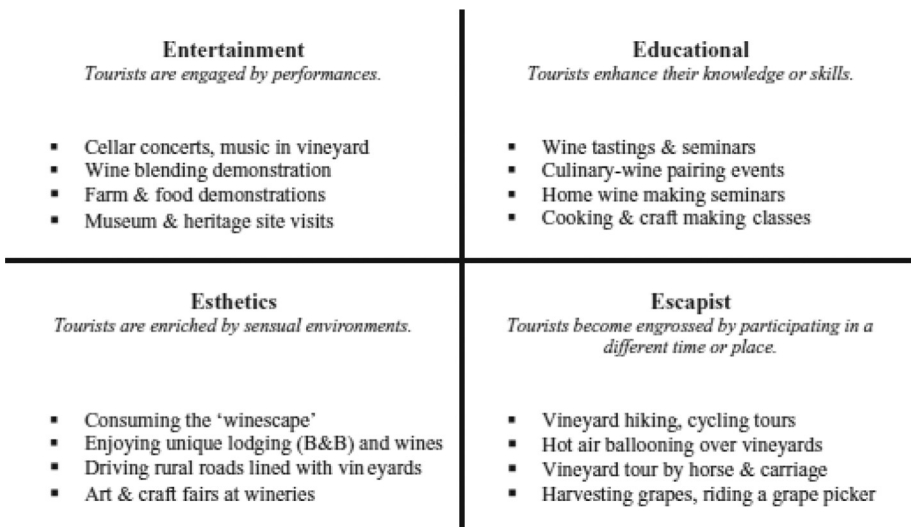
Concerning the success factors of the wine tourism experience, after reviewing the work of many authors, Ali-Knight and Carlsen (2003, p. 5), describe some indispensable conditions to offer extraordinary wine tourism experiences such as: memorable experiences that involve the visitor and is an excellent opportunity to increase wine sales; novelty value; provide exceptional experiences, in addition to the wine tastings, for example, visiting the region in a limousine, travelling in a helicopter or hot air balloon above the vineyards; grand events, which will involve and entertain the visitor, attracting different market segments, with different events in the wine region. Including events and festivals in marketing, brand and promotion of wine regions has become quite important, and nowadays, all wine regions have wine festivals or wine tourism events; free wine tastings opportunity, providing an excellent opportunity to build relationships with clients; sensorial experiences, as the tasting becomes a complete sensorial and educational experience too, and the visitor has a positive connection to the place and the wines; include emotion, fun and participation because of customer loyalty.

Getz and Brown (2006) examined the critical success factors for wine tourism regions and concluded that the success of the wine tourism experience results from the combination of three core components and their adjacent dimensions as follows: core wine product, core destination appeal; and the cultural product. In their research, specific attention was given to the importance attached by wine consumers to various destination and trip attributes when deciding upon a wine tourism experience. According to their analysis of these critical success factors, it is possible to infer that the success of wine tourism results from the combination of three nuclear components and their adjacent dimensions.

Correia and Brito (2016) promote the idea of wine tourism as a territorial experience, composed of tangible and intangible components. The traditions, authenticity, atmosphere, culture and interaction were described as the intangible components. As tangible components, the authors consider the producers, wine cellars, restaurants, landscapes and tourism operators. Summarizing, the intangible components, which are linked to each region are essentially connected to cultural and social roots, as well as the atmosphere. Intangible components > traditions > culture > authenticity > interactions > tangible components > producers > landscapes > wine cellars > operators > tourist restaurants from each region. Regarding tangible components, these are directly linked to the stakeholders of the wine tourism activity, such as producers, wine cellars, restaurants, among others. Though there is this division between tangible and intangible, they conclude that one component alone is not enough for wine tourism to be successful. Thus, to create positive dynamics in territories where this activity happens, it is necessary for the two components to be intertwined, so that wine tourism is dependent on cooperative success strategies.

*Experiential marketing in wine tourism*

Schmitt (1999) was the pioneer of experiential marketing and the experience model, which covers five strategic experiential modules that marketers can create for customers to offer distinguished experiences as follows: sensory experiences (Sense); affective experiences (Feel); creative cognitive experiences (Think); physical experiences, behaviours and lifestyles (Act); and social-identity experiences that result from relating to a reference group or culture (Relate). Pine and Gilmore (1999) support the “Economy of Experience” theory, which covers four domains or four E’s of the model as follows: entertainment, education, aesthetics and escapist, as in Figure 3, regarding wine tourism activities. Getz (2000) highlights the hedonic perspective and approach, enhancing its particular characteristics because of the fact that it potentiates the elevated involvement of all senses as follows: taste, smell, touch, sight and hearing. According to Getz (2000), wine tourism is intimately related



**Figure 3.**  
4E model of the  
economy of  
experience in wine  
tourism activities

Source: Adapted from Pine and Gilmore (1999)

to cuisine and the local experience where it happens. Cohen and Ben-Nun (2009) point out that the main attribute of the wine tourism experience is the wine tasting and production of wine. Wine tourists understand the quality of the service that is experienced while visiting a wine cellar (O'Neil and Charters, 2000).

According to Pine and Gilmore (1999), the creation of wine and cuisine experiences implies that wine producers, from a certain wine region or wine tourism destination, should articulate their services as if they were on a theatre stage, and their products are prompts, so as to involve tourists individually, and therefore, create the conditions for a memorable event. The visit to a wine cellar is a holistic experience that can include an aesthetic appreciation of the natural atmosphere, the wine cellar, the cultural and historical context of the wine region, production methods, the search for education and diversity, a sense of belonging to the cellar and the search for authenticity (Charters *et al.*, 2009).

The wine tourism experience embraces many characteristics, including a lifestyle experience, education, interaction with art, wine and food, wine tastings and sales at the cellar, walks through the cellars, association with the tourist destination image and a marketing opportunity, which improves the development of economical, social and cultural values of a territory (Charters and Ali-Knight, 2002). Wine routes are a fundamental engine to link wine tourism, activities and traditions, working as a privileged tool to disseminate and promote regional tourism (Getz, 2000).

According to Schmitt (2003), the holistic experience lived by the tourist should also be analysed taking into account the convergence between cuisine, wine and tourism. That experience is the result of the interaction between sensorial (senses), affectionate (sensation), cognitive (thoughts), behaviours (actions) and social (relations) experiences. The genuine, endogenous food and wine that represent a place of origin, as well as the landscape and cultural places, are essential elements to build a wine and cuisine experience (Pine and Gilmore, 1999). Finally, it is important to determine the key attributes of the wine tourism experience to understand the behavioural intentions that result in choosing the wine region (Williams, 2001).

## Conclusions, managerial and practical implications

### *Transversal analysis: from management to research*

To provide an original, unique and memorable experience, managers, marketers, operators and stakeholders should create a reasonable number of activities related to the most significant and related aspects. In those activities, they must consider the factors, characteristics, dimensions and attributes of wine and wine tourism according to the cellars, cellar doors, vineyards, wineries, wine routes, wine festivals/events, wine hotels, wine museums and wine estates, during the visits.

The experiences that emerge from wine tourism activities consist mainly of wine tastings and visits to cellars, wine cellars and wine museums. Nowadays, and probably more so in the future, wine tourism has provided and driven the creation of authentic and genuine, increasingly differentiated and personalized experiences. These experiences alone result from the offer of wine tourism destinations that contribute strategically and effectively to the constant and growing attraction and retention of national and international wine tourism operators. In addition, these wine tourism experiences are memorable for wine tourists and contribute simultaneously to the optimization of the experience, making it more enriching and stimulating.

There is no doubt that wine is the core product of wine tourism, which is in itself an experiential dimension, therefore, intimately related to the basis of the wine tourism experience, essentially related to the hedonic perspective, insofar as it involves sensations through all of the five senses as follows: taste, smell, touch, sight and hearing. Together, hedonic experience has been highlighted over time by some researchers. After all, wine



experiences form the central point of all wine tourism activity and are crucial in the wine tourism supply and the local culture and food connections are enhanced. The knowledge also gained on the visits is relevant, and some of it can be enhanced by certification or at a lower level organizing quizzes for visitors about the wines and the territory.

Research on consumer experiences is still rather limited, despite some recent advances in this area and wine tourism is a good example of this limitation. In practice, wine tourism is seen as a system essentially centred on the wine tourism experience. The potential of wine and wine tourism to create experiences has no limits or barriers. Some new experiences like creating own blends or making personalized labels could help to improve the experience, namely, in terms of enhancing the positive and memorable experiences that could be shared with future visitors.

### Further directions for research

*Leading the way for wine and wine tourism experience development: what kind of new scientific approach or tool is needed for the future?*

Wine and wine tourism experience is not a new phenomenon, but measurement research requires further development. Recent research shows gaps in the scope of measurement scales and so more appropriate instruments, applied to the wine touristic activity could be developed. Further, the scales that exist in the literature were not constructed with the specific purpose of measuring wine experience in a wine tourism context. In fact, the main measurement scales for wine and wine tourism experience basically focus on the: customer experience index (Kim *et al.*, 2011; Knutson *et al.*, 2007); service experience quality (Klaus and Maklan, 2012); service experience quality (Chang and Horng, 2010); marketing experience scale (Tsauro *et al.*, 2006; Schmitt, 1999, 2003); economic experience model (Pine and Gilmore, 1999); and wine involvement scale (Brown *et al.*, 2006); winescape scale (Thomas *et al.*, 2016); and sensory tourist experience (Agapito *et al.*, 2017). This demonstrates the need to develop a measurement scale for wine experience in the context of wine tourism activity, as a specific measurement scale is needed. Further, a new measuring tool for wine experience in the wine tourism industry could draw on eight dimensions/attributes as follows:

- cultural experience;
- exciting experience;
- sensory appeal/experience;
- winescape;
- wine storytelling; and
- wine product/activity involvement.

These dimensions/attributes for a new wine tourism experience measurement tool are supported by the literature and such a tool would be a useful resource in support of wine tourism activity.

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## CHAPTER IV

**Scientific Paper 4: *Wine Experience Scale Development: a new strategy to measure holistic behaviour of wine tourists***



Article

# Developing a Wine Experience Scale: A New Strategy to Measure Holistic Behaviour of Wine Tourists

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**Abstract:** This study develops a scale to measure wine tourism experiences and was tested in Portugal, in two of the main wine tourism centres: Porto and Madeira. The wine experience scale combines experience traits with the traditional approach to scales related to wine tourism. The development of the scale follows the most recognised validated procedures. Data were collected from a total of 647 international wine tourists in the wine cellars of the two main fortified wine tourism regions visiting areas: Porto and Madeira. Structural equation modelling (SEM-AMOS) was used as the main analysis and validation tool. The resulting 18-item wine experience scale comprises four major dimensions: (1) Wine storytelling, (2) wine tasting excitement, (3) wine involvement, and (4) winescape. All these showed reliable and validated indicators. This new scale presents a valid new tool to better measure and evaluate experiences in a wine tourism setting. This study offers a broad range of use for academics, managers, planners, and practitioners. It shows how a new measurement tool focused on the wine tourism experience in terms of several outcomes and applications, addressing important practical managerial implications, can have an impact on academic research. Most previous tourism scales still fail to measure the specifics of wine settings. This is the first scale that comprises the dimensions of experience with wine senses, applied in a relevant wine destination where research is still limited. The results are relevant in boosting the increasingly recognized awareness of Portugal as wine tourism, as well as bringing experience scales to the body of knowledge.

**Keywords:** scale validation; SEM; wine storytelling; wine tasting excitement; wine involvement; winescape

## 1. Introduction

Portugal is recognised as a wine tourism destination and has growth potential. In 2019, the tourism revenue contributed 8.7% of the national GDP, with an increase of 8.1% in tourism revenue growth [1,2]. Wine tourism directly contributes to the wine regions' economic development [3]. The 4th UNWTO Global Conference on Wine Tourism (2019), themed 'Co-creating Innovative Experiences', sought to further explore issues related to wine tourism experience for international comparability between destinations. Although Porto and Madeira wines are internationally renowned, there is still limited empirical research on its experience-based wine tourism. It is noteworthy that the Porto wine vines in Douro became the first wine-growing area in the world to be legally regulated in 1756, although the

name Porto was already in use from at least 1619. The history of Madeira wine is at least 200 years old, although vines had been planted since the fifteenth century by order of Henry the Navigator. This makes these two wine regions the most historically significant regions for fortified wines not only in Portugal, but also globally. They are both fortified wines, which means that they are wines to which brandy was added during its winemaking process, normally for conservation and strengthening purposes. They are part of a broader family that includes Sherry, Marsala, Vermouth, and the also Portuguese Moscatel de Setubal. Portugal is the 11th biggest wine producer but the 9th wine exporter in 2018, with an increase of 5% in volume (3 million hl) and an increase of 11% in value (0.8 billion €) [4]. The Porto wine, after some years of declining sales, had, in 2019, an overall increase in sales of 2.5% in volume, although in value it decreased −1.5%. In the domestic market, it had an increase of 3.6% in value despite a decrease of −0.5% in volume. However, in 2020, in the midst of the Covid-19 pandemic crisis, between January and June, it declined −12.4% in volume and −15.4% in value, compared with the same period last year [5]. The Madeira wine also had a decrease of −15% in volume and −19% in value over the same period. This wine had its best year ever in 2018 with over 19.2 million € in value, but with a decrease of −2.9% in value and −6% in volume already in 2019 [6].

In the context of wine tourism, wine-related experiences are a central concept in which the determinants of the success of a wine region emerges through the selection of the customer hedonic concept as an indicator [7]. Wine products offer a wide range of different experiences including wine-related travel, known as an indicator of the wine tourism experience. Wine tourists may travel in search of specific wine tourism experiences, such as visits to the cellars, wineries, vineyards, wine tasting rooms, and/or wine hotels in order to experience an amalgam of different wine-related activities. Therefore, the wine tourism experience comprises the interplay of many factors such as wine tastings, staff, cellar door visits and sales, entertainment, education, and aesthetics [8].

As Hall et al. [9]. argued, wine is seen as an imperative component of the attractiveness of a wine destination. These activities include a set of opportunities in different life domains based on lifestyle and personal experience [10] (p. 152) the opportunity to purchase wine and to learn more about wine [11]. and other wine related matters [12,13]. opportunities for social interaction [11], and communing with others and the opportunity to relax [12,13]. “A favourable winery experience eventuates when a wine tourist engages in a positive interaction with these wine attributes [14] (p. 1). Wine tourism consists of a wine-related activity that integrates wine culture and heritage, providing a dynamic and versatile experience through the visit context [15]. A visit to a wine cellar includes an aesthetic appreciation of the natural atmosphere, the wine cellar, the cultural and historical context of the wine region, production methods, the search for education and diversity, a sense of belonging to the cellar, and the search for authenticity [16]. To Brás, Costa, and Buhalis, “wine regions can establish themselves as destinations through the full integration of different products combining main attractions: from wine and food to accommodation, events and entertainment activities and many other regional services” [17] (p. 1625).

Globally, the dominant literature still has some research gaps in the field of the wine-related touristic experience as the central product and activity of wine tourism. Despite frequent references to the wine tourism experience, when it is associated with the wine experience construct, it remains fragmented. Within the literature, there is still no universally accepted scale that encapsulates all the dimensions of the wine experience. This makes it difficult to examine what attributes and variables should form it. The proposal of a wine experience construct containing the following dimensions: (1) Wine storytelling, (2) wine tasting excitement, (3) wine involvement, and (4) winescape, appears to demonstrate how wine-related experiences occur simultaneously in the context of a visit. This is the first study that demonstrates the combined used of wine experience dimensions to construct a useful measurement tool, applied to wine experience in wine tourism destinations and wine regions. This measurement approach extends the scope of the existing literature, as there is no scale that measures the wine experience of wine tourists. For instance, there is a lack of consensus about how the wine experience occurs and is perceived in the context of wine tourism activities. Hence, there is an



emerging need to develop and validate a new scale addressing the wine experience [18]. The original contribution of the paper is to showcase the dimensions that form the wine experience construct, providing its associated originality and the value added. A literature review related to the wine experience constructs follows, and an overview of the construction, development, and validation of the wine experience scale is described and discussed. Finally, the results, implications, and future research directions are discussed.

## 2. Literature Review: Wine Tourism Experience and the Domain of Constructs

### 2.1. Wine Tourism Experience

For tourists, food-and-wine activities are a component of their tourism experience while travelling [19]. and a wine tourism activity involves the participation of a group of individuals seeking experiences related to wines and wineries within wine tourism destinations [20]. Charters and Ali-Knight suggest that “the wine tourism experience can be provided in many ways, the most notable being events and festivals, cultural heritage, gastronomy, hospitality, education, tastings and wine houses, wine sales at cellars/wine houses and winery tours” [21] (p. 312). To Pikkemaat et al. [22], the wine tourism sector has the potential to create experiences for the tourist, especially those looking for historical and cultural values in iconic places, who appreciate genuine experiences, and who are interested in wine, vineyard crops, wine houses, and what the landscape offers [23]. The creation of a tourism experience can be combined through food and culture, for instance in music festivals within wineries [24]. A holistic wine experience occurs mainly in the context of a winery visitation, where the tourist experience has a positive effect on their future behaviour intentions [25,26]. The importance of wine tourism and a hedonic experience is supported by Bruwer and Rueger-Muck [7], who advanced that five wine tourist drivers: (1) Taste wine; (2) buy wine; (3) experience the atmosphere; (4) learn more about wine; and (5) find a unique wine, work to achieve a memorable wine tourism experience at a winery cellar door. Thanh and Kirova [3]. also concluded that experiences are globally positive, and that education and entertainment are relevant when comparing aesthetics and escapism. It is also highlighted that a holistic perspective focuses on the visitors’ experience in relation to wine tourism activities and wine regions. Wine tourism is recognised as a holistic experience comprising of a set of wine region features [27]. provided mainly by tasting, cellar door, cellar door sales, and winery tours, among others [21]. Creating memorable experiences, especially in a new wine region, is the culmination of a several unique experiences [28].

The inclusion of wine experience dimensions (wine excitement, wine sensory appeal, winescape, wine storytelling, and wine involvement) is justified as other measurements of wine experience are not just centred on a holistically transversal and also aggregating approach, but encapsulate various stages during a wine tourism visit, allowing a clearer vision of the wine experience. The experiential perspective of wine tourism [23,29] can be enhanced through hedonistic components that characterise wine [9]. In addition, Gómez, Pratt, and Molina [30] revealed that there has been an increase in theory building which highlights the complexity underlying the wine tourism experience and, by extension, to the experiential wine tourist. As such, for the final achievement of the following described dimensions, some of the dimensions derived from the dominant literature were included, others disregarded, and others added, considering the underlying holistic component. The dimensions of existing scales are not directed towards the nature of the wine and wine tourism experience. Consequently, a new scale is necessary, as no current scale objectively measures the wine experience. Within this context, this new scale establishes the most effective symbiosis of the dimensions that mirror the various stages of a wine tourism visit. Accordingly, the scale intercepts the main inherent dimensions for a better acquaintance of the holistic and hedonic perspectives of wine and wine tourism experience, which will yield a richness to both conceptual and theory-building research in this field and prove to be useful in wine tourism.

## 2.2. Wine Excitement

Eating experiences, including the drinking of wine, may convey emotions such as excitement and attract tourists who desire excitement and novelty [31]. Fields [32] and Kim, Eves, and Scarles [33] have indicated that eating local food for the first time is an exciting experience within a destination. Fields [32] demonstrated that physical motivators may also be associated with the opportunity to taste new and exotic foods, and thus local wines may also be part of this experience. Additionally, the exciting experience, while considered as one of the key physical motivators, can be regarded as an event that has excitement as the crucial feature in a leisure activity setting [34]. The place experience is determined by the relationships that exist between tourists, in terms of place excitement and engagement [35]. Kim and Eves [36] also assumed excitement as a motivation to taste local food. Within this context, wine tourists are wine consumers looking for pleasurable winery attractiveness [37], which forms part of the memorable wine tourism experience described by Bruwer and Rueger-Muck.

## 2.3. Wine Sensory Appeal

Customer experience in tourism also comprises sensory components [38]. The literature highlights multi-sensory stimuli and impressions to understand tourist experiences, and that tourists may be attracted towards a destination by visual elements [39–41]. Brochado, Stoleriu, and Lupu [42] suggest that wine tourists accord great value to the multisensory aspect of wine, and they identified twelve themes of sensory experience within Douro wineries: (1) Wine, (2) view, (3) staff, (4) room, (5) hotel, (6) food, (7) restaurant, (8) pool, (9) service, (10) Douro, (11) delicious (food and wine), and (12) comfort. Wine tourism indulges the senses in the wine product itself primarily, involved through the very nature of wine tourism, and influences consumer attitudes and purchases within wineries [43]. Bouzdine-Chameeva and Durrieu [44] suggest sensory stimulation originates in the wine tasting and the winery design. Ali-Knight and Carlsen [45] state that consumer engagement is achieved by novelty and sensory activities in winery settings and was confirmed by Santos et al. [18] where sensory impressions impacted on the winery visit experience.

## 2.4. Winescape

The winescape is described as the synergic interaction of “vineyards, wineries and other physical structures, wines, natural landscape and setting, people and heritage, towns and their architecture and artefacts within them” [46] (p. 277). Alebaki and Lakovidou [47] (p. 123) describe winescape as “the whole region and its attributes”. Thomas, Quintal, and Phau [14] also conceptualised seven key attributes of the winescape: (1) The winescape cluster, (2) the atmosphere, (3) the wine product, (4) complementary products, (5) the signage, (6) the layout, and (7) service staff attributes. Dimensions of the winescape include: (1) Nature-related; (2) wineries and vineyards; (3) wine and other products; (4) ambient factors; (5) signage and layout; (6) service staff and locals; (7) heritage-related towns; and (8) fun-based activities [48]. The winescape is also the primary driver of motivations for the wine tourists’ hedonic experience [23] where much importance is placed on the winescape during the visit [49]. Bruwer and Gross [50] advocate that a winescape framework for wine tourism is conceptualised by five major dimensions: Infrastructure, natural setting, atmosphere, layout, and people. The winescape attributes shown above are considered in a multi-layered macro-context of a wine region.

## 2.5. Wine Storytelling

Moscardo [51] states that central themes and stories impact on tourists and their behaviour. Winery visits by tourists provide wine producers with a communication platform for their brand’s stories, while also showcasing their product portfolio [52]. Winemakers may tell many stories about the wine production: Their families, their heritage, and their winemaking approach. The wine tourist may also evaluate the stories when deciding which wine to buy [53]. Wine-related stories become

part of the wine experience and may be relived by repeating the story [54]. As storytelling allows consumers to integrate the story of a wine brand or property [55] and enhance their wine experience, this element should also be measured, as storytelling value adds to the wine tourism experience.

### 2.6. Wine Involvement

According to O'Neill and Charters [52] winery visits increase the direct involvement with the tourist. The relationship between consumers' travel and their involvement with wine proves their strong dependence [11,56]. Wine tourism and involvement with wine are described as a consumer experience with a high hedonic charge [11]. Brown, Havitz, and Getz [57] found that the particular interest in a product (wine) has the effect of creating the desire to travel to the place where the product is made. Wine consumers' product involvement is also equated with their own personal involvement with wine [58]. Yuan et al. [59] maintain that wine consumers' feelings of importance and relevance towards a product, as well as their genuine level of interest in wine, are determined through a high level of product involvement. Bruwer and Alant [23] offer the view that the wine tourist is drawn to be involved with the wine and region where the wine is produced. Engagement by individuals in wine tourism is related to a desire to become better acquainted with the wine product and to enjoy an indulgent experience [23]. Sthapit et al. [60] attest that involvement is one of seven experiential tourism factors, significantly influencing the memorability of the tourists' experience.

Wine and wine tourism provide and drive a set of authentic and genuine experiences for wine tourists, which are increasingly differentiated and personalised [61]. Thus, the wine tourism experience is an amalgam of components and features related to wine, with dimensions such as wine excitement, wine sensory appeal, winescape, and wine involvement, which play a crucial role in the wine tourists' experience.

## 3. Research Method

### 3.1. Scale Development Process

Scale validity refers to the degree to which a study accurately reflects or assesses the specific concept that the researcher is attempting to measure, while reliability refers to the degree to which a test is consistent and stable in measuring what it is intended to measure [62]. Consequently, to ensure the reliability and validity of the methods used to construct and validate the scale in this study, four aspects were taken into account: (1) Domain of construct, (2) item generation, (3) purifying the measurement, and (4) finalising the measurement [62,63], comprising the scale development process through the major methodological stages which focus on the scale development process.

### 3.2. Item Generation

Derived from several studies (Table 1), an initial pool of 20 items was constructed and generated. The initial items were then refined and edited for content validity by six experts in related academic or practical fields. With the intention of classifying the items into construct groups, a sorting procedure was used by the experts to refine items that were considered redundant or ambiguous. The items were not grouped or sequenced, and only one conceptual change resulted from the process where the experts found it difficult to distinguish between 'wine sensory appeal' and 'wine excitement', this being replaced by 'wine tasting excitement'. The process resulted in 18 modified measurement items, classified into four categories: Wine tasting excitement, winescape, wine storytelling, and wine involvement (Table 1).

The 18-item instrument was pretested with a convenience sample of 65 participants who had a wine experience at Porto and Madeira wine cellars, as wine tourism destinations, during July 2019. The goal of this pre-test was to identify possible weaknesses, ambiguities, missing and redundant questions, and poor reliability [62]. As Netemeyer et al. [64] argue, the construct validity can be supported by this process, as the exclusion of items that may be conceptually inconsistent is allowed.

To determine the scale dimensions, exploratory factor analysis (EFA) was performed, which is a preliminary technique in the scale development process and construct validation [65]. An inspection of the strength of the relationship between the items is necessary to assess whether a particular data set is suitable for factor analysis [66]. It was found that no items had factor loadings lower than 0.4 or cross-loaded on more than one factor. A Cronbach's alpha reliability score higher than 0.7 indicated that the variables exhibited moderate correlation with their factor groupings and were regarded as internally consistent and stable [66]. As a result, no items had factor loadings lower than 0.4 or cross-loaded on more than one factor, and therefore no item was eliminated [66]. A total of 18 items with four constructs remained: Wine tasting excitement, winescape, wine storytelling, and wine involvement. A confirmatory factor analysis (CFA) analysis was then performed to confirm the structure of the scale. Moreover, CFA also evaluates the relationships between observed measures or indicators and latent variables or factors in detail [65]. CFA was applied, allowing free correlations for the whole sample and for a randomly split subsample. Convergent and discriminant analysis were used to test the scale as well as model fit. The last steps were to test a second-order factor analysis and then the multigroup analysis was applied.

**Table 1.** Initial scale items of wine experience.

Dimensions	Scale Items Adjusted to Wine Experience	Support References
Wine Tasting Excitement	1. Tasting this wine in its original wine cellars makes me excited 2. Tasting this wine on holidays helps me to relax 3. Tasting this wine makes me feel exhilarated 4. Tasting this wine on holidays makes me stop worrying about routine	[41,67,68].
Winescape	5. This winery landscape has a rural appeal 6. These buildings have historic appeal 7. There is an old-world charm in these wine cellars 8. This architecture gives the winery character 9. Stories told about the wine positively influenced the value I attribute to it	[14,23,56,68,69].
Wine Storytelling	10. Stories told about the wine positively influenced the value I attribute to the wine tasting 11. Stories told about the wine positively influenced the value I attribute to this visit 12. Stories told about the wine enabled me to have an enjoyable time 13. Stories told about the wine enabled me to learn ancient facts about wine that I did not know	[53,54,70].
Wine Involvement	14. I like to purchase wine to match the occasion 15. For me, drinking this wine gives me pleasure 16. I enjoyed these wine activities which I really wanted to do 17. For me, these wine tastings are a particularly pleasurable experience 18. My interest in this wine makes me want to visit these wine cellars	[57,71].

### 3.3. Purifying the Measurement

The list of resulting measurement items was verified with 379 wine tourists who had visited Madeira and Porto wine cellars, and these items were measured using a seven-point Likert scale, varying from 1 (strongly disagree) to 7 (strongly agree). The final survey (multilingual: English, Spanish, French, and Portuguese) was administered by the researcher to a convenience sample of wine tourists visiting Porto and Madeira wine cellars between July and September 2019. The data analysis was carried out in two stages: An (1) EFA, followed by a (2) confirmatory factor analysis (CFA), using SPSS (version 26) and AMOS (version 26). An exploratory factor analysis (EFA) using the generalised least squares as extraction method with a varimax rotation and Kaiser normalisation was undertaken

on the data collected to determine the dimensions of the scale. The criteria used to extract factors was an eigenvalue > 1. The EFA was run separately for each factor.

The EFA identified four dimensions, explaining 58.94% of overall variance, labelled: (1) Wine tasting excitement, (2) winescape, (3) wine storytelling, and (4) wine involvement. Both Bartlett's test of sphericity (a statistical test for the presence of correlations among the variables) and the Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy were measured to assess data factorability. A KMO value of 0.942 exceeds the acceptable minimum value, which is 0.6 [66]. Bartlett's test of sphericity was found to be significant ( $p < 0.000$ ), within the recommended boundaries (Table 2). The findings presented Cronbach reliability scores ranging from 0.86 to 0.92. In addition, during the factor extraction process, no items were removed. Factor loadings were not revealed to be cross-loaded on different factors, and therefore no item was eliminated.

**Table 2.** Exploratory factor analysis results for the initial measurement scale (wine tourists  $n = 647$ ).

Dimensions and Items	Factor Loading	Mean	SD	Total Variance Explained (%)	Cronbach's Alpha
<b>Wine Tasting Excitement</b>	-	-	-	16.662	0.887
1. Tasting this wine in its original wine cellars makes me excited	0.697	6.23	1.074	-	-
2. Tasting this wine on holidays helps me to relax	0.688	5.90	1.281	-	-
3. Tasting this wine makes me feel exhilarated	0.725	5.91	1.256	-	-
4. Tasting this wine on holidays makes me stop worrying about routine	0.658	5.88	1.414	-	-
<b>Wine Storytelling</b>	-	-	-	15.952	0.888
1. Stories that the wine tour guide/winemaker/wine producer told about the wine positively influenced the value I attribute to the wine	0.819	6.30	1.014	-	-
2. Stories that the wine tour guide/winemaker/wine producer told about the wine positively influenced the value I attribute to the wine tasting	0.770	6.15	0.977	-	-
3. Stories that the wine tour guide/winemaker/wine producer told about the wine positively influenced the value I attribute to this visit	0.703	6.21	0.882	-	-
4. Stories that the wine tour guide/winemaker/wine producer told about the wine enabled me to have an enjoyable time	0.689	6.22	0.916	-	-
5. Stories that the wine tour guide/winemaker/wine producer told about the wine enabled me to learn ancient facts about wine that I did not know	0.691	6.30	1.029	-	-
<b>Wine Involvement</b>	-	-	-	14.442	0.876
1. I like to purchase wine to match the occasion	0.626	6.16	1.071	-	-
2. For me, drinking this wine gives me pleasure	0.677	6.33	0.886	-	-
3. I enjoyed these wine activities which I really wanted to do	0.689	6.19	0.926	-	-
4. For me, these wine tastings are a particularly pleasurable experience	0.699	6.34	0.857	-	-
5. My interest in this wine makes me want to visit these wine cellars	0.534	6.27	1.012	-	-
<b>Winescape</b>	-	-	-	11.880	0.793
1. This winery landscape has a rural appeal	0.570	6.20	1.017	-	-
2. These buildings have historic appeal	0.642	6.40	0.846	-	-
3. There is an old-world charm in these wine cellars	0.705	6.27	0.868	-	-
4. This architecture gives the winery character	0.585	6.32	0.855	-	-

KMO: 0.942, Bartlett's test of sphericity: 7860.099, Sig.: 0.000

## 4. Results and Discussion

### 4.1. Sample Profile

The sample (Table 3) was balanced in terms of gender, with most visitors from the United Kingdom, France, Portugal, or Germany, and the majority being adults between 25 and 54. The sample had high education levels and a medium- to high-level job standard, and represented the main market in Portugal.

**Table 3.** Socio-demographic profile of the sample—whole data ( $n = 647$ ).

Gender	Age	Education Level	Country of Origin	Job
Male (49.7%)	18–24 years old (7.1%)	Less than high school graduate (3.7%)	Portugal (8.3%)	Businessperson/manager (16%) Freelancer/self-employed (17.9%)
	25–34 years old (21.3%)		Spain (5.6%)	
	35–44 years old (21%)	High school graduate (18.5%)	France (24.7%)	Middle/senior employed management (17%) Civil servant (11.4%)
	45–54 years old (27.8%)		Germany (7.7%)	
Female (50.3%)	55–64 years old (16%)	Degree (43.8%)	United Kingdom (25.9%)	Worker (17.4%)
	65 or > years old (6.8%)	Master's degree (27.2%)	Other countries (27.8%)	Pensioner/retired (4%)
		Doctorate (6.8%)		Domestic/unemployed (1.5%)
				Student (6.5%) Other (8.3%)

### 4.2. Finalising the Measurement

Further robust and consistent data collection was carried out to assess the reliability and validity of the measurement scale. Likewise, the data gathered from the sample of wine tourists recruited in Madeira and Porto wine cellars ( $n = 647$ ) was used to accomplish the CFA, because the development sample must be sufficiently large [62,64]. In total, 323 responses were collected in Madeira wine cellars and 324 responses were collected in Porto wine cellars between late July and September 2019 (the high season). Therefore, a total of 647 self-administrated questionnaires were considered valid and usable for data analysis.

The confirmatory factor analysis (CFA) was conducted using the generalised least squares method [72,73]. to assess the validity and reliability of the constructs. As result, 18 indicators were retained for inclusion in the final scale (Table 4). The adjustment results improved significantly, yielding the values in Table 4 and the adjustment values expressed. As concerns validity and reliability, for the average variance extracted (AVE), the value obtained also exceeds the reference cut-off value ( $\geq 0.50$ ) according to the literature [66,70] (Table 5).

The overall goodness-of-fit index (Table 5) displayed a suitable level of fit:  $\chi^2 = 406.302$ ;  $df = 129$ ;  $p = 0.000$ ;  $\chi^2/df = 3.15$ ;  $GFI = 0.93$ ;  $AGFI = 0.907$ ;  $RMSEA = 0.058$ , with the result in keeping with what is suggested in the literature [66], confirming the scale's goodness of fit. These results suggest that the proposed model fits well with the empirical data. This study represents one of the first major efforts to propose wine experience factors at wine tourism destinations and, following the accepted scale development procedure [62,64]. developed a measurement scale for wine experience. The final analysis to validate the scale comprises wine storytelling (5 items), wine involvement (5 items), winescape (4 items), and wine tasting excitement (4 items).



**Table 4.** Confirmatory factor analysis results for final measurement scale (wine tourists  $n = 647$ ).

Constructs and Indicators		St. Regression	S.E.	C.R.	$p$
Stories that the wine tour guide/winemaker/wine producer told about the wine enabled me to learn ancient facts about wine that I did not know	← Wine Storytelling	0.798	-	-	-
Stories that the wine tour guide/winemaker/wine producer told about the wine enabled me to have an enjoyable time	← Wine Storytelling	0.848	0.042	23.778	***
Stories that the wine tour guide/winemaker/wine producer told about wine positively influenced the value I attribute to this visit	← Wine Storytelling	0.826	0.044	22.402	***
Stories that the wine tour guide/winemaker/wine producer told about the wine positively influenced the value I attribute to the wine tasting	← Wine Storytelling	0.88	0.05	22.376	***
Stories that the wine tour guide/winemaker/wine producer told about the wine positively influenced the value I attribute to the wine	← Wine Storytelling	0.891	0.045	25.063	***
Tasting this wine on holidays makes me stop worrying about routine	← Wine Tasting Excitement	0.84	-	-	-
Tasting this wine makes me feel exhilarated	← Wine Tasting Excitement	0.808	0.046	23.441	***
Tasting this wine on holidays helps me to relax	← Wine Tasting Excitement	0.874	0.043	25.592	***
Tasting this wine in its original wine cellars makes me excited	← Wine Tasting Excitement	0.79	0.035	22.06	***
My interest in this wine makes me want to visit these wine cellars	← Wine Involvement	0.773	-	-	-
For me, these wine tastings are a particularly pleasurable experience	← Wine Involvement	0.846	0.044	21.931	***
I enjoyed these wine activities which I really wanted to do	← Wine Involvement	0.833	0.05	21.069	***
For me, drinking this wine gives me pleasure	← Wine Involvement	0.837	0.048	20.021	***
I like to purchase wine to match the occasion	← Wine Involvement	0.841	0.056	21.02	***
This winery landscape has a rural appeal	← Winescape	0.75	-	-	-
These buildings have historic appeal	← Winescape	0.78	0.052	17.594	***
There is an old-world charm in these wine cellars	← Winescape	0.805	0.056	17.29	***
This architecture gives the winery character	← Winescape	0.82	0.055	17.62	***

Notes: \*\*\*  $p$ -value < 0.01.**Table 5.** Goodness-of-fit indexes for the measurement.

Dimensions	CR	AVE	MSV	ASV	Wine Involvement	Wine Storytelling	Wine Tasting Excitement	Winescape
Wine Involvement	0.915	0.683	0.594	0.570	0.826	-	-	-
Wine Storytelling	0.928	0.721	0.527	0.479	0.726	0.849	-	-
Wine Tasting Excitement	0.897	0.687	0.594	0.537	0.771	0.690	0.829	-
Winescape	0.868	0.623	0.590	0.521	0.768	0.659	0.735	0.789
GOF Indexes	-	X2	Df	$p$ -value	X2/df	GFI	AGFI	RMSEA
Whole sample ( $n = 647$ )	-	406.302	129	***	3.15	0.93	0.907	0.058

Notes: \*\*\*  $p$ -value < 0.01.

The structural equation model and values of standardised structural coefficients are shown in Figure 1. It was proven by the statistical analysis that all dimensions contribute to the definition of the wine experience construct. The evaluation of the significance of a regression coefficient was performed by an analysis of the *t*-test [74]. The existence of a significant regression coefficient (the value of *t* exceeds 1.645) assumed that the relationship between the two latent variables was demonstrated empirically [66]. In addition, the case of a positive or satisfactory evaluation of adjustment measures confirmed the predictive validity of the model [74]. In this study, it was assumed that in unilateral cases (direct and positive influence), significant relations would present a *t*-value of greater than 1.645. Overall, the data supported that wine experience was explained by the four latent factors: Wine storytelling, wine involvement, winescape, and wine tasting excitement.

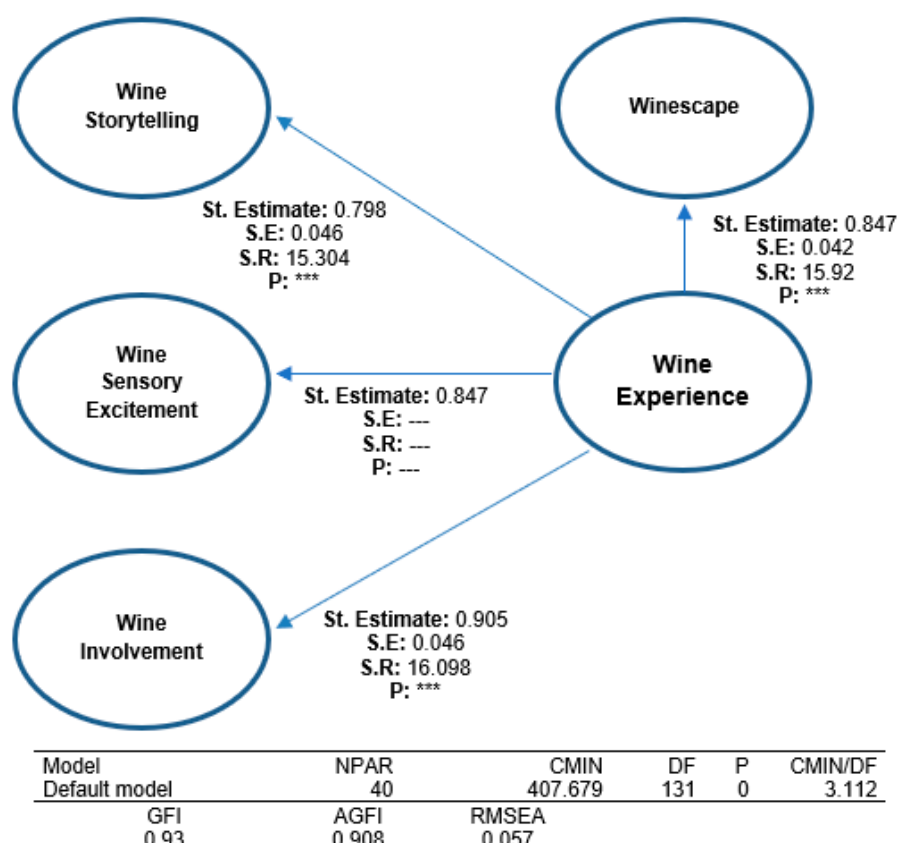


Figure 1. Structural equation model of final measurement scale. \*\*\* *p*-value < 0.01.

Following the SEM analysis, variable correlations were tested for invariance among two different groups of wine tourists. A multigroup analysis (Table 6) highlighted how the Porto and Madeira wine cellars differ from each other from the wine tourists' perspective within these two wine tourism destinations, based on the proposed scale. Overall, the findings supported all the hypothesised relationships in both tourism destinations, which reinforces the consistency of the wine experience scale. The two main differences were wine storytelling and winescape. Wine storytelling by the wine tourists was more evident in Madeira (0.718,  $p < 0.05$ ) than in Porto (0.574,  $p < 0.05$ ). It is expected that this discrepancy was related to greater personalisation of the guided wine tours in Madeira wine cellars as compared to Porto wine cellars. The winescape was more evident in Porto (0.696,  $p < 0.05$ ) than in Madeira (0.655,  $p < 0.05$ ), probably due to the cellar landscape, scenery, ancient architecture, and panoramic views around the cellars.



Table 6. Multi group analysis.

Dimensions and Constructs		-	Porto Wine Cellars		Madeira Wine Cellars		-
-	-	-	Estimate	<i>p</i>	Estimate	<i>p</i>	<i>z</i> -Score
Wine Storytelling	<←	Wine Experience	0.574	***	0.718	***	1.72 *
Wine Involvement	<←	Wine Experience	0.720	***	0.696	***	-0.273
Winescape	<←	Wine Experience	0.696	***	0.655	***	-0.501
Wine Tasting Excitement	<←	Wine Experience	1.000	-	1.000	-	-
Wine Storytelling 5	<←	Wine Storytelling	1.000	-	1.000	-	-
Wine Storytelling 4	<←	Wine Storytelling	1.137	***	0.949	0.000	-1.942 *
Wine Storytelling 3	<←	Wine Storytelling	1.092	***	0.977	0.000	-1.149
Wine Storytelling 2	<←	Wine Storytelling	1.314	***	1.050	0.000	-2.273 **
Wine Storytelling 1	<←	Wine Storytelling	1.327	***	1.011	0.000	-3.027 ***
Wine Tasting Excitement 3	<←	Wine Tasting Excitement	1.000	-	1.000	-	-
Wine Tasting Excitement 2	<←	Wine Tasting Excitement	1.124	***	1.011	0.000	-1.349
Wine Tasting Excitement 1	<←	Wine Tasting Excitement	0.807	***	0.718	0.000	-1.261
Wine Involvement 5	<←	Wine Involvement	1.000	-	1.000	-	-
Wine Involvement 4	<←	Wine Involvement	0.991	***	0.953	0.000	-0.423
Wine Involvement 2	<←	Wine Involvement	1.031	***	1.091	0.000	0.589
Wine Involvement 2	<←	Wine Involvement	0.885	***	1.045	0.000	1.652 *
Wine Involvement 1	<←	Wine Involvement	1.240	***	1.086	0.000	-1.326
Winescape 1	<←	Winescape	1.000	-	1.000	-	-
Winescape 2	<←	Winescape	1.058	***	0.668	0.000	-3.895 ***
Winescape 3	<←	Winescape	1.074	***	0.693	0.000	-3.587 ***
Winescape 4	<←	Winescape	0.944	***	0.850	0.000	-0.906
Wine Tasting Excitement 4	<←	Wine Tasting Excitement	1.076	***	1.040	0.000	-0.400

Notes: \*\*\* *p*-value < 0.01; \*\* *p*-value < 0.05; \* *p*-value < 0.10.

Advancing these results, meaningful conclusions were drawn and explained, and confirm that the dimensions focus on experiential wine tourism in a holistic way, directly demonstrated by the nature of their corresponding items. Thereby, the wine experience is shaped by four dimensions (wine storytelling, wine tasting excitement, wine involvement, and winescape), directly correlated between them in a composite way, justifying their inclusion on the same scale. Moreover, the results identified dimensions with stronger relevance and impact; foremost was wine storytelling, followed by wine involvement and wine tasting excitement (both very close), and finally winescape. These statements underline the premise value of holistic and hedonic wine experience and yield valuable insights through the increased participation of the wine tourists in the visits. Asero and Patti [75] regarded wine as a decoy that attracted visitors, considering it the soul of the wine tourism, and that it is an experience derived from the hedonic nature of wine tasting [76]. The wine experience dimensions (wine storytelling, wine tasting excitement, wine involvement, and winescape) fulfil a congruent logic that is undoubtedly justified by the relationship between them as the results suggest. The research results highlight the relevance of these dimensions to provide and guarantee an immersive experience to offer a “best holistic wine experience” to wine tourists and potential visitors. It is noteworthy that the wine tourists appreciate a holistic tourism experience due to interactions with other wine visitors and winery staff [76]. Moreover, these findings align with several studies [3,7,19,22,39,77,78].

## 5. Conclusions

If tourism is to succeed and expand in the future, new paradigms have to be brought into the field [79]. Wine tourism as a form of tourism may make a great contribution to the tourism industry and to the development of new experiential paradigms. Such experiences are often offered in small-sized, rural establishments that are linked to nature and offer social distancing. This study has established a reliable and valid 18-item scale composed of four dimensions to measure the wine experience within a wine tourism context. This was applied in two different environments and with both national and international wine tourists. The research clearly highlights the major finding that the wine experience construct is formed by the four dimensions proposed (wine storytelling, wine tasting excitement, wine involvement, and winescape) that simultaneously and accurately depict the wine-related tourism

experience as being justified by the significant relationships between dimensions. Wine storytelling appears as a most significant dimension due to the fact that visits to the wine cellars begin and end with the wine tour guide/winemaker/wine producer, where there are authentic stories related to wine and wine tourism, which are much appreciated by wine tourists. The tasting of the wine also creates delight through a wine sensorial excitatory stimulus. It is also common for wine tourists to be involved during the visits where wine tourists appreciate the wine scenery in the cellar winescape.

This is the first study demonstrating the combined use of wine experience dimensions in constructing a useful measurement tool. This measurement approach extends this scope because a scale had never been developed to measure the wine experience of wine tourists. Hence, there was the emerging need for development and validation of this new scale—the wine experience scale. The study also reinforces the growing literature on wine experience by establishing representative constructs which address research gaps in terms of the lack of a validated scale to evaluate the wine experience. Therefore, the measurement tool proposed in this study provides a procedure for further examination in future wine tourism research. The wine experience dimensions within the wine tourist experience are an important topic in wine tourism research, and thus these dimensions are considered key wine experience drivers, derived from empirical evidence and a holistic approach, understood as essential to more successful and memorable wine experiences for all kinds of wine tourists. It is recognised that wine tourists expect the “best wine experience”. The consistent relationship between the four underlying dimensions was demonstrated, and it was proven that, as a whole, they form the wine experience construct. The main management implications imply that managers should understand how a wine tour experience can be improved across a range of wine dimensions in a highly immersive wine experience, as is the case and example of wine and cultural heritage [80]. Wine tour guides should take full advantage of their close contact with wine tourists during the visits and should be monitored and more customized, first to reflect on better performance in wine guided tours, and thus achieving a better wine engagement in the future. Hence, exclusive and memorable wine experiences can be promoted as follows: Wine tours, wine tastings, wine events, and wine courses, among others, taking full advantage of the kind of wine tourist profile (e.g., wine lovers, wine interested, and wine curious), according to other studies similar to this one [81].

The results further underline the importance of wine as the main core product in wine tourism experiences. In addition, wine tourists in Madeira and Porto wine cellars retain quite strong, distinctive impressions of each wine cellar-related travel. Notably, there is a growing potential for managers, stakeholders, players, opinion makers/leaders, and marketers to extract benefits from this managerial point of view [82]. In summary, wine potentiates a multi-experience for wine tourists, so managers can get better results by designing wine and wine tourism products and communication strategies around the main themes linked to each dimension of the wine experience explained in this research, all of which appear to contribute to more complete wine experiences.

Regarding the research limitations and suggestions for future research, the period of data collection (during the summer) was short, although it is the time when there is the largest number of wine tourists, which leads to the suggestion for a cross sectional evaluation of wine experience of the wine tourists, for instance every season, and a comparison with other cellars of the new- and old-world wine tourism destinations. In this way, high coverage of the population can be achieved in order to establish the generalisability and consistency of this newly developed and validated scale.

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## SUMMARY OF THE GLOBAL RESULTS

It should be noted that there are two scientific papers (2 and 3) that are not in chronological order, as initially described (information of the scientific papers publication), due to the fact that publication of scientific paper 2 took longer because of a slower process of the editorial team and reviewers of the journal. Thus, scientific paper 2 is derived from the sequence of paper 1, and scientific paper 3 (performed and submitted after scientific paper 2) is connected to scientific paper 2. And finally, scientific paper 4 results from the direct and complete extension of the suggestions future research evidenced in the scientific paper 3.

### *i. Main challenges, trends and opportunities for wine tourism in Portugal*

A new improved definition of the concept of wine tourism has been developed. Hence, it is proposed that “wine tourism consists of an activity directly related to wine, which provides a dynamic and versatile experience that integrates wine culture and heritage, in order to create emotions, sensations, attachment and sensory impressions through the visit, allowing the wine tourist to become an advocate of that particular cellar, brand or wine region” (Ramos, Santos & Almeida, 2008, p. 683).

The main trends and opportunities that characterise the Portuguese wine tourism sector in a contextual analysis are presented and listed, taking into account the supply perspective, governmental support, marketing, promotion and production. Analysis was carried out of the whole wine tourism industry and its challenges, trends and opportunities; a set of practical and operational suggestions, recommendations and contributions for the range of agents were discussed using the APIC (Analyse, Planning, Implementation and Control) model, based on analysis and control, and planning and implementation in wine tourism was also highlighted and provided as follows:

#### *Analysis and control:*

- Evaluate the perceptions of wine tourists according to socio-demographic variables: age, education level, country of origin and job (among others) to develop wine tourist segmentation;
- Analyse the socio-economic impact of the visits in terms of expenditure, number of visits, duration and nationalities;

- Explore and analyse the differences and/or similarities of wine tourists from different segmentation perspectives;
- Continuously analyse wine tourism trends, consumption patterns and wine-related travel options to respond quickly;
- Aim to address information gaps relating to what drives the wine tourist when visiting wine tourism products and destinations;
- Improve the infrastructure and conditions of wine tourism units: wineries, cellars, farms, wine service, availability of information, multilingual reception, wine shops;
- Strengthen tourist information on digital channels and platforms on the provision of wine tourism services.

*Planning and implementation:*

- The key point should be to develop a national strategic plan for the promotion of wine tourism in an added value chain, with practical strategic guidelines;
- Create, develop and retain the wine brands' loyalty in order to forge enduring wine consumer relationships; make the best use of the attributes and critical success factors of wine tourism products and destinations for the future by emphasising authenticity, wine cultural and heritage value, cellar doors, wine cellars and vineyard tours, wine tastings, wine activities and events, among others;
- Wine tour guides should take full advantage of their close contact with wine tourists and visitors to monitor responses so that guided wine tours can be improved for better future engagement;
- From a marketing point of view, the best fit for promotion and positioning strategies for the wine tourism market is needed;
- Aim to attain best practices in benchmarking as well as yield management and to maximise gains in sales via wine offers and distinctive services, given that the wine market is increasingly competitive.
- Promote unique, exclusive and memorable wine experiences;
- Explore the potential for cross selling with other offers in the same territory;
- Plan for diversified promotional action in priority markets;
- Prepare and apply a manual of good practices for wine tourism, supported by a wine tourism technical guide.

Regarding the role and impact of the worldwide wine tourism themes on the supply and demand perspective, a strategic summarised agenda for future actions was proposed based on characteristics, attributes and critical success factors, such as authenticity, cultural and heritage value which is highly appreciated by wine tourists. This depends on



practices applied in the future, in the belief that there is a growing potential for managers, stakeholders, players, opinion makers/leaders and marketers to extract benefits from these critical review contributions.

**ii. *Wine tourist profiling in the Porto wine cellars: segmentation based on wine product involvement***

Regarding the global results and conclusions of the previous studies in the relevant literature review, the main results of this research corroborate and reinforce the need for and high importance of recognition of the different target markets for wine involvement. In this case, the identification was made of different profiles of the wine tourists during their visits to the Porto wine cellars. This was done through the identification and characterisation of different groups of wine tourists according to their wine involvement.

According to the profiling characterisation of wine tourists, a European wine tourists are dominant in all clusters, particularly French wine tourists as evidenced. Therefore, these results may suggest that European citizens have more interest, more knowledge and more investment in wine products, mainly due to the fact that more tourists came from these countries. As we progress to the clusters with the strongest performance in wine product involvement (WPI) indicators, the presence of Europeans also increases significantly.

The main goal of the study was to profile the wine tourists in the Porto wine cellars through segmentation based on wine product involvement. According to the results, three wine tourist clusters were identified in this study according to three clearly different levels of wine involvement: Those with a high wine product involvement (Cluster 2) with a medium wine product involvement (Cluster 1), and with low wine product involvement (Cluster 3).

An exploratory factor analysis (EFA) with a varimax rotation was performed with all the wine product involvement items. A second EFA using the same criteria was made with the behavioural intention (BI) indicators. This analysis allowed an exploration of latent factors defined by the WPI and BI sets of indicators.

The table below presents the EFA results for wine product involvement (WPI). The EFA determined that BI is a single factor construct. Within the two WPI components, an

analysis division into two separate factor suggests the existence of a first factor related to prior knowledge about Porto wine acquired before the visit to the cellars, while the second factor is related to future learning/activities and is more related to a willingness to learn more in the visit.

The correlations between these two factors of the WPI and the BI allow us to explore and to find quite significant differences in relations between the three clusters and these factors (Table 1). The correlation between behavioural intentions and prior acquired knowledge about port wine is weaker in general, but significant and negative with the medium-involvement cluster and non-significant in the high and low-involvement clusters. This gives evidence for these separate analyses. Regarding the relation between behavioural intention and future learning/activities, correlations are stronger but still moderate and it is again in Cluster 1 that the strongest correlation is presented.

Table 1 - Exploratory factor analysis of wine product involvement indicators and correlations with behavioural intentions

	Factor Matrix <sup>a</sup>		Rotated Factor Matrix <sup>b</sup>	
	1	2	1 Prior acquired knowledge	2 Future learning/ activities
% of Variance	65.41%	18.86%	44.49%	39.77%
WPI1.I am knowledgeable about Porto wine	.814	-.377	<b>.857</b>	.266
WPI2.Much of my leisure time is devoted to Porto wine-related activities	.858	-.436	<b>.929</b>	.252
WPI3.I have invested a great deal in my interest in Porto wine	.871	-.433	<b>.936</b>	.262
WPI4.Porto wine represents a central life interest for me	.874	-.380	<b>.903</b>	.304
WPI5.For me the Porto wine tastings are a particularly pleasurable experience	.697	.419	.237	<b>.778</b>
WPI6.I wish to learn more about Porto wine	.775	.485	.250	<b>.879</b>
WPI7.I have a strong interest in Porto wine	.811	.411	.326	<b>.849</b>
WPI8.My interest in Porto wine makes me want to visit the cellars	.754	.515	.214	<b>.888</b>
<b>Correlations between factor and behavioural intentions Group</b>				
<b>Behavioural Intentions</b>	All		<b>.195**</b>	<b>.549**</b>
	C1: Medium Involvement		<b>-.323**</b>	<b>.427**</b>
	C2: High Involvement		.030	<b>.296**</b>
	C3: Low Involvement		-.134	.212
<b>Structure Matrix of all Clusters</b>				
	<b>Function 1</b>		<b>Function 2</b>	
	<b>Prior acquired knowledge</b>		<b>Future learning/ Activities</b>	
WPI3.I have invested a great deal in my interest in Porto wine		<b>.770*</b>		-.324
WPI2.Much of my leisure time is devoted to Porto wine-related activities		<b>.767*</b>		-.437
WPI4.Porto wine represents a central life interest for me		<b>.661*</b>		-.144
WPI1.I am knowledgeable about Porto wine		<b>.425*</b>		-.060
WPI8.My interest in Porto wine makes me want to visit the cellars		.275		<b>.786*</b>
WPI7.I have a strong interest in Porto wine		.325		<b>.768*</b>
WPI6.I wish to learn more about Porto wine		.264		<b>.647*</b>
WPI5.For me the Porto wine tastings are a particularly pleasurable experience		.220		<b>.461*</b>

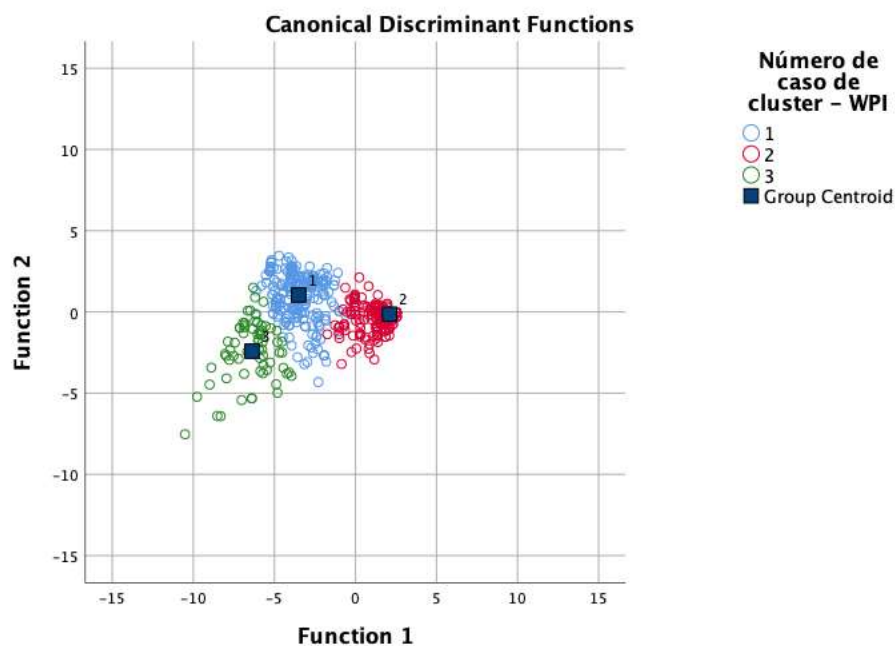
Source: Santos, et al. (2020)

A discriminant function analysis (Table 2) was performed in order to build a predictive model of group membership, showing statistically significant differences across the groups. The results of the discriminant function analysis contribute to an accurate quality performed for validation of the cluster analysis. All WPI variables demonstrate significant differences, with WPI2 and WPI3 presenting the greatest discriminatory power.

Differences between clusters are more prominent on the Function 1 axis: Cluster 2 has the highest values, suggesting a stronger correlation to WPI indicators 5 to 8. As for discriminant function 2, all cluster centroids are close to zero indicating that this function does not discriminate the clusters. Hence, this means that Function 1 is the one that best contributed to discrimination.

Table 2 - Exploratory key data from canonical discriminant function and plot with canonical discriminant functions

	Standardized Canonical Discriminant Function Coefficients	Structure Matrix	Canonical Discriminant Function Coefficients
WPI1.I am knowledgeable about Porto wine	.024	.770*	.021
WPI2.Much of my leisure time is devoted to Porto wine-related activities	.496	.767*	.573
WPI3.I have invested a great deal in my interest in Porto wine	.418	.661*	.489
WPI4.Porto wine represents a central life interest for me	.205	.425*	.218
WPI5.For me the Porto wine tastings are a particularly pleasurable experience	.185	.275	.277
WPI6.I wish to learn more about Porto wine	-.013	.325	-.022
WPI7.I have a strong interest in Porto wine	.147	.264	.221
WPI8.My interest in Porto wine makes me want to visit the cellars	.246	.220	.453
Constant			-13.085



Source: Santos, et al. (2020)

The chi-square test results showed the cluster differences in their behavioural characteristics with Porto wine involvement. Cluster 1 comprises wine tourists with medium wine product involvement, representing 25.6% of the total sample. Cluster 2 includes wine tourists who were highly involved with Porto wine and accounted for 64.7% of the total sample. Cluster 3 shows the remaining respondents who are characterised by low wine product involvement with the lowest percentage (7.3%). These results demonstrated the main different clusters based on wine product involvement attributes of the wine tourists that visited the Porto wine cellars.

The results provide direct implications for managers, tour guides and marketers to a successful targeting of the wine consumers in order to increase sales and positive word of mouth. The research has practical implications related to wine tourists' profile and segmentation to achieve a better competitive positioning of the visits and the wine activities and events.

Another targeting strategy for wine cellars could entail the use of the wine cellar experience during the visits as a tool to increase interest among wine tourists. This is particularly relevant for those at the low- and medium-involvement levels that could become more involved wine tourists. The wine cellar experience is, consequently, a great opportunity to create a stronger bond between the cellar and the wine tourist.

Ultimately it is possible to uphold that involvement with wine can provide a very useful segmentation basis for the wine tourism market, and can also simultaneously be used as the basic input for newly designing their targeting, positioning and mixing wine marketing strategies.

### ***iii. Wine and wine tourism experience: a theoretical and conceptual review***

This paper provided a useful and valuable theoretical and conceptual review of the analysis research on wine and wine tourism experiences evidencing the current state of the art. This research aimed to achieve an accurate and refined state of the art about wine and the wine tourism experience. The most relevant problem of this theoretical and conceptual analysis research review lies in the experience that wine and wine tourism provide wine tourists.

This review of wine tourism research has highlighted the approach that has emerged up to the present and that which is indicated as a light for the near future. Given the importance, role and impact of the experience in wine and wine tourism, we must go further. This implies perceiving how the experience of the wine tourism activity by the wine tourist visitor is analysed and evaluated. The experience resulting from the wine and wine tourism activity in a specific destination or product of wine tourism is one of the most important critical success factors of the experience during the visit from the wine tourist's perspective.

The major result of this research points out scientific study that demonstrates the need to develop a measurement scale of wine experience in the context of wine tourism activity. Therefore, it is considered necessary to develop a concrete and appropriate measurement scale for this purpose in order to address this scientific gap. In fact, the scientific advance in the field of wine tourism becomes more fortified when it is jointly based on the development of new tools understood as anchors of the progress of scientific knowledge.

Therefore, trying to advance in this approach of constructing a new measuring tool for wine experience in wine tourism industry, the following proposal advanced of preliminary selection of the eight following dimensions/attributes of the future scale:

- (1) *Cultural experience*;
- (2) *Exciting experience*;
- (3) *Sensory appeal*;
- (5) *Sensory experience*;
- (6) *Winescape attributes*;
- (7) *Wine storytelling*; and
- (8) *Wine product/activity involvement*.

These dimensions/attributes of the proposed wine tourism experience are supported in the essential and attractive resources and in the resources and factors of support to the wine tourism activity.

***iv. Wine Experience Scale Development: a new strategy to measure holistic behaviour of wine tourists***

Data were collected from a total of 647 international wine tourists in the wine cellars of the two main fortified wine tourism regions visiting areas: Porto and Madeira. Structural equation modelling (SEM-AMOS) was used as the main analysis and validation tool.

The resulting 18-item wine experience scale comprises four major dimensions: (1) Wine storytelling, (2) wine tasting excitement, (3) wine involvement, and (4) winescape. All these showed reliable and validated indicators.

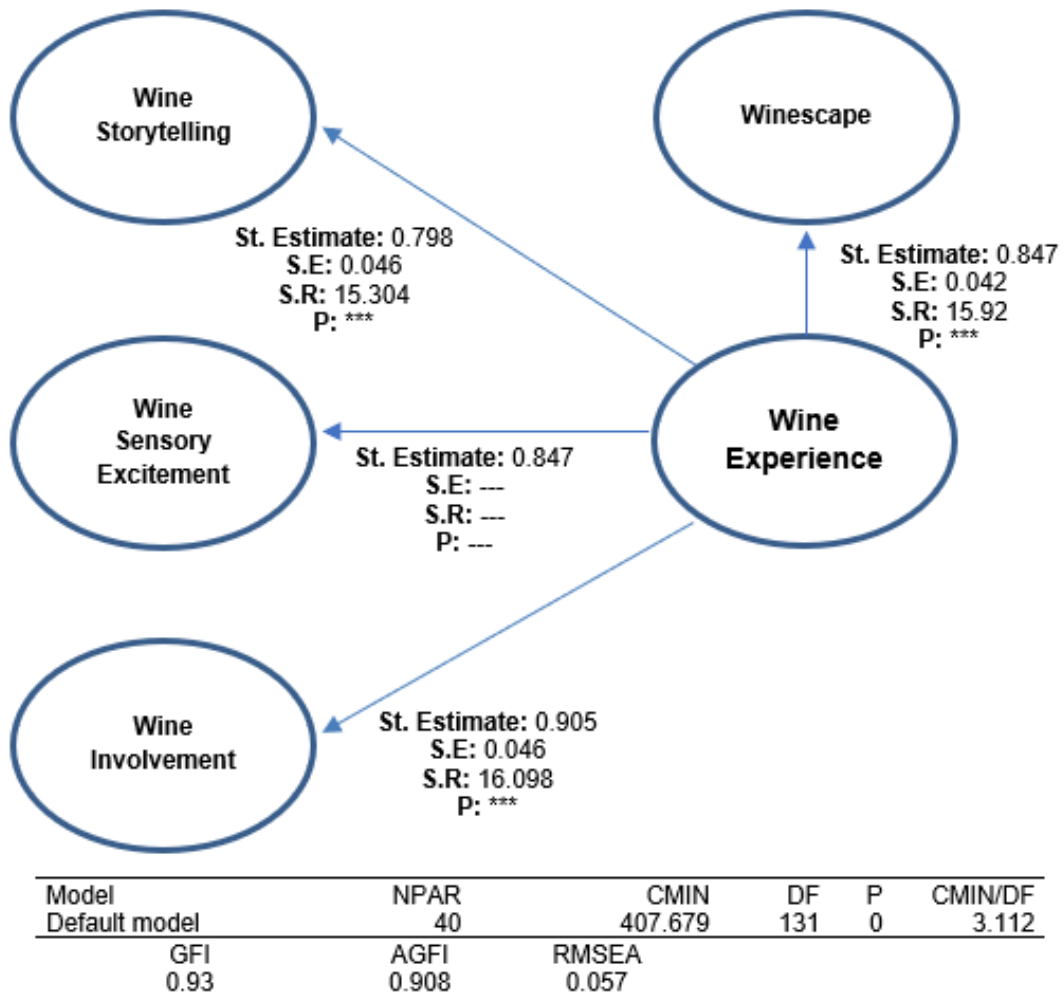
The research clearly highlights the major finding that the wine experience construct is formed by these four validated dimensions (wine storytelling, wine tasting excitement, wine involvement, and winescape) that simultaneously and accurately depict wine-related tourism.

These results confirm that the dimensions focus on experiential wine tourism in a holistic way, directly demonstrated by the nature of their corresponding items. Thereby, the wine experience is shaped by these four dimensions (wine storytelling, wine tasting excitement, wine involvement, and winescape), directly correlated in a composite way, justifying their inclusion on the same scale.

The structural equation model of the final measurement scale (Figure 1) and values of standardised structural coefficients are shown in the figure below. It was proven by the statistical analysis that all dimensions contribute to the definition of the wine experience construct.

Overall, the data supported that wine experience was explained by the four latent factors: wine storytelling, wine involvement, winescape, and wine tasting excitement.

Figure 1 - Structural equation model of final measurement scale



Source: Santos, et al. (2020)

Moreover, the results identified these dimensions with stronger relevance and impact; foremost was wine storytelling, followed by wine involvement and wine tasting excitement (both very close), and finally winescape. These statements underline the premise value of holistic and hedonic wine experience and yield valuable insights through the increased participation of the wine tourists in the visits.

This new scale presents a valid new tool to better measure and evaluate experiences in a wine tourism setting. The consistent relationship between the four underlying dimensions was demonstrated, and it was proven that, as a whole, they form the wine experience construct.

This is the first study demonstrating the combined use of wine experience dimensions in constructing a useful measurement tool. This measurement approach extends this scope because a scale had never been developed to measure the wine experience of wine tourists. The results are relevant in boosting the increasingly recognised awareness of Portugal as a wine tourism destination, as well as bringing experience scales to the body of knowledge. The results further underline the importance of wine as the main core product in wine tourism experiences. In addition, wine tourists in Madeira and Porto wine cellars retain quite strong, distinctive impressions of each wine cellar-related travel.



## DISCUSSION OF THE GLOBAL RESULTS

### *i. Main challenges, trends and opportunities for wine tourism in Portugal*

Wine tourism has undoubtedly been a trend which has been consolidated by the quality and diversity of the offer. It has, therefore, attracted a growing number of wine tourism operators who visit and explore wine tourism destinations serviced by new products and services and wine tourism destinations that are becoming more competitive and attractive. The future perspective is that wine tourism (wine, gastronomy and accommodation) will have a more prominent presence in the tourism sector. Cellars, wineries, wine estates and winemakers have all invested in an integrated and sustained way in the continuous improvement of their services and associated infrastructures to provide wine tourists with an excellent tourist experience.

Given the findings, it was discussed and argued that wine tourism should not be solely based on its attractiveness as an offer, but also on the enhancement of tourist demand through its wine activities. The experience and practice of wine tourism can be provided in a number of ways, from events and festivals, cultural and natural heritage, gastronomy, hospitality and wine tasting to visits to wineries and vineyard tours.

After defining the boundaries and purpose of wine tourism, the next step for managers is to answer the question “How can the wine tourism experience be enhanced?” In relation to this, another question also needs to be addressed: “How has the paradigm of the old wine tourism consumer vs the new wine tourism consumer changed?” and “What kind of wine tourist do we wish to attract?” In a wine tourism context, attracting the right type of wine tourist seems to be more important than just attracting large numbers. These global questions and their answers are related to perspectives on and the future of wine tourism that are addressed in this paper.

Analysis was carried out of the whole wine tourism industry and its challenges, trends and opportunities; a set of practical and operational suggestions, recommendations and contributions for the range of agents were discussed using the APIC (Analyse, Planning, Implementation and Control) model, based on analysis and control, and planning and implementation in wine tourism was also highlighted.

**ii. Wine tourist profiling in the Porto wine cellars: segmentation based on wine product involvement**

The cluster characterisation regarding sex, age and nationality suggested that global WPI means tend to rise as the sample is composed of older individuals. When dividing ages into groups (35 – younger, 36 to 50 – young adult, 51 to 65 – adult, and 66 or older), it can be concluded that Cluster 2 has the highest percentages among the three oldest groups and the lowest percentage among the youngest group. Cluster 3 is in a symmetrical position, while Cluster 1 is in the middle position in all four age groups.

All eight indicators of wine product involvement (WPI) differ significantly among the three clusters supported by a homogeneity test of variances. The follow-up Scheffe post hoc test details those differences by analysing each of the eight indicators and ascertaining whether there are significant differences in relation to the three clusters. All of them present significant differences, as  $p = 0.000$ .

The exploratory factor analysis (EFA) allowed an exploration of latent factors defined by the WPI and BI sets of indicators. The values of the Kaiser-Meyer-Olkin (KMO) and Bartlett's test of sphericity confirmed the sampling adequacy for performing factor analysis. The KMO presented high values for both groups of indicators (0.884 for WPI and 0.789 for BI), which confirmed that EFA is a suitable tool to explore the latent structure of the data. As for Bartlett's test of sphericity, both groups of indicators have a significance below 0.05, once again indicating the relevancy of the EFA.

Regarding discriminant function analysis, globally, the empirical findings of this study confirm that it is a sound approach to distinguish different segments/clusters of different wine involvement levels for Porto wine cellar visitors. The results of this study shed light on the different importance and involvement that the Porto wine product has for wine tourists. Thus, the discussion of results derived from this study leads to a reduction in the gap in understanding of how different wine involvement profiles may help explain the different types and levels of wine involvement. When the wine product involvement factor of "prior acquired knowledge" about Porto wine, although generally correlating with behavioural intentions, is broken down by cluster, the relationships between them are significantly different. This relationship with the medium involvement clusters is negatively correlated. That might suggest that the higher the involvement (which implies higher and previously acquired knowledge) the lower the behavioural intentions (recommending and returning). That suggests that this segment may consider that there

is not much more to learn about Porto wine on a standard visit to a Porto wine cellar. Conversely the experience factor seems to motivate more future behavioural intentions. That implies that the experiential side of the visit, namely the tasting, is critical for enhancing future behaviours.

Market segmentation based on wine product involvement has been recognised as a valuable tool in profiling and segmentation of consumers with similar needs and wants who are very likely to respond and behave in a similar way to marketing promotion and strategies from the wine and wine tourism business. Regarding the conclusions of the previous studies mentioned above in the literature review, the discussion of findings of this research corroborate and reinforce the need for and high importance of recognition of the different wine involvement target markets, in this case, the identification of different profiles of the wine tourists during their visits to the Porto Wine Cellars. This was done through the identification and characterisation of different groups of wine tourists according to their wine involvement.

### ***iii. Wine and wine tourism experience: a theoretical and conceptual review***

From conceptualising the experience construct, it was synthetised that the wine tourism experience can be summarised as a response to a situation or environment where the consumer decodes cues and gains some extra knowledge that can provide an enjoyable, memorable or unique emotional response that can be transmitted to others.

The experiences that emerge from wine tourism activities consist mainly of wine tastings and visits to cellars, wine cellars and wine museums. Wine tourism has provided and driven the creation of authentic, genuine, increasingly differentiated, and personalised experiences. In addition, there is no doubt that wine is the core product of wine tourism, which is in itself an experiential dimension and therefore intimately related to the basis of the wine tourism experience, essentially related to the hedonic perspective through the five senses (taste, smell, touch, sight and hearing).

Research on consumer experiences is still somewhat limited, despite some recent advances in this area and wine tourism is a good example of this limitation. In fact, the wine and wine tourism experience are not a new phenomenon, but research on its measurement requires further development. Recent research discussed gaps in the scope of measurement scales and so more appropriate instruments could be developed

to be applied to wine tourism activity. Furthermore, the scales that exist in the literature were not constructed with the specific purpose of strictly measuring wine experience in a wine tourism context, due to the fact the main measurement scales for wine and wine tourism experience basically focus on the customer experience index; service experience quality; marketing experience scale; economic experience model; wine involvement scale; winescape scale; and sensory tourist experience. As such, this research demonstrated the advance need to develop a measurement scale for wine experience in the context of wine tourism activity.

***iv. Wine Experience Scale Development: a new strategy to measure holistic behaviour of wine tourists***

Within the literature, there was still no universally accepted scale that encapsulates all the major dimensions of the wine experience. The measurement approach extended the scope of the existing literature by developing and validating a scale that measures the wine experience of wine tourists, showcasing the dimensions that form the wine experience construct and taking an holistic approach of wine tourists into account.

The sample profile was balanced in terms of gender, with most visitors from the United Kingdom, France, Portugal, or Germany and the majority being adults between 25 and 54 years of age. The sample had high education levels and a medium-to-high-level job standard and represented the main market in Portugal. Likewise, data collection recruited in Madeira and Porto wine cellars (n = 647) to assess the reliability and validity of the measurement scale was considered robust and consistent. The data analysis was carried out in two stages: an (1) exploratory factor analysis (EFA), followed by a (2) confirmatory factor analysis (CFA), using AMOS.

The EFA identified four dimensions, explaining 58.94% of overall variance, labelled: 1) wine tasting excitement, 2) winescape, 3) wine storytelling, and 4) wine involvement. Both Bartlett's test of sphericity and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy were measured to assess data factorability. The findings presented Cronbach reliability scores ranging from 0.86 to 0.92. In addition, during the factor extraction process, no items were removed. Factor loadings were not revealed to be cross-loaded on different factors, and therefore no item was eliminated.

The confirmatory factor analysis (CFA) was conducted using the generalised least squares method to assess the validity and reliability of the constructs. As a result, 18 indicators were retained for inclusion in the final scale. The adjustment values expressed significantly improved the model scale. As concerns validity and reliability, for the average variance extracted (AVE), the value obtained also exceeds the reference cut-off value ( $\geq 0.50$ ). The overall goodness-of-fit index displayed a suitable level of fit:  $\chi^2 = 406.302$ ;  $df = 129$ ;  $p = 0.000$ ;  $\chi^2/df = 3.15$ ;  $GFI = 0.93$ ;  $AGFI = 0.907$ ;  $RMSEA = 0.058$ , confirming the scale's goodness of fit.

Following analysis of the structural equation model (SEM), variable correlations were tested for invariance among two different groups of wine tourists. A multigroup analysis highlighted how the Porto and Madeira wine cellars differ from each other from the wine tourists' perspective within these two wine tourism destinations, based on the proposed scale.

Overall, the discussion of the findings supported all the hypothesised relationships in both tourism destinations, which reinforces the consistency of the wine experience scale. The two main differences were wine storytelling and winescape. Wine storytelling by the wine tourists was more evident in Madeira (0.718,  $p < 0.05$ ) than in Porto (0.574,  $p < 0.05$ ). It is expected that this discrepancy was related to greater personalisation of the guided wine tours in Madeira wine cellars as compared to Porto wine cellars. The winescape was more evident in Porto (0.696,  $p < 0.05$ ) than in Madeira (0.655,  $p < 0.05$ ), probably due to the cellar landscape, scenery, ancient architecture, and panoramic views around the cellars.

The resulting 18-item wine experience scale comprised four major dimensions: (1) wine storytelling, (2) wine tasting excitement, (3) wine involvement, and (4) winescape. Structural equation modelling (SEM-AMOS) was used as the main analysis and validation tool. All these showed reliable and validated indicators. This new scale proved to be a valid new tool to better measure and evaluate experiences in a wine tourism setting. It has been proven that the wine tourism experience is an amalgam of components and features related to wine, with dimensions such as wine excitement, wine sensory appeal, winescape, and wine involvement, which play a crucial role in the wine tourists' experience.



## FINAL CONCLUSIONS

### *i. Contributions of the research*

This thesis was based on four scientific papers and it constituted a sequential and integrative logic, which arose from evolutionary and consistent research work (Figure 1). Thus, the sequence of four scientific papers was considered essential, because it allowed chaining of the measured constructs and their dimensions. The first three scientific papers were a very important support to the fourth (and last) scientific paper.

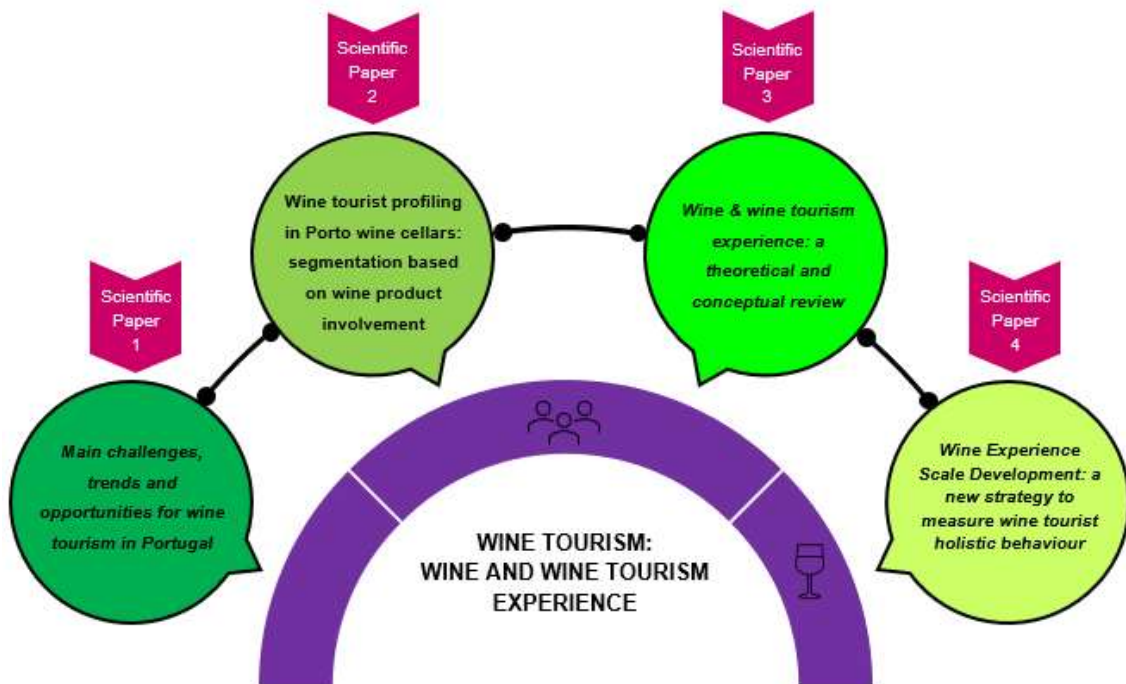
The first scientific paper allowed the research paper to be built, drawing the segmentation of wine tourist profiling based on wine product involvement, through the application of the cluster analysis method, in Porto wine cellars during the visits.

The second scientific paper allowed the general review to be built based on a literature review and content analysis that identified the main challenges, trends and opportunities of wine tourism in Portugal. This provided a set of key points forming the basis of a strategic agenda for future action, as well the development of some benchmarks for the wine tourism industry in Portugal.

The third scientific paper allowed the conceptual paper to be built, which defined a strictly aligned approach on a theoretical and conceptual review about wine and wine tourism experience, based on a review of the dominant literature in this field. In addition, as the main direction for suggesting future studies, this paper advanced the need to develop a measurement scale with a proposal of dimensions, while a useful scientific tool, for wine experience in the wine tourism industry.

The last (fourth) scientific paper allowed the research to be built, based on the development and validation of a new measurement tool, through a scientific scale, to measure the wine experience of wine tourists. This was based on a holistic perspective into the wine tourism settings, focused on wine storytelling, wine tasting excitement, wine involvement and winescape in the Porto and Madeira wine cellars, predicting wine experience. For the first time, this research simultaneously applied the combined use of wine storytelling, wine tasting excitement, wine involvement and winescape, analysing and evaluating the holistic wine experience travel behaviour of wine tourists in their visits to the Porto and Madeira wine cellars.

Figure 1 - Framework summarizing the logical flow of the scientific papers



The non-existence in previous studies of the key constructs that drive the wine experience to visit wine tourism products and destinations demonstrates the major contribution of this thesis.

This empirical study occurred in an area that is still not much explored, i.e., the wine tourism context, and this integrated study mainly focused on Porto and Madeira wine cellars, which makes this study innovative and valuable for the scientific community.

The conclusions of this research allowed more contributions to be added to the body of scientific research in the analysis and evolution of wine tourist experiences directly related to wine and wine tourism experience. This was done by means of the intersection of the constructs to obtain the kind of strong relationship between them owing to their undoubted logic and evolutive relevance.

The multivariate statistical analysis used structural equation modelling (SEM-AMOS) to assess the reliability and validity of the new scale – the wine experience scale. It also tested the magnitude of the relationship between the four dimensions, namely wine



storytelling, wine involvement, winescape, and wine tasting excitement, explaining the wine experience construct.

## ***ii. Methodological contributions of the research***

This research adapted and validated several sets of data collection instruments which are specific to wine tourism, specifically wine involvement, wine and wine tourism experience.

In the data collection procedure, three large and representative samples of the target population were obtained in two studies (first, 918 valid respondents in Porto wine cellars, and then 647 valid respondents in the Porto and Madeira wine cellars). Both data collection instruments integrated the main wine involvement, wine and wine tourism experience constructs, dimensions, attributes, and features, giving a broader view of wine tourism.

This perspective allows for a more holistic view of the hedonic and experiential concept of the wine tourist experience. This also allowed another input for the current research by enhancing the need to study wine tourists' experiential behaviour and their performance in wine tourism visits to the wine cellars from a multidimensional and multisensorial perspectives of the wine tourism experience.

The development of the new measurement scale – the wine experience scale – was validated in two specific contexts, Porto and Madeira wine cellars, which are renowned worldwide. The first approach through descriptive statistical analysis was performed using SPSS Statistics (version 26) to perform a cluster analysis, and second approach for multivariate analysis was performed using the SEM quantitative analysis modelling technique using AMOS (version 26).

Two samples of the two papers (n = 918 in the cluster analysis paper and n = 647 in the scale development paper) enriched the research, with both samples being characterized by their large size and also high coverage of the population.

The data collection instruments, scale development process and research method and the model and data analysis techniques were strong enough in terms of their quantity and quality to broadly sustain the conclusions drawn.

Moreover, the study reinforced the link between the key constructs, dimensions and variables, and it also helped to clarify the combined role and direct impact that wine storytelling, wine tasting excitement, wine involvement and winescape simultaneously have in relation to the construction and influence of the wine involvement and wine experience, both in wine tourism contexts. Finally, by comparing the combined use of the constructs, dimensions and variables that drive wine and wine experience for the first time, the study enables a better analysis and evaluation of the real wine tourist experience in an immersive way, during their visits.

It overcomes a gap to find an empirical scientific measure, encapsulating the main wine experience dimensions in the wine tourism context. Therefore, this is the first study to demonstrate the combined use of wine experience dimensions by constructing a measurement tool, extending the scope into the wine tourism setting.

It allows validation of a new useful measurement tool, the wine experience scale, focused on assessing the wine experience within a wine tourism setting. Consequently, it offers a diagnostic tool to evaluate the wine experience of wine tourists, revealing a wide range of different wine experiences in wine tourism-related travel.

### ***iii. Implications for management***

Wine storytelling, wine tasting excitement, wine involvement, and winescape should be considered key drivers for wine tourism by wine cellar managers.

Guided tours should be enhanced to retain strong, distinctive, and experiential experiences during wine tourism-related travel as well as in wine tourism activity.

More exclusive and memorable wine experiences should be promoted, such as wine tours, wine tastings, wine events and wine courses to increase engagement and loyalty of current and potential wine tourists.

The wine involvement that Porto wine cellars generate in wine tourists during their visits needs to be further developed and enhanced by tourism managers in order to further determine behavioural intentions, based on a stronger wine involvement understood by wine tourists according to their different profiles and levels of involvement with Porto wine.

The managers of the Porto and Madeira wine cellars should analyse the socio-economic impact of the visits in terms of expenditure, number of visits, duration and nationalities, with the aim of extracting more competitive advantages resulting from the permanence of tourists during their visits.

This should be accomplished so as to evaluate whether the fact that visitors are international tourists from countries with higher GVA has an influence on wine tourists staying longer to visit the cellars and also if they visit the cellars in a greater number of days, and also if they buy more wine in the context of their visits.

One of the main concerns of the Porto and Madeira wine cellars association should be raising the awareness of the need for more and better information by wine tourism destination managers and companies to reflect on better performance in guided tours.

To pursue the implications for management, both managers and tour guides from this and other sectors and related industries should develop and promote benchmarking actions of best practices and yield management of the visits. They can thereby promote and ensure maximum satisfaction of wine tourists in visits, and also maximize gains in sales in cellars and wineries, essentially through the wine bottles, wine tours and medium- and long-term customer relationships and loyalty.

Likewise, the technical support, from the point of view of practical and daily management of visits, should be based on established synergies with some key partners such as universities and/or research centres that conduct research based on innovation and progress in this area. For this reason, this should provide a double benefit, as it implies more technical expertise on the scope of the research and also a steady and high increase of applied research to this growing area.

#### ***iv. Research limitations***

The first limitation relates to the two short data collection periods used in the two papers (cluster analysis and scale development) (between July and September), in the season where there is the largest number of wine tourists visiting the Madeira and Porto wine cellars, which did not allow the results to be generalised.

There was no availability to carry out the survey in more wine cellars to add to the total of main cellars, within the time frame constraints.

The second limitation is related to the self-reported questionnaires, due to the environment in which wine tourists filled out the questionnaires, after their visits, in different available areas of the cellars, but this could not be done in another location.

**v. *Suggestions for future research***

The limitation identified in terms of the short period of data collection allows the suggestion of a cross sectional evaluation of wine experience of wine tourists in Madeira and Porto wine cellars, as well as in other cellars, wine hotels, wine estates or also in other wineries and wineries, as well as the great wine capitals of the world (eight in total).

The new scale – the wine experience scale – could also to be replicated in other great wine capitals (in total there are eight) to establish a comparative analysis between all great wine capitals of the world, with independent samples, to analyse and evaluate the differences and similarities of the wine experience among wine tourists in these.

The wine experience scale should be used in order to establish reliability and validity of measurement, model and global adjustment quality for its revalidation, in order to establish the generalizability and consistency of this developed and validated new scale.

The wine tourism experience of first-time and repeat visitors between New-World and Old-World wine countries should be analysed and evaluated.

The differences and/or similarities of the wine tourism experience could be explored and analysed according to the most widely known wine tourist profiles/segments: wine lovers, wine curious, wine interested, wine connoisseurs, wine novices, and hangers-on.

The wine experience similarities and differences should be analysed and evaluated between generations of wine tourists: millennials, generation-X, and baby boomers.

It is suggested to do a follow up of the research to evaluate if the wine experiences based on hard evidence like number of visits, duration, expenditure and nationality, can be also recommended to favour wine experience-related travel regarding Madeira and Porto wine cellars, and/or according to wine experience in wine tourism settings.

Despite the crisis that the worldwide pandemic (COVID-19) has caused in the tourism industry, it can be inferred that this kind of tourism, namely wine tourism, which is increasingly considered as niche tourism, does not suffer from massification and may come to benefit much more and better in the future. This is because wine tourism mostly benefits from a set of unique advantages from location to support infrastructures, which are: rural areas, winescape, large cellar spaces, ventilation associated with wine tasting sales, small groups of wine tourists and individuals in both making visits and doing wine tasting, among others.

Therefore, the wine tourism sector is not one of those most damaged and conditioned by the COVID-19 crisis. In future research, it will be pertinent to develop research of a qualitative nature (i.e., interviews and focus group) with wine tourism stakeholders to guarantee a wine tourism offer which is totally safe and trustworthy, in sustainable and equitable ways, for all types and segments of wine tourists. The attention and attraction of potential visitors can be determined, as well their continuous behavioural intentions (satisfaction, loyalty and WoM) to visit and experience wine tourism products and destinations across the world.

This section of the suggestions for future research ends with a statement for reflection:

***“How can the wine experience in wine tourism be enhanced?”***

The paradigm of the wine experience for old wine tourists vs. wine experience in new wine tourists – ***what kind of wine tourist do we wish to attract to the wine and wine tourism experience?*** – attracting the right type of wine tourist is more important for creating the best memorable wine experience than promotion to attract large numbers.