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## **Tourism Management Perspectives**

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# Drivers of experience co-creation in food-and-wine tourism: An exploratory quantitative analysis<sup>☆</sup>

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#### ARTICLE INFO

Keywords:
Co-creation
Experience
Active participation
Food tourism
Wine tourism

#### ABSTRACT

This paper aims to investigate the underlying drivers of co-creation in food-and-wine tourism experiences and, consequently, to explore how they might influence the level of tourists' active participation in related activities. An online survey was developed and sent to platforms specialised in food-and-wine related tourism experiences. A total of 243 valid responses were obtained. The hypotheses were tested using multivariate statistical analysis. The research results reveal that experience co-creation, the interaction between tourists and local residents, the interaction between tourists and frontline tourism employees, operant resources, and satisfaction influence the level of active participation in food-and-wine tourism experiences. This study contributes to the body of knowledge by proposing and testing a model that explores the drivers of co-creation in food-and-wine settings. The theoretical and managerial implications of these results are discussed.

## 1. Introduction

Tourism experiences involving food and wine heritage are growing (Del Vecchio, Secundo, & Passiante, 2015). As food tourism expands, the range of food-and-wine related activities offered continues to diversify (Stone, Migacz, & Wolf, 2019). Seasonal mushroom picking experiences (Fusté-Forné, 2019a), cheese tasting (Fusté-Forné, 2015), olive oil tasting (López-Guzmán, Morales, Cuadra, & Orgaz-Agüera, 2016), craft brewery experiences (Kraftchick, Byrd, Canziani, & Gladwell, 2014), among other special-interest food-related activities, are just a few examples.

If previously tourism practices were oriented towards destination support facilities and services, currently opportunities of participation in active culinary activities in a wide range of different spaces are more frequent, e.g. locals' home-based culinary experiences (Fusté-Forné, 2019b; Johnson & Neuhofer, 2017; Paulauskaite, Powell, Coca-Stefaniak, & Morrison, 2017). As such, food experiences are extending beyond restaurant settings, to settings such as boathouses, campsites (Sthapit, 2017), and craft or boutique breweries (Murray & Kline, 2015).

Given the experiential dimension of food-related tourism experiences, the active participation of tourists in food-related activities is enhanced in places that co-create experiences by linking local culture and food (Ellis, Park, Kim, & Yeoman, 2018; Mkono, 2011; Stone, Soulard, Migacz, & Wolf, 2017; UNWTO, 2019; Williams, Yuan, & Williams Jr., 2019). The demand for memorable experiences supports the increasing number of food festivals (including wine and craft beer festivals) (Kim, Duncan, & Chung, 2015), small restaurants, and farm selling points (Plummer, Telfer, Hashimoto, & Summers, 2005).

There is evidence of limited research focusing on the demand for contemporary food and wine tourism (Alonso, Bressan, Shea, & Krajsic, 2014; Pikkemaat, Peters, Boksberger, & Secco, 2009). In addition to the limited research on tourism demand, studies defining and testing cocreation based on the active participation in tourism activities (Campos, Mendes, do Valle, and Scott, N., 2018; Campos, Mendes, do Valle, and Scott, 2017; Chathoth, Ungson, Harrington, & Chan, 2016), and, particularly, in food-and-wine tourism experiences, remain scarce (Lugosi, Robinson, Walters, & Donaghy, 2020; Rachão, Breda, Fernandes, & Joukes, 2020a). There is also the argument that the desirable

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 $<sup>^{\</sup>star}$  We thank the Professor Deolinda Rebelo and Dr. Carla Ferreira for their insights regarding statistical analysis.

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 Table 1

 Physical active participation in food-and-beverage tourism experiences.

Authors	Food-related						Beverage-relate	d					
	Preparing food in traditional ways	Tasting local food products	Pancake making	Fruit & vegetable picking	Cooking classes	Beer or wine tasting	Attending a food and wine festival	Shopping at a farmer's market	Visiting breweries, distilleries, and wineries	Hiking, cycling and hot air ballooning over vineyards	Harvesting grapes	Participating in the wine/cognac making process	Riding a grape picker
Williams et al. (2019) Sthapit, Coudounaris, and Björk (2019)** Leri and Theodoridis (2019)** Antón, Camarero, and Garrido (2017) Bruwer and Rueger-Muck (2019) Chen (2018)** Robinson, Getz,	X	X			X	X		X	X				
and Dolnicar (2018) Caber et al. (2018)** Rahman et al. (2018)** Chien et al. (2018)** Thanh and Kirova					Α			Α	A	X	x	x	
(2018) Su, Johnson, and Mahony (2018) Wang et al. (2017)** Da Liang (2017) Stone et al. (2017)			x	X	x x		x						
(2017) Sthapit (2017) Björk and Kauppinen- Räisänen, 2016 Quadri-Felitti and Fiore (2016)** Byrd et al. (2016) Carlsen and Boksberger (2015)**	x	X				X				X			
Organ et al. (2015)		X				X							

Authors	Food-related						Beverage-relate	d					
	Preparing food in traditional ways	Tasting local food products	Pancake making	Fruit & vegetable picking	Cooking classes	Beer or wine tasting	Attending a food and wine festival	Shopping at a farmer's market	Visiting breweries, distilleries, and wineries	Hiking, cycling and hot air ballooning over vineyards	Harvesting grapes	Participating in the wine/cognac making process	Riding a grape picker
Kim et al.													
(2015)** Murray and Kline													
(2015)** Saayman and Van Der Merwe						X						X	
(2015) Björk and Kauppinen- Räisänen	X												
(2014) Robinson and					X		X	X	X				
Getz (2013) Nella and						X							
Christou (2014) Kraftchick et al. (2014)		X				X							
Quadri-Felitti and Fiore (2014)** Gug et al. (2013)**													
Robinson and Getz (2013)	x												
Mason and Paggiaro (2012)		X				X							
Lee and Chang (2012)						X						X	
Quadri-felitti and Fiore (2012)										X	X		X
Mkono (2011)** Famularo et al. (2010)						X							
Bruwer and Alant (2009)						X							
Cohen and Ben- Nun (2009)						X						X	
Everett (2009) Stewart et al. (2008)		X			X	X	X		X				
Sparks (2007) Brown et al. (2007)					X	X X							
Ignatov and Smith (2006)											X		
Kivela and Crotts (2006) Carmichael					Х						X		
(2005)** Quan and Wang (2004)**													

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thors	Food-related						Beverage-related						
	Preparing food in traditional ways	Tasting local food products	Pancake making	Fruit & vegetable picking	Cooking	Beer or wine tasting	Attending a food and wine festival	Shopping at a farmer's market	Visiting breweries, distilleries, and wineries	Hiking, cycling and hot air ballooning over vineyards	Harvesting grapes	Participating in the wine/cognac making process	Riding a grape picker
2004) arters and Alinight (2002)						×							

\*\* Passive consumption. Source: authors' elaboration level of co-creation should be examined according to different consumer groups (Hwang & Seo, 2016). In fact, food-and-wine activities are commonly used in tourism literature to segment tourists (Bruwer & Rueger-Muck, 2019; Gu, Zhang, King, & Huang, 2018; Kim et al., 2015; Kline, Lee, & Knollenberg, 2018; Lee, Bruwer, & Song, 2017; Levitt, Zhang, Dipietro, & Meng, 2019; Robinson & Getz, 2013).

However, an important drawback to segment tourists based on foodand-wine experiences is that they [tourists] are commonly passive prone (e.g. experience the atmosphere, buying wine, eating at the winery) (Madeira, Correia, & Filipe, 2019). As tourism destinations activities are changing towards a more participative behaviour of tourists (Campos et al., 2018), active participation is seen as a critical factor in increasing the value of co-creation (Da Liang, 2017). Furthermore, Rachão, Breda, Fernandes, and Joukes (2020b) claim that food tourism provides interactive creative encounters with the destinations' culture, and, therefore, contributes to a 'coherent collective identity' (Staggs & Brenner, 2019).

Although numerous food-and-wine tourism businesses have created more active-related experiences (Madeira et al., 2019), little is known about how different generational cohorts respond to these experiences (Hwang & Seo, 2016). For this reason, assessing the optimal level of actual co-creation may impact the designing of food-and-wine tourism experiences (Rachão et al., 2020b). In particular, little research has explored the drivers of experience co-creation in food-and-wine tourism experiences and how tourists perceive different levels of active participation in different stages of food-and-wine experiences. In this regard, exploring the drivers of experience co-creation concerning the tourist's willingness to actively participate in food-and-wine-related experiences will help the product conception, communication and the value of cocreation. This study aims to analyse the tourists' level of active participation in food-and-wine tourism activities through the lens of the experience co-creation theory. The paper is structured as follows: the current introduction (Section 1); a brief literature review on the main constructs guiding the study (Section 2); the survey design and the description of the collected data (Section 3); the methods used in the study (Section 4); the results (Section 5); the discussion and main conclusions (Section 6); theoretical and practical implications (Section 7); and, finally, limitations and recommendations for future research (Section 8).

## 2. Theoretical background

The construct of experience has been theorised under diverse perspectives since the early 1990s and by different scholars (Schmitt, 1999; Schulze, 1992). Alongside, research has begun to measure the influence of the experience itself in consumers' buying behaviour (Pine & Gilmore, 1998). Later, the concept of co-creation of experiences was advanced by Prahalad and Ramaswamy (2004), in which consumers played a key role in co-creating their unique experiences facilitated by service providers, and by adding value through the co-creation process (Vargo & Lusch, 2004, 2008). At this stage, the experience construct was seen as a key element in value creation for tourism service providers (Ngamsirijit, 2014). As attested by Quan and Wang (2004), one of the pioneer examples of the experience economy is tourism. The authors also considered that food experiences might be seen as a peak tourism experience (food-related tourists) or a supporting consumer experience (Quan & Wang, 2004). These trends mirror a demand for 'postmodern touristic activity' (Everett, 2009).

Tourism experiences are perceived differently among individuals and cultures (Pikkemaat et al., 2009), and, as argued by Binkhorst and Den Dekker (2009), p. 316), "people vary in their preference for active or passive tourism consumption". Experience co-creation is, thus, a subjective phenomenon deeply connected to internal tourists' perceptual, cognitive processes (Campos et al., 2017; Mathis, Kim, Uysal, Sirgy, & Prebensen, 2016). But they can also involve physical active participation (Campos et al., 2018; Prebensen & Xie, 2017). Research evidence suggests that active/physical participation in tourism experiences

Table 2
Level of physical active participation in co-create food-and-wine tourism activities

Type of experience	Physical active participation (level)
Wine experience (W)	
WINE1 – Brief introduction to wines (theory)	Low
WINE2 – Wine tasting	Moderate
WINE3 – Blend construction (mixing the wine grape varieties)	High
WINE4 – Bottling	High
WINE5 - Place the cork in the bottle (coiling)	High
WINE6 – Encapsulation	High
WINE7 - Label design (drawing of the label)	High
WINE8 - Final photo of the experience	Low
Food experience (FOOD)	
FOOD 1 – Receive an explanation on food products and ingredients used	Low
FOOD 2 – Pick own ingredients	High
FOOD 3 - Cooking class with a chef	High
FOOD 4 – Cooking class with local people	High
FOOD 5 - Eat the meal you cooked yourself	Moderate

Source: authors' elaboration based on relevant literature.

functions as a key factor to engage tourists in destinations (Bertella, 2014; Komppula, 2001; Stamboulis & Skayannis, 2003), in which coproduction is part of the creative experience (Anastasiadou & Vettese, 2019). Therefore, the creative tourism model arises as an innovative approach for tourism product development (Richards, 2014).

Co-creation, co-production, prosumption (Ritzer & Jurgenson, 2010) and collaborative experiences share similar theoretical underpinnings as they are grounded in active participation/intervention in both creation and consumption processes. Despite the conceptual differences between co-creation and co-production debated by some scholars, as Ertimur and Venkatesh (2010) and Chathoth, Ungson, Harrington, & Chan, 2016, these are used interchangeably in the literature. Studies have indicated that when activities are centred on direct interaction through physical engagement with a key attribute (e.g. chocolate tasting), they are considered as more active experiences. The co-creation element enhances memorability and its perceived authenticity (Campos et al., 2017; Saayman & Van Der Merwe, 2015; Sthapit, 2017; Williams et al., 2019), hence promotes an 'out of ordinary' experience (Duerden et al., 2019). Yet, as claimed by Rachão et al. (2020b), studies investigating the co-creation of food-related tourism activities are predominantly from a passive consumption perspective without a focus on active creative inputs (hands-on experiences). The co-creation of experiences can be seen as the opportunity for tourists to add their practical and intellectual contributions in the creative process of activities related to food-andwine.

Table 1 illustrates the studies analysing food-and-wine experiences that involve the physical active participation of tourists. Undoubtedly, the most analysed experience is beverage tasting (e.g. wine, beer, and cognac) – example of passive co-creation –, followed by cooking classes – active co-creation –, in which learning traditional and new food techniques are demanded activities. Seventeen research papers only focus on passive consumption activities, such as gazing at the vineyards, visiting local food markets and/or interacting directly with local residents and tourism employees.

Few studies attempted to assess the level of active tourists' participation in food-and-wine related activities. For example, Da Liang (2017) evaluated the level of active tourists' participation in agritourism tasks, which included pancake making and/or fruits and vegetables picking. A few other studies tried to understand how co-creation participation in activities, such as picking grapes, bottling the wine, or making wine, contributed to a memorable and authentic experience (Cubillas, Mars, Torres, & Sias, 2017; Saayman & Van Der Merwe, 2015).

Based on the few studies that focused on the active participative behaviour of tourists while experiencing food-and-wine activities, two separate experiences were created: a wine experience, with seven cocreation process stages, and a food experience consisting of five stages. Subsequently, the intensity level of physical active participation was determined. According to the physical active participation required to carry out the activity, the existence of three levels was established, varying between low, moderate and high participatory tourist behaviour, as displayed in Table 2.

Whereas the existing measures of tourist involvement scales in cooking-related experiences have been documented in some food studies (e.g. Kim & Eves, 2012; Robinson & Getz, 2013), the operational meaning of physical active/passive participation is less apparent. Because travellers are interested in getting involved in more experimental food-and-wine activities, it becomes essential to profile passive and active participation behaviours.

## 3. Hypotheses and proposed model

## 3.1. Co-creation in food-and-wine tourism experiences

Co-creation is a well-developed construct in marketing and management studies. Several authors attest to the importance of co-creating experiences/services between consumers and service providers (Prahalad & Ramaswamy, 2004; Vargo & Lusch, 2004, 2008). It is the interactive encounter through direct interactions (Grönroos & Voima, 2013) between the customer and the supplier that lays the foundation for cocreation (Payne, Storbacka, & Frow, 2008) and, thus, for a higher value proposition (Busser & Shulga, 2018). In addition, tourism destination activities have also been changing towards the promotion of more participative behaviour (Campos et al., 2018). By generating the creation of meaning or utility, tourists can easily be encouraged to actively participate in co-creation experiences (Ind & Coates, 2013). For that reason, the active participation in these destination activities can be portrayed in the light of the creative tourism theory as tourists seek more engaging and learning experiences rather than passive cultural gazing (Richards, 2014).

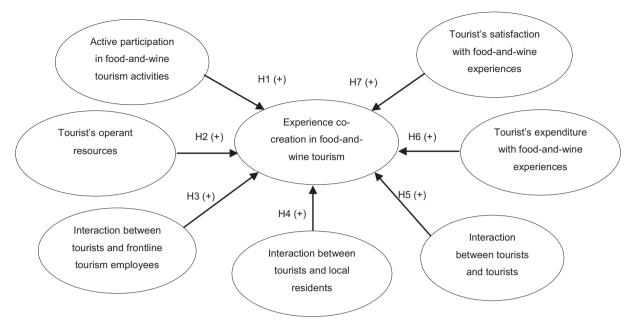
According to Rachão et al. (2020b), limited previous studies recognised the co-creation processes within food-and-wine settings. For example, Johnson and Neuhofer (2017) affirm that tourists and hosts cooking a traditional meal is a key activity in peer-to-peer accommodation, leveraging the perceived authenticity of the tourist experience (Adongo, Badu-Baiden, & Boakye, 2017; Paulauskaite et al., 2017). Similarly, in an agritourism context, the active participation of tourists in rural activities is viewed as a critical factor to increase the value of cocreation (Da Liang, 2017). These arguments resulted in the following hypothesis:

**H1.** The level of active participation is positively related to co-creation in food-and-wine tourism experiences.

## 3.2. Tourists' operant resources

Personal traits of visitors' demand in food-and-wine tourism consumption are significant psychometric variables in measuring tourists' motivations and expectations. These personal traits can be seen from the lens of the self-perceived mastering dimension (Prebensen & Xie, 2017) in which operant resources, such as tourists' perceived knowledge and skills (Antón et al., 2017) and tourists' creative potential (Richards, 2011; Richards & Wilson, 2006; Ross, Saxena, Correia, & Deutz, 2017). By taking an active and creative role in destination experiences (Rachão et al., 2020b), such operant resources are important variables in assessing the co-creation processes outputs. Personal resources, such as time and effort, are also important inputs in co-creation experiences (Prebensen, Vittersø, & Dahl, 2013). Therefore, tourists' operant resources play a fundamental role in the success of food-and-wine experiences. Thus, the following hypothesis was developed:

H2. Tourists' operant resources are positively related to co-creation in



**Fig. 1.** Theoretical model of the study. Source: authors' elaboration

food-and-wine tourism experiences.

#### 3.3. Interaction between tourism employees, local residents and tourists

Human resources, particularly, those who work directly with tourists are an integrating part of the tourism experience, by creating and facilitating the experience itself (Campos et al., 2018; Murdy, Alexander, & Bryce, 2016). Hence, the social interactions between frontline tourism employees and tourists are discussed in the literature. Previous studies recognise how frontline tourism employees may influence the experience's co-creation processes. For instance, Buonincontri, Morvillo, Okumus, and van Niekerk (2017) and Bryce, Murdy, and Alexander (2017) suggest that the capability of tourists to directly interact with tourism professionals highly influences the co-creation experience. Direct staff contact can also contribute to overall satisfaction with the tourism experience (Mathis et al., 2016). This means that tourists may improve their tourism experiences by expressing their needs to service providers, therefore ensuring a more personalised experience. Besides, the ability of hotel employees to be responsive may function as a key moderator of satisfaction, loyalty, and perceived value (Smed, Dressler, & Have, 2016; Tung, Chen, & Schuckert, 2017).

Concerning the interactions between tourists and local residents, many tourists want to get involved in the real-life of the destination by becoming part of the local community and contacting with the everyday life of local residents directly. For that reason, a growing number of theoretical and empirical studies discuss the social interaction between tourists and local residents in developing tourism experiences (Bertella, Cavicchi, & Bentini, 2018; Ngamsirijit, 2014; Paulauskaite et al., 2017; Schuckert, Peters, & Pilz, 2018). The quality and nature of these encounters may affect the tourists' willingness to pay for their experiences (Sharpley, 2014). The engagement of local residents with tourists may impact the long-term success of a destination (Bertella et al., 2018), and within a food-and-wine tourism setting, tourists in general, but particularly food tourists, are keen to engage with local chefs through food-related experiences at a destination (Su et al., 2018).

Levy, Getz, and Hudson (2011) argue that the level of consumer-toconsumer interactions is influenced by four factors, namely, individual characteristics, consumer needs, service employees, and the service environment. Sharing experiences and interacting with other tourists while on holidays (i.e. wine tours, gastronomic events) are part of the tourist's experience. However, the level of interaction between tourists will depend on personal and contextual factors (Rihova, Buhalis, Moital, & Gouthro, 2015). Moreover, the value co-creation is mainly influenced by personal factors, which can be divided into intrinsic goals related to pleasure stemmed from social contacts, and extrinsic goals perceived as obligations, such as the need for information or help (Reichenberger, 2017). For Szmigin, Bengry-Howell, Morey, Griffin, and Riley (2017), the value of co-creation is based on collective interpersonal experiences. Based on these arguments, the following three hypotheses will be tested:

- **H3**. The level of interaction between tourists and frontline tourism employees is positively related to co-creation in food-and-wine tourism experiences.
- **H4.** The level of interaction between tourists and local residents is positively related to co-creation in food-and-wine tourism experiences.
- **H5.** The level of interaction between tourists is positively related to cocreation in food-and-wine tourism experiences.

## 3.4. Level of expenditure

According to Buonincontri et al. (2017), the level of expenditure, satisfaction, and happiness are successful outcomes of experience cocreation for both tourists (demand) and tourism destination providers (supply). In an agritourism context, Da Liang (2017) explains that the level of expenditure is higher when tourists join activities (e.g., fruit picking, farm visits). Furthermore, Grissemann and Stokburger-Sauer (2012) claim that tourists who are satisfied with their co-creation performance are more willing to spend more on holidays. Focusing on a wine tourism setting, Nella and Christou (2014) found that the greater the involvement in wine tourism experiences, the higher the level of spending on on-site purchases. Engaging tourists in a wide range of activities that allow co-creation through self-development, skills acquisition and cultural immersion (i.e. 'authentic food' markets) influences the length-of-stay, and, therefore, the level of expenditure at the destination (Adongo et al., 2017). For that reason, the following hypothesis is proposed:

H6. The level of expenditure is positively related to co-creation in

**Table 3**Initial scale items of tourists' experience co-creation in food-and-wine tourism activities.

activities.		
Constructs	Scale items operationalised in the survey	References
Active participation in food-and-wine tourism activities	During my stay, I directly interact with local producers (wine; gastronomy). During my stay, I participate actively in wine and gastronomy activities. My holiday experience is enriched with my participation in wine and	Campos et al. (2017); Mathis et al. (2016)
Tourist's operant resources	gastronomy activities. I have a keen interest in learning about art/history/science. I frequently visit museums and/or exhibitions. I frequently participate in cultural activities. Enogastronomic experiences are personally appealing to	Antón et al. (2017); Prebensen et al. (2013)
Interaction between tourists and frontline tourism employees	me. I identify myself with enogastronomic experiences. During my stay, I enjoy interacting directly with local tourism professionals (hotel employees; tourism office employees; guides). During my stay, I co-create	Bryce et al. (2017); Mathis et al. (2016)
Interaction between tourists and local residents	(active participation and collaboration) with local tourism professionals which improves my experience. Normally, I establish new acquaintance relations with people (local residents). Normally, I enjoy spontaneously interacting with local residents (on the street, in a bar, in a restaurant).	Bertella et al. (2018)
Interaction between tourists and tourists	Normally, I try to interact with local residents. During my stay, I find it gratifying to interact with other tourists. Interaction with other tourists enhances my tourism	Mathis et al. (2016); Reichenberger (2017); Rihova et al. (2015)
Tourist's expenditure with food-and-wine	experience.  I prefer to spend more time and money during an engaging tourism experience (be an active participant in the activity; not a passive observer).	Buonincontri et al. (2017); Da Liang (2017)
Tourist's satisfaction with food-and-wine	I am likely to buy products sold in a shop. I am more likely to buy a product made by me during the experience. If I have to choose between the product made by me during the experience and the product sold by the shop I would buy "my product". Normally, I feel that my holidays enrich my life. Normally, I feel much better about myself after the holidays. Overall, a co-creative experience (active participation and	Mathis et al. (2016)

Table 3 (continued)

Constructs	Scale items operationalised in the survey	References		
	collaboration with others) adds pleasure and value			
Experience co- creation in food- and-wine tourism	adds pleasure and value during my visit.  I am interested in actively participate in the brief introduction to wines (theory) I am interested in actively participate in the wine tasting I am interested in actively participate in the blending construction (mixing the wine grape varieties) I am interested in actively participate in the bottling I am interested in actively participate in placing the cork in the bottle (coiling) I am interested in actively participate in the encapsulation I am interested in actively participate in the encapsulation I am interested in actively participate in the label design (drawing of the label) I am interested in actively participate in the final photo of the experience	Rachão et al. (2020a)		
	I am interested in actively participate in the explanation of food products and ingredients used I am interested in actively			
	participate in picking my ingredients I am interested in actively participate in the cooking class with a chef			
	I am interested in actively participate in the cooking class with local people I am interested in actively participate in the eating of the meal I cooked			

Source: authors' elaboration

food-and-wine tourism experiences.

## 3.5. Level of satisfaction

There is substantial literature on the construct of satisfaction in tourism and marketing studies. Satisfaction is a sum of different dimensions of service providers' performance (Baker & Crompton, 2000), tourist mood and personality traits (Kocabulut & Albayrak, 2019), and tourists' perceived value of the experience (Wong et al., 2019). By participating in collaborative activities, tourists are experiencing higher levels of satisfaction (Shulga, Busser, & Kim, 2018). When the learning, emotional and social inputs increase in the experiential encounter, the satisfaction experienced by tourists rises (Prebensen & Xie, 2017). Also, Mathis et al. (2016) suggest that the co-creation of experience affects satisfaction with the holiday experience. Consequently, participation in co-creation is expected to increase the satisfaction of the tourist experience. As such, the following hypothesis was formulated:

**H7**. The level of satisfaction is positively related to the motivation to co-create in food-and-wine tourism experiences.

The theoretical model illustrated in Fig. 1 represents the seven research hypotheses.

This theoretical model illustrates that an experience co-creation is determined by a set of seven variables of active participation in foodand-wine activities: tourists' operant resources, the interaction

**Table 4**Overview of respondents' sociodemographic characteristics and travel behaviour.

Variables	N (=243)	%	Variables	N (=243)	%
Gender			Highest level of		
			education		
Female	127	52.3	High school degree	22	9.1
Male	116	47.7	University degree	73	30.0
			Postgraduate/ Master	96	39.5
Age generational cohorts			Doctoral degree	51	21.0
Generation Z	25	10.3	Post-doctoral	1	0.4
Generation Y	93	38.3			
Generation X	82	33.7	Academic/ vocational background		
Baby Boomers	43	17.7	Social Sciences	86	35.4
-			Services and Sales	45	18.5
Region of residence			Arts and Humanities	37	15.2
Europe	194	79.8	Engineering, Manufacturing and Construction	23	9.5
America	29	11.9	Science, Mathematics and Computing	18	7.4
Rest of the world	20	8.2	Education	13	5.3
			Health and Social Protection	13	5.3
Top European countries			Agriculture	8	3.3
Portugal	99	40.7			
Italy	15	6.2	Main occupation		
Spain	14	5.8	Employee	150	61.7
Belgium	10	4.1	Self-employed	31	12.8
Poland	10	4.1	Student	29	11.9
			Entrepreneur	19	7.8
Travel party (multiple choice)			Retired	8	3.3
Travel with friends	93	25.0	Unemployed	6	2.5
Travel with partner	90	24.2			
Travel with friends and family	49	13.2	Food-and-wine travel-related frequency		
Travel alone	40	10.8	Only once	129	53.1
Travel with family with children (up to 12 years old)	38	10.2	Multiple times	36	14.8
Travel with group package travel	33	8.9	Only twice	21	8.6
Travel with family no children	29	7.8	Once a year	19	7.8
			Twice a year Multiple times a year (3 or more times)	9	3.7 3.7

Source: authors' elaboration

between tourists and frontline tourism employees, the interaction between tourists and local residents and between tourists at the destination. The tourists' level of expenditure is subjective to the satisfaction with food-and-wine co-creation experiences at the destination.

## 4. Methodology

## 4.1. Survey design

As this research attempts to assess the level of tourists' intervention in food-related activities, the research process was based on a positivist paradigm and data were gathered through an online survey a similar method conducted by other studies on tourism research (e.g. Lee et al., 2017; Robinson & Getz, 2013; Stone et al., 2017; Williams et al., 2019).

**Table 5**Descriptive statistics regarding tourists' interest to actively participate in the stages of a food and wine experience.

Type of experience	N	Mean	Standard Deviation
Wine experience			
WINE1 - Brief introduction to wines (theory)	243	5.57	1.387
WINE2 – Wine tasting	243	6.25	1.180
WINE3 – Blend construction (mixing the wine grape varieties)	243	5.70	1.334
WINE4 – Bottling	243	5.07	1.455
WINE5 - Place cork in the bottle (coiling)	243	4.92	1.513
WINE6 – Encapsulation	243	4.64	1.587
WINE7 - Label design (drawing of the label)	243	5.32	1.557
WINE8 - Final photo of the experience	243	5.29	1.573
Food experience			
FOOD 1 – Receive an explanation of food products and ingredients used	243	6.23	1.001
FOOD 2 - Pick your own ingredients	243	5.76	1.302
FOOD 3 – Cooking class with a chef	243	5.89	1.363
FOOD 4 - Cooking class with local people	243	6.10	1.279
FOOD 5 – Eat the meal you cooked yourself	243	6.17	1.314

7-point Likert-type scale (1 = not at all interested, 7 = very interested.). Source: authors' elaboration

Screening questions at the beginning of the online survey were introduced to ensure respondents met the criteria for inclusion in the research. Respondents were screened based on four criteria: (i) age (18 years of age or older), (ii) having taken a leisure trip in the previous year, with (iii) at least, one overnight stay, and (iv) the participation in an enogastronomic experience in a tourism destination (i.e., on-site activities related to wine and/or food performed during their stay). If they did not meet the criteria, they had to point out why they never had enogastronomic experiences while on holidays. Participants who met the criteria were asked to proceed to the second section.

The second section comprised seven constructs (experience cocreation, operant resources, the interaction between tourists and front-line tourism employees, the interaction between tourists and local residents, the interaction between tourists, level of expenditure, and satisfaction). Respondents were asked to rate them based on their food-and-wine tourism experiences on a 7-point Likert scale ranging from 1= "strongly disagree" to 7= "strongly agree". The seven constructs were developed by gathering existing scales in the literature and readjusting them to the theme of co-creation in food-and-wine tourism experiences (Table 3).

The third section was designed to assess the respondents' willingness to participate in two hypothetical food and wine experiences, also based on a 7-point Likert scale to rate the different stages, ranging from 1 = "not at all interested" to 7 = "very interested". Likert-type scales can be a helpful tool for operationalising constructs such as attitudes and preferences (Richards & Munsters, 2010), as responses can be quantified (Veal, 2006) based on the positive-negative tendency towards the object being studied (Clark et al., 2007). The 7-point Likert scales were also employed in other studies on co-creation and food-and-wine tourism experiences (Busser & Shulga, 2018; Kim & Eves, 2012; Leri & Theodoridis, 2019; Prebensen, Kim, & Uysal, 2015; Santos-Vijande, López-Sánchez, & Pascual, 2018). Given the exploratory and developmental nature of the research, the 7-point Likert scale is acknowledged as appropriate to extract underlying constructs in the questionnaire (Robinson & Getz, 2013).

The fourth, and last, section collected data to establish the sociodemographic profile (gender, age, country of residence, level of education, main occupation, professional background, and academic/ vocational background). The survey was translated into French, German, Portuguese and Spanish by members of the research team, some of whom are bilingual and native speakers. A pilot of the survey was administered to tourism scholars for further refinement and, subsequently, to 19 tourists of different nationalities to test its length and

**Table 6** Results of the principal component factor analysis of the drivers to food-and-wine experiences co-creation (n = 243).

Factor and item	Mean	SD	Factor Loading	Cronbach Alpha α	Variance explained % (VE)	Eigenvalue (EV)
Factor 1 – Active participation in food-and-wine				0.863	34.923	7.334
1) During my stay, I directly interact with local producers (wine; gastronomy).	5.92	1.323	0.550			
2) During my stay, I participate actively in wine and gastronomy activities.	5.81	1.211	0.756			
<ol><li>My holiday experience is enriched with my participation in wine and gastronomy activities.</li></ol>	6.15	1.129	0.811			
7) Enogastronomic experiences are personally appealing for me.	6.11	1.063	0.833			
8) I identify myself with enogastronomic experiences.	5.88	1.222	0.823			
Factor 2 – Interaction between tourists and local residents				0.842	11.421	2.398
11) Normally, I establish new acquaintance relations with people (local residents).	5.39	1.360	0.689			
<b>12</b> ) Normally, I enjoy spontaneously interacting with local residents (on the street, in a bar, in a restaurant).	5.83	1.220	0.826			
13) Normally, I try to interact with local residents.	5.75	1.236	0.836			
<b>16)</b> I prefer to spend more time and money during an engaging tourism experience (be an active participant in the activity; not a passive observer).	5.79	1.189	0.449			
Factor 3 – Interaction between tourists and frontline tourism employees				0.799	7.951	1.670
9) During my stay, I enjoy interacting directly with local tourism professionals (hotel employees; tourism office employees; tour guides).	5.86	1.193	0.514			
10) During my stay, I co-create (active participation and collaboration) with local tourism professionals, which improves my experience.	5.33	1.443	0.534			
<b>18)</b> I am more likely to buy a product made by me during the experience.	4.72	1.618	0.903			
19) If I have to choose between the product made by me during the experience and the product sold by the shop I would buy "my product".	4.90	1.710	0.892			
Factor 4 – Tourist's operant resources				0.805	7.284	1.530
4) I have a keen interest in learning about art/history/science.	6.12	1.069	0.755			
5) I frequently visit museums and/or exhibitions.	5.88	1.176	0.904			
6) I frequently participate in cultural activities.	5.80	1.099	0.736			
Factor 5 – Satisfaction				0.688	5.658	1.188
20) Normally, I feel that my holidays enrich my life.	6.69	0.687	0.785			
21) Normally, I feel much better about myself after the holidays.	6.43	0.802	0.800			
22) Overall, a co-creative experience (active participation and collaboration with others) adds pleasure and value during my visit.	6.14	1.136	0.555			
Factor 6 – Interaction between tourists and tourists				0.908	5.224	1.097
<b>14)</b> During my stay, I find it gratifying to interact with other tourists.	5.31	1.345	0.852			
<b>15)</b> Interaction with other tourists enhances my tourism experience.	5.28	1.359	0.899			

Extraction method: PCA. Rotation method: variance: 72.461%. 7-point Likert-type scale (1 = strongly disagree, 7 = strongly agree.).

Source: authors' elaboration

**Table 7**Spearman correlation (Rho) between factors with the level of interest to actively participate in different stages of two experiences.

	WINE1	WINE2	WINE3	WINE4	WINE5	WINE6	WINE7	WINE8	FOOD1	FOOD2	FOOD3	FOOD4	FOOD5
F1 Active participation in food-and-wine tourism	0.271**	0.330**	0.334**	0.246**	0.257**	0.241**	0.290**	0.360**	0.413**	0.285**	0.348**	0.391**	0.315**
F2 Interaction between tourists and local residents	0.289**	0.176**	0.279**	0.266**	0.266**	0.273**	0.252**	0.310**	0.375**	0.294**	0.314**	0.396**	0.314**
F3 Interaction between tourists and frontline tourism employees	0.120	0.049	0.189**	0.300**	0.321**	0.369**	0.314**	0.350**	0.256**	0.468**	0.389**	0.464**	0.399**
F4 Operant resources	0.199**	0.084	0.168**	0.192**	0.178**	0.172**	0.196**	0.192**	0.270**	0.218**	0.180**	0.270**	0.235**
F5 Satisfaction	0.184**	0.188**	0.257**	0.285**	0.300**	0.293**	0.212**	0.306**	0.322**	0.411**	0.332**	0.408**	0.378**
F6 Interaction between tourists and tourists	0.205**	0.108	0.178**	0.187**	0.159*	0.227**	0.112	0.308**	0.190**	0.178**	0.254**	0.238**	0.231**

<sup>\*\*</sup> Correlation is significant at the 0.01 level (2-tailed).

Source: authors' elaboration

readability. Some adjustments were made to the wording of some variables, such as adding information to explain some the constructs.

## 4.2. Data collection and analysis

Due to limited financial resources and time (Neuman, 2014), the contact of respondents located in different international contexts (Altinay & Paraskevas, 2008) and across a broad population, an online survey was employed. A respondent-completion questionnaire survey was designed and employed as, in this case, the participation patterns in

tourism activities had to be assessed (Veal, 2006).

The online survey was available for approximately ten months, from November 6th, 2018, to September 30th, 2019. It was disseminated through email, Facebook groups (e.g. FoodTrekkers: Eat Well, Travel Better) and Instagram groups for food and wine travellers (e.g. Eat Meat Wine Repeat; Winaesthetic – Art & Wine). In addition, the survey was promoted through a variety of organisations (International Wine Tourism Association, World Food Travel Association, Ontario Culinary Tourism Association, and Creative Cities of Gastronomy), Internet sites and mailing lists to reach food and wine travellers (with no incentive

<sup>\*</sup> Correlation is significant at the 0.05 level (2-tailed).

being offered). The sampling frame was respondents who participated in destinations' on-site food and wine activities during their holidays.

In total, 970 responses were received; however, only 500 were validated and retained for analysis. From these, 243 respondents reported that they had food-and-wine experiences while on holidays. Data screening to prepare the data for analysis was conducted including some procedures to make results more interpretable, by controlling missing data and by coding open-ended questions. The data have been processed and analysed with the IBM Statistical Package for the Social Sciences (SPSS) 25.0.

Sociodemographic characteristics and travel behaviour were analysed using univariate descriptive statistics. The 22 items of the drivers to co-create in food-and-wine activities were subjected to principal component factor analysis (PCA), as demonstrated in Table 6. The Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy (KMO = 0.828) exceeding the recommended value of 0.6 (Pallant, 2010) and 0.7 (Field, 2009) and Bartlett's test of sphericity ( $\chi$ 2, 3061, 529, df = 231, p < 0.000) confirmed that factor analysis was appropriate on the initial 22 items. In order to test the proposed hypotheses, between the factors extracted from the PCA and the two experiences (wine and food separately), Spearman's correlations were employed to test the relations between them. Additionally, the impact of gender and age on the level of interest in active participation in food-and-wine experiences were tested. Significative differences were determined at a confidence level of 95%.

#### 5. Results

Sociodemographic and travel behaviour information of the respondents is summarised in Table 4. Research results reveal that respondents' gender was closely distributed: female (52.3%) and male (47.7%) and respondents were mainly from Generation Y (37.7%) and

Table 8 Hypotheses testing results.

Hypothesis			Rho	Supported
H1 Active participation in food-and-wine tourism	$\rightarrow$	Experience co- creation in food- and-wine tourism	*	Yes
H2 Operant resources	$\rightarrow$	Wine tasting (WINE2)	0.084	Partially
H3 Interaction between	$\rightarrow$	Brief introduction to wines (WINE1)	0.120	Partially
tourists and frontline tourism employees		Wine tasting (WINE2)	0.049	
H4 Interaction between tourists and local residents	$\rightarrow$	Experience co- creation in food- and-wine tourism	*	Yes
H5 Interaction between	$\rightarrow$	Wine tasting (WINE2)	0.108	Partially
tourists and tourists	$\rightarrow$	Drawing the label design (WINE7)	0.112	
H6 Satisfaction	$\rightarrow$	Experience co- creation in food- and-wine tourism	*	Yes
H7 As displayed in Table 6, the "level of expenditure" was	$\rightarrow$	Experience co- creation in food- and-wine tourism	*	Yes
reduced and divided by the PCA and				
repositioned into Factor 3 – Interactions between				
tourists and frontline tourism employees and				
Factor 2 – Interaction				
between tourists and local residents.				

 $<sup>^{\</sup>ast}$  All items were positively correlated at the 0.01 and at the 0.05 levels. Source: authors' elaboration

Generation X (34.1%). Respondents were categorised in four generational age cohorts according to previous research (Bruwer & Rueger-Muck, 2019; Stone, Migacz, Garibaldi, & Wolf, 2020), namely 18–25 years of age (Generation Z), 26–39 years (Generation Y), 40–55 years (Generation X) and 56 years and older (Baby Boomers). The generational categorisation is based on the premise that age cohorts share experience under common socioeconomic influences and Generation Y and Generation X display more interest in food and drink tourism activities than other generations (Hwang & Kim, 2020; Stone et al., 2020).

Research results revealed that the majority of the respondents were from Europe (79.8%), mainly from Portugal (40.7%), Italy (6.2%) and Spain (5.8%). More than 90% of respondents had an undergraduate or postgraduate university degree, mainly in social sciences (35.4%) and in services and sales (18.5%). The majority was employed (61.7%). Approximately 25% of respondents travelled with their friends, and 24.2% travelled with their partner. The majority of respondents reported that they performed on-site activities related to food-and-wine travelled only once (53.1%). Table 5 displays the tourists' interest to actively participate in food and wine activities in ranked order according to the stage of the experience. If the highest-ranking items, i.e. those ranked more than 5.5, are considered, it is apparent that for the wine experience three activities dominate: the tasting, the blending of the wine grape varieties and a brief introduction to wines (theory). Concerning the food experience, all the stages encompassing the experience gathered a moderate level of interest (all items were above 5.8 on a 7point Likert-type scale).

Both activities display different levels of physical active participation. This is because they were created based on existing experiences offered in the hospitality industry, with some minor adjustments. For the food experience, "Cooking class with a chef" and "Cooking class with local people" were added. For the wine experience, short explanations of the different technical stages were added to provide additional information to respondents.

Stated preferences (SP) data have been used in many fields and later extended to the travel and tourism industry (Albaladejo-Pina & Díaz-Delfa, 2009). Developing and validating questions based on SP can imply hypothetical bias as respondents can overstate their intended behaviour (Whitehead & Wicker, 2018). On the other hand, the main advantage of employing SP is that it can predict tourists' choice patterns and improve knowledge on actual behaviour in activities where data are scarce (Alexandros & Shabbar, 2005; Whitehead, Weddell, & Groothuis, 2016)

One of the items, "I am likely to buy products sold in a shop", displayed low loadings (less than 0.5) and, consequently, was removed from the final model to improve its robustness. PCA was processed to ensure uni-dimensionality and internal consistency of the constructs, as the items of each construct were extracted from the literature but were modified to suit the context of the study. As the purpose of these analyses was to explore the drivers of co-creation underlying the set of food-and-wine items, a PCA with Varimax rotation was performed. PCA revealed a six-component solution with eigenvalues exceeding 1, explaining 34.9%, 11.4%, 7.95%, 7.28%, 5.65% and 5.22% of the variance, respectively. These components were found to be reliable, as their Cronbach's alpha ( $\alpha$ ) values were above 0.7 (Pallant, 2010), except for satisfaction (with  $\alpha = 0.688$ ). Nevertheless, low alpha values tend to be related to the small number of items and not particularly to poor internal consistency (Martire, Stephens, Druley, & Wojno, 2002).

The factorial analysis excluded the component of the "level of expenditure" previously tested by the research of Buonincontri et al. (2017). The items composing the excluded component were grouped in two different components, as illustrated in Table 6. This may be because the "level of expenditure" was employed in a general context, whereas this study was specially developed for a food-and-wine co-creation context. It can also mirror the relevance of the activities developed between tourists and the local residents reflecting a higher level of engagement with the experiences (Bertella et al., 2018; Richards, 2014),

and a higher cultural immersion experiencing a sense of "authenticity" (Adongo et al., 2017). As tourists carry out experiences in which a higher level of active participation is required (i.e. performing a cooking workshop), the need to interact with and rely on tourism professionals is essential to raise the experience to its full potential (Bryce et al., 2017; Buonincontri et al., 2017).

Study results from the Spearman's correlation analysis showed that most of the factors are significantly correlated with all stages of the wine and food experiences. The results are reported in Table 7. Therefore, the "experience co-creation in tourism" is positively related to the level of active participation in food-and-wine tourism experiences, being H1 supported. Factor 4 defined as "operant resources" and the "wine tasting" (WINE2) stage revealed no correlation (Rho = 0.084; p = 0.194). Therefore, H2 was partially supported. Regarding Factor 3 – "Interaction between tourists and frontline tourism employees" and the stage "brief introduction to wines" (WINE1) (Rho = 0.120; p = 0.061) and the "wine tasting" (WINE2) stage (Rho = 0.049; p = 0.451), results indicate that there is no statistically significant correlation. Therefore, H3 was partially supported.

Spearman's correlation analysis showed that "interaction between tourists and local residents" and the "level interest of active participation in food-and-wine tourism experiences" are correlated, and, therefore, H4 was supported. However, no statistically significant correlation was found between Factor 6 – "Interaction between tourists and tourists" and the "wine tasting" stage (WINE2) and drawing the "label design" (WINE7) (Rho = 0.108; p = 0.094 and Rho = 0.112; p = 0.080). For that reason, H5 was partially supported. Spearman's correlation analysis also indicated that "satisfaction" was correlated with the level of interest of active participation in food-and-wine tourism experiences, being H6 supported.

Concerning the "level of expenditure", this factor was reduced and divided by the PCA. As displayed in Table 6, the "level of expenditure" was repositioned into Factor 3 – "Interactions between tourists and frontline tourism employees" with high factor loadings (>0.8), as the activities were co-created with tourism staff during the experience. It means that there is a relation between the latent construct of the level of money spent on the outcome of the co-creative experience and the direct interaction between tourists and tourism employees. The item "I prefer to spend more time and money during an engaging tourism experience (be an active participant in the activity; not a passive observer)" was also relocated into Factor 2 – "Interaction between tourists and local residents". For this reason, H7 was supported.

In order to explore any correlation between the level of interest in active participation in food-and-wine experiences and gender, the Mann–Whitney U test was employed. Results revealed statistically significant differences between gender and the stage of "pick your own ingredients" (U=5883.000, p=0.005), "cooking class with a chef" (U=6009.500, p=0.009) and "cooking class with local people" (U=5945.000, p=0.005). The stage "pick own ingredients" tends to have a lower interest to male tourists, but, conversely, male tourists tend to have a higher interest in cooking classes with a chef rather than female tourists. Female tourists tend to have a higher interest in a cooking class with local residents.

Based on the Kruskal-Wallis test, results revealed that there were statistically significant differences between the generational cohorts and the stage of "cooking class with local people" ( $X^2 = 8.600$ , p = 0.035). There appears to be evidence that Baby Boomers seem to be less interested in those stages of the food experience that the other generational cohorts (mean of 5.67 against means between 6.12 – Generation Z; 6.11 – Generation Y and 6.32 – Generation X).

## 6. Discussion and conclusions

This study indicates that the construct of co-creation based on tourists' active participation in the creation process, is correlated with food-and-wine experiences. Tourists revealed their interest in actively participating in food-and-wine activities, as they considered the activities personally relevant and related to themselves (Campos et al., 2018; Da Liang, 2017; Ind & Coates, 2013; Prebensen et al., 2013).

In addition, tourists showed more interest to partake in wine activities that implied a less physical active participation and demanded less technical skills, being consistent with past research on tourists' growing willingness to actively participate in less technical experiences (Rachão et al., 2020b). This study also stresses that, despite the higher physical active participation, particularly in technical wine processing, bottling and post-bottling activities they may be seen as less creative than an exercise of blending different grape varieties.

Results indicate that tourist's operant resources, such as knowledge and skills acquisition, are not the main driver underlying their interest to actively participate in the wine experience, particularly, in the wine tasting stage. The influence of tourist's operant resources is, though, evident on the level of interest in participating in all the other stages of the wine and food experiences. This leads to the conjecture that the wine tasting stage (although it can be an experience on its own) implies a lower level of participation and creativity in the co-creation process, contrasting with the other stages of the wine experience.

Results underline the fact that the interaction between tourists and frontline tourism employees was not correlated to the theoretical introduction to wines and the wine tasting stages. That is to say that tourists perceived that the frontline tourism staff may not influence their level of interest in participating in those stages, but, conversely, the tourism staff may be seen as facilitators in the other stages of the experiences as they require more skills and support. These findings reflect what is argued by Campos et al. (2018) and Murdy et al. (2016) in their studies regarding the facilitating role of the tourism employees in the cocreation process. In addition, gaining wine knowledge (introduction to wines) among young consumers is regarded as a less important motivator in the wine experience (Stergiou, 2018).

This investigation further indicates that the interaction between tourists and local residents was interrelated with the tourists' level of interest in actively participating in food-and-wine tourism experiences. This is to say that tourists are likely to participate in food-and-wine activities when they involve members of the local community at a destination. This confirms the results of prior research that suggested that food tourists are keen to engage with local chefs and local food producers to embed with the destination (Su et al., 2018).

The findings of this study show that interaction among tourists while participating in a wine experience at a destination is not a driver underlying their interest to actively partake in the wine tasting and the design of the bottle label stages (Table 8). Past research claimed that the experience exchange with other tourists at a destination did not have a strong influence in the process of experience co-creation in tourism (Buonincontri et al., 2017). Contrary to what is advocated by Joy, Belk, Charters, Wang, and Peña (2018) that wine tourism experiences (at a winery setting) enable interactions between tourists, the current study suggests that particularly wine-related activities (e.g. wine tasting; drawing the label of the bottle) do not have that influence. Furthermore, during a wine tasting, due to its individual consumption nature, and lower physical active participation (you only have to taste), the interaction is mainly developed between the tourist and the interlocutor who may be a winemaker or wine producer. The same holds for the design of the bottle label. This activity, however, has extra value because of the more intensive the co-creative role played by tourists during this stage of the wine experience. In this situation, it becomes clear that self-creative activity requires more inner-self throughout the experience, as supported by Tan, Kung, and Luh (2013).

The current study also showed that as the level of satisfaction rises, the more active becomes the co-creative participation in a tourism experience. Furthermore, tourists even perceived that having an active role in destination activities (through co-creation of experiences) had a positive influence on their total holiday satisfaction. These results emphasise the findings of previous studies (Buonincontri et al., 2017;

Shulga et al., 2018). In fact, the supply of food-and-wine activities represent one of the most attractive aspects in destination branding (Lai, Khoo-Lattimore, & Wang, 2018, 2019).

Research results demonstrated that male tourists tend to have a higher interest in cooking classes with an (expert) chef rather than female tourists. The same applied to the "pick own ingredients" stage. This outcome is in line with extensive research, in which socioeconomic variables, such as age and gender, influence wine tourists' behaviour (Hall & Mitchell, 2008; Mitchell, Hall, & McIntosh, 2000). This can be explained by the drive of social interaction in encounters with local residents, reflected in voluntary tourism, predominantly dominated by women (Kipp, Hawkins, & Gray, 2020). In addition, female tourists are reportedly more engaged and supporters of novel cultural practices than male tourists (Pung, Yung, Khoo-Lattimore, & Del Chiappa, 2020). In particular, the present study suggests that female tourists have a higher interest in participating actively (co-creating) in specific food-related activities with local residents.

The current research further suggests statistically significant differences based on generational cohorts across the food experience stages. Baby Boomers seem to be less interested in partaking in cooking classes with local people. These results may reflect the fact that cooking is an ordinary activity. Conversely, Generation Z, Y and X seem to be more willing to participate in these experiences actively. These results underscore the findings of Gu, and Huang, S. (Sam). (2019) and Stone et al. (2020) in the sense that younger food tourists are more likely to get involved and immersed in the experiences rather than older tourists, who usually encounter more constraints. This is another illustration of the fact that food-and-wine travel markets are not demographically or behaviourally homogeneous as acknowledged by recent studies (Robinson et al., 2018; Lai, Wang, & Khoo-Lattimore, 2020).

## 7. Theoretical and practical implications

Although considerable research on food and wine tourism has been conducted, research concerning tourists' active participation, especially within food-and-wine scenarios remains scarce. Besides, when exploring a small number of activities in wine-related settings, authors fail to provide empirical research on the experience co-creation of tourists that takes place in this type of settings. The insights generated in the current study through the exploration of latent constructs in the co-creation of food-and-wine experiences provided a roadmap to enhance knowledge about co-creative food-and-wine activities.

This study is the first to attempt to differentiate the level of physical active participation between two different experiences: one dedicated to a winemaking process experience and another entirely related to a cooking class experience. Furthermore, this study provides empirical evidence about the underlying drivers of co-creation in food-and-wine tourism. It demonstrated that tourists' prior knowledge and creative skills did not influence the level of interest in participating in wine tastings. Tourists may feel less comfortable in participating in the more technical stages of the wine experience, in which prior knowledge and skills may be seen as crucial to conclude the experience successfully. Tourists are continuously seeking information about experiences, showing a greater willingness to participate in the learning process of the creative process of food-and-wine. In this way, the more technical phases may be redesigned using new technologies, reducing their technical level and improve their attractiveness.

The interaction between tourists and frontline tourism employees during the wine experiential process showed significant outcomes. In wine stages implying a lower level of physical active participation, such as the introduction to wines and wine tasting, interaction with tourism staff did not influence tourists' active participation. On the other hand, interaction with the local community may be viewed as a driver to cocreate food-and-wine experiences. Furthermore, social interactivity with other tourists while performing a wine tasting or design the label of a bottle was not considered as an underlying driver to co-create.

Providing basic wine tastings may no longer be enough to fulfil the current market demand, as tourists can interpret it as a globally standardised experience (what used to be "local" experiences in the past are now more "generic"). A further example includes the organisation of local food-and-wine festivals and/or markets involving local businesses and residents promoting food-and-wine heritage and traditions. These local events should also advocate the information about local farmers' products and the terroir. Regarding social interactivity with other tourists, mainstream and big scale tasting rooms should be downsized and probably be more restricted and exclusive.

Generational cohorts and gender were found to be influencers of the level of interest to physically active participation (co-create) in specific food-related activities. Baby Boomers and male tourists were less keen to join cooking classes with local people, in contrast to Generations X, Y, Z and female tourists. The democratisation of travel and the search for more authentic and immersive experiences with the local culture and traditions represent a relevant driver to the participation in co-creation of food-and-wine experiences. Nevertheless, questions may be raised when discussing who the 'locals' are, considering the current globalisation and mobility of people.

It is crucial to understand what features of food and wine production processes provide compelling tourism experiences to co-create. Only then can wine tourism professionals create the best service packages for each of their client segments and market the benefits. This approach will not only favour the demand side, but most certainly also the supply side, more specifically wine hotels, wine bars, wineries, food markets, and agritourism units.

#### 8. Limitations and future research

This study displays several limitations that future research should address. The study focused on assessing the level of interest to actively participate in two hypothetical experiences, which means that tourists were requested to answer based on their stated preferences. Despite the difficulties in gathering tourists to take part in experimental research (food-and-wine related) while on their holidays, relevant data to improve the food-and-wine tourism marketing research could be obtained from experimental methods. This include, for example, to explore the tourists' revealed preferences on variables such as creativity (tourists' creative outputs), willingness-to-pay for specific experiences and social interaction with local residents.

Another research limitation is related to the number of stages included in the two experiences. In the current study, the food experience did not include technical variants/sub-activities/stages. Readjusting the food experience towards a more complex and technical lot of activities could be appropriate to assess bigger differences among the stages of the food and wine experience. Exploring deeper the influence of gender in experiencing specific/narrow food-related activities would help food tour operators and destination marketers to organise the supply side to attract its consumers more effectively.

For these reasons, further research should be implemented to explore how tourists perceive the physical active participation in food-and-wine tourism experiences on location, in complex real-life situations. Given the tourist demand for more participatory experiences as well as the tourist market's need for self-development and transformational experiences, there is scope for more research of these factors within foodand-wine settings. The increasingly active role (physical participation) of tourists in food-and-wine activities at destinations reveals the need to gain greater knowledge and learning about the local culture through local food. However, the dimension of active participation from a creative point of view remains unexplored. Particularly, future research might scrutinise the tourists' creative outputs and how these can influence a meaningful place/destination experience, as well as how they can assist in the management and marketing of the destination's tangible and intangible cultural resources. More research on creative options, which implies more participative behaviour, might be more appealing over cultural tourism standardised experiences.

#### **Declaration of Competing Interest**

The authors declare no conflict of interest.

#### Acknowledgements

This research was supported by the project NORTE-01-0145-FEDER-000038 (INNOVINE & WINE – Vineyard and Wine Innovation Platform) and by European and Structural and Investment Funds in the FEDER component, through the Operational Competitiveness and Internationalization Programme (COMPETE 2020) [Project No 006971 (UIC/SOC/04011)]; and national funds, through the FCT – Portuguese Foundation for Science and Technology under the UID/SOC/04011/2013.

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