

Why Wine Tourists Visit Cellar Doors: Segmenting Motivation and Destination Image

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ABSTRACT

This study examines the relationship between the motivation of wine tourists to visit cellar doors and destination image perception. A survey of tourists resulted in 676 useable questionnaires. Using a novel segmentation method, self-organizing maps (SOM) and bagged clustering (BC), the study identified five distinct motivation clusters. These clusters were different on only gender and previous visit to the wine region. Three clusters of destination image were identified using the same segmentation method. Significant relationships were found between the motivation and destination image clusters. Implications for destination marketing and managing the tourist experience at the winery cellar door are discussed.

Keywords: Wine tourists, segmentation, self-organizing maps, bagged clustering, cellar door, Barossa Valley

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1. INTRODUCTION

The wine tourist is someone who feels a need to ‘connect’ with the origin of the product through visitation of the location (wine region) where wine is produced. Wine tourism research has brought some salient factors and differences to light based on socio-demographics (Charters & Ali-Knight, 2002; Getz & Brown, 2006), destination analysis (Bruwer, Gross & Lee, 2016), and travel motivation (Getz & Brown, 2006). While many segmentation studies exist of different types of tourists using different methodologies, existing research segmenting the wine tourism experience remains rather scant.

The use of motivation as a basis for segmenting tourist markets has however, provided insight into why consumers desire to visit wine destinations and regions (Alebaki & Iakovidou, 2011). Moreover, understanding wine tourists’ motives and preferences for activities represents a promising direction in linking visitors’ needs to the attributes of the destination (Pearce & Lee, 2005). A popular view is that tourist motivation centres around the concept of ‘push’ and ‘pull’ factors which impact on destination choice (Prayag & Ryan, 2011). This suggests that tourists are pushed by their own motivational strengths and ‘pulled’ by a destination’s attractions (Chen & Chen, 2015). The push-pull motivation framework has been used extensively for studying why tourists travel (Chen & Chen, 2015; Li, Meng, Uysal, & Mihalik 2013; Prayag & Hosany, 2014), but few have applied the framework to understand tourists at cellar doors (Sparks, 2007; Yuan, Cai, Morrison, & Linton, 2005), and their perceptions of destination image.

The importance and influence of destination pull attributes on destination choice may differ considerably for different market segments (Albayrak & Caber, 2013). For example, the relative importance of pull attributes has been found to differ for visitors of different socio-demographic characteristics (Kim, Lee & Klenosky, 2003; Prayag, 2010). Other studies have identified factors, such as learning about wine, interest in wine regions, relaxation, exploration, socialization, and involvement with wine as important motivational factors in wine tourism. Whether motivations are studied from the push-pull theoretical basis or from a purely psychological perspective, this alludes to interrelated activities within the overall wine tourism experience (Cho, Bonn & Brymer, 2017). Our research thus adopted the premise that visit motivation (push) and destination image (pull) are interrelated and can be used for segmentation purposes as suggested in previous studies (Baloglu & Uysal, 1996; Prayag & Hosany, 2014). More specifically, our study contributes to the segmentation literature by

introducing an ‘ensemble’ method, which is a combination of two existing segmentation methods. Specifically, Self-Organizing Maps (SOM), which is one of the most important Neural Networks (NNs) algorithms along with Bagged Clustering (BC), are used to understand the relationship between motivation of tourists and wine destination attributes. This new ensemble method introduces a *post hoc* segmentation approach to the tourism literature, which offers a more sophisticated profile of wine tourist segments and how they respond at the wine regional destination.

2. LITERATURE REVIEW

2.1 Tourist experience at cellar doors

Andersson (2007, p.46) describes the tourist experience as “the moment when tourism consumption and tourism production meet.” The nexus of what has become known as the ‘experience economy’ (Pine and Gilmore, 1998) is that tourists seek unique and memorable experiences such as authenticity, silent relaxation and ‘soft’ tourism experiences such as ocean-cruising, or wine tourism (Pikkemaat, Peters, Boksberger & Secco, 2009). The emergent trend for tourism providers to focus on providing a memorable, often staged experience, has prompted some tourism researchers to employ customer experience or hedonic consumption theories (Hirschman & Holbrook, 1982; Knutson, Beck, Kim & Cha, 2007). Although there is no single theory that defines tourist experience, the hedonic view of tourism consumption underlines the relevance of its theoretical framework to understanding the experiences sought by tourists. This prompted Quadri-Felitti and Fiore (2012, p.5) to conclude that this “affords a logical connection to wine tourism with its emphasis on senses, emotions, and enjoyment of pastoral settings.” Few wine tourism studies have focused on the total experience aspect, in other words, what reasons other than the obvious “to taste” and “buy wine” actually motivated them to visit (Asero & Patti, 2011; Chen, Goodman, Bruwer & Cohen, 2016).

The winery cellar door is the hub of the visitor’s wine tourism experience (Bruwer, Coode, Saliba & Herbst, 2013) presenting winery owners with the opportunity to provide an authentic and memorable experience. It increases visitors’ awareness of the winery brand, develops their knowledge and understanding of the wine region destination, and impacts upon post-visit buying behaviour (Bruwer, Lesschaeve & Campbell, 2012). The total tourism experience occurs in the context of what is known as the winescape (Quintal, Thomas & Phau, 2015) and

could have an impact on the perception thereof as per our argument in a subsequent sub-section on destination image.

2.2 Motivations of Wine Tourists

Motivation researchers have conceptualised several theories and models to explain motivation (i.e. Dann, 1977; Hsu, Cai & Li, 2010), but still these only partially meet all the requirements of a good theory (Pearce & Lee, 2005). Among the theoretical frameworks and models emanating during the evolution process when researchers attempted to explain human motivation, the push-pull theory originally introduced by Dann (1977), is arguably the best-known and, is by now, commonly adopted in destination marketing research (Kim, Holland & Han, 2013). The general appeal found by push-pull motivation theory among tourism researchers has been attributed to its intuitive approach (Klenosky, 2002) and simplicity (Mohsin & Alsawafi, 2011). The push-pull framework has been used extensively for studying why tourists travel (Chen & Chen, 2015; Li et al., 2013; Prayag & Hosany, 2014). Push factors motivate individuals to travel away from home, and pull factors draw them towards specific destinations (Prayag & Ryan, 2011). Pull factors are travel destination-specific factors that influence destination choice (Klenosky, 2002). Pull factors are also considered as attributes that form destination image in the visitors' minds on the basis of their expectations and perceptions of the destination (Li et al., 2013; Prayag & Ryan, 2011).

The intense social context of wine tourism behaviour has been confirmed in studies showing that people who engage in this activity, are almost always accompanied by others (Bruwer and Alant, 2009). Researchers have also confirmed that the primary motivations of wine tourists are to “taste” and “buy wine” (Alant & Bruwer, 2004; Charters & Ali-Knight, 2002). Hence, we propose that wine tourism lends itself to further exploration of the motivations that drive tourists to consumption, and that this is also reflected in their perception of the destination's imagery or winescape, particularly when examined from an experiential viewpoint (i.e. Bruwer & Alant, 2009).

Because of the rural setting in which wine tourism occurs, it is plausible that environmental arousal could be at the root of the motives of wine tourists to satisfy their needs. It should also be kept in mind that not all wine tourists are necessarily wine drinkers and therefore have wine-related motivations (Douglas, Douglas & Derrett, 2001). Other than to taste and buy wine, there are also ‘secondary’ motivations such as learning about wine, socialising, being entertained,

travelling in a rural setting, relaxation, and so forth that round off the experience (Getz & Brown, 2006).

A gap exists in the knowledge base in that little is known about the motivational forces that drive wine tourists to consumption (Ravenscroft & van Westering, 2001). According to Nicolau and Mas (2006) most studies assume independence between tourist motivations and attributes of the tourism destination. This is also our approach in this study and hence we attempt to explain the decisions through interaction of wine regional characteristics with the personal motivations of the tourist. In the process we enrich the knowledge base by being the first study in wine tourism to link destination attributes to visit motivations using a novel self-organizing maps (SOM) and bagged clustering (BC) segmentation approach.

2.3 Destination image and wine tourism

Tourism destination image (TDI) perception plays an important role in the tourism destination visit decision, whether this decision is primarily driven by motivation to have a holiday, participate in recreational activity, visit friends and/or relatives, and in the case of wine tourism, taste and/or buy wine (Bruwer & Joy, 2017). Not surprisingly, TDI has been the focus of much research and different methodological approaches to understand this tourism construct exist (i.e. Quintal et al., 2015; Stepchenkova & Mills, 2010). In this context, wine tourism has emerged as a special-interest tourism field from an academic research perspective. During this process the inclusion of wine as a TDI element received some coverage in the literature (i.e. Bruwer et al., 2016; Getz & Brown, 2006; Quintal et al., 2015). This coincided with visitation to wineries to experience winemaking, grapegrowing and wine consumption becoming popular tourist activities (Marzo-Navarro & Pedraja-Iglesias, 2012).

The push-pull theory of motivation discussed earlier, is conceptually related to the characteristics of the tourist destination, more specifically the ‘winescape’, when attempting to develop a better understanding of the consumption of wine tourism and why tourists select a specific regional destination. This is a central tenet of the segmentation approach we develop in the current study. Dann (1977) identified two key push motivation forces, namely, the desire to escape, or to seek out novel experiences. On the other hand, pull motivation factors encompass tourist destination attributes that play an important role in the destination decision process (Correia & Pimpão, 2008). Pull motivations therefore relate to the attractiveness of tourist destinations and encompass tangible resources that destinations possess and tourists’

perceptions and expectations of these (Mohsin & Alsawafi, 2011). In the current study, it is proposed that regional destination's attributes, such as its wine quality, setting, and service staff pull wine tourists to experience the destination, also known as the 'winescape'.

Two main approaches exist in conceptualising the winescape. The first, a macro approach, defines the winescape in general terms, by referring to it as "the whole region and its attributes" (Alebaki and Lakovidou, 2011, p.123) and, "physical, social and cultural dimensions...and its components" (Douglas et al., 2001, p.313). The second approach defines the winescape in specific terms by identifying three main elements: the presence of vineyards, winemaking activity, and winery facilities where wine is produced and stored (Bruwer et al., 2016).

2.4 Segmentation research on wine tourists

A useful *precis* of the evolvement and current state of market segmentation in wine tourism is provided by Molina, Gómez, González-Díaz and Esteban (2015). From this we conclude that much of the published segmentation research on wine tourists is not directly tourism-related, but instead mostly focused on their wine consumption habits and other wine consumer-related behavioural aspects. For example, although motivational attributes have been examined in wine segmentation studies (i.e. Alebaki and Iakovidou, 2011; Mitchell & Hall, 2006), this research area has not been fully developed (Bruwer et al., 2013). Looking back over 30 years of wine tourism research, the *ad hoc* nature of research on market segmentation of wine tourists is evident. Alebaki and Iakovidou (2011, p.125) attempt to provide more 'structure' to the process of market segmentation of wine tourists by suggesting that researchers consider: if wine tourists are a distinct group with specific characteristics compared to an average traveller in rural areas or urban centers, and whether wine constitutes the main reason for visiting a wine region.

There is evidence to confirm that visitors to wineries have different profiles. Through their meta-analysis of wine tourism segmentation research Molina et al. (2015) conclude that in general, two procedures can be used to segment wine tourists: classifying visitors by considering their demographic factors and, establishing a profile by detailing their psychographic characteristics (i.e. attitudes, lifestyle). Romano and Natilli (2009) present a segmentation structure based on demographic variables and added other variables, such as preferences when buying food, interest in gastronomic media, and level of technological knowledge.

A number of studies have sought to identify wine tourists by generating psychographic (lifestyle) segmentation structures (Mitchell & Hall, 2006), and by measuring their involvement or attachment to wine and destinations (Nella & Christou, 2014). These constructs have also been linked to hedonic and experiential consumption (Bruwer & Alant, 2009). Visitor motivation research reveals that wine tourists also seek shopping, dining, and cultural and recreational outlets (Bruwer et al., 2012; Getz & Brown, 2006). Clearly wine tourists want more from their wine tourism destination experience than just to taste and buy wines.

3. METHOD

Existing segmentation studies on tourists to wineries and wine festivals (i.e. Chen & Sasia, 2014; Cho et al., 2017; Nella & Christou, 2014) continue to use the much-criticized factor-cluster analysis (Dolnicar & Grün, 2008) to derive segments. This approach to segmentation casts doubt on the stability and reproducibility of the identified clusters. With the exception of a few studies (i.e. Molina et al., 2015) that use latent class analysis (LCA), robust segmentation methods such as (Bloom, 2004, 2005; Li, Law & Wang, 2010; Mazanec, 1994) and ensemble methods among which bagged clustering (Dolnicar & Leisch, 2003; Prayag, Disegna, Cohen & Yan, 2015, D'Urso, Disegna, Massari & Prayag, 2015), are sparsely used in tourism studies. In particular, ensemble methods refer to a set of individually trained classifiers (such as neural networks and clustering methods) whose findings are combined to generate clusters (Opitz & Maclin, 1999). Ensemble methods are often more accurate than any single classification method in segmenting markets (Opitz & Maclin, 1999). Accordingly, this study uses a novel ensemble method, Self-Organizing Maps (SOM) and bagged clustering (BC), to derive stable segments.

3.1 Survey instrument

This study was part of a larger project on wine tourism experiences at the cellar door, but focuses on the project's motivation and destination image aspects only. The data collection instrument was a purpose-designed highly-structured questionnaire which comprised several sections. Motivation was measured using 15 items from which visitors had to rank those that apply to them on an importance scale ranging from most important (=1) to the least important one (rating number dependent on the number of motivations applicable). The items were adopted from previous wine tourism studies (Bruwer et al., 2012). Destination image was measured using 24 items that employed a free-text macro approach similar to that used by Bruwer et al. (2016)

and Bruwer and Gross (2017). Several socio-demographic and wine consumption-related questions were also measured (see Table 3). The questionnaire was pre-tested on tourists at the winery cellar door.

3.2 Sampling and data collection

The sampling frame was 17 winery cellar doors within the Barossa Valley Wine Region in South Australia. Barossa is Australia's premier wine region and located only a 1-hour drive from the Adelaide CBD, South Australia's capital city. The cellar doors were chosen to reflect a broad range of cellar door sizes to obtain a wide as possible range of visitors and have an acceptable degree of fit with the universum of 70 cellar doors. A time-based random sampling design was used, with no quotas imposed relating to any characteristic of the visitors.

The research questionnaires were administered at the cellar doors where data collection took place during a 6-8 week period in 2015. Cellar door staff were given clear instructions on ensuring randomness when recruiting visitors to participate in the survey. For example, only one respondent from a household could participate in the survey and a time-based systematic random sampling technique used, first identifying visitors randomly as they arrived during different times of the day and days of the week, but waiting until the identified persons were ready to depart. This ensured that visitors had first enjoyed the wine tourism experience before participating in the research. The self-administered surveys were completed *in situ* at the cellar doors, ensuring that information pertaining to the visit experience was still fresh in the minds of the respondents. Incentives were offered in the form of entry in a lucky draw for a case of the region's best wine. A total of 814 questionnaires were collected, however, the final number of usable questionnaires is 676 due to excessive missing information in 138 questionnaires which were subsequently discarded.

3.3 Data analysis

Market segmentation usually consists of three phases. In the first phase, the researcher selects and, if necessary, transforms the segmentation variables. In phase two, the researcher adopts a suitable segmentation technique and in the last stage, the clusters are profiled. In this study, the motivation items were used as the segmentation variables. Figure 1 schematically describes phases two and three of the segmentation procedure. The two-level approach of SOM, namely SOM-BC method (see Figure 1) adopted in this study has the purpose of finding both micro (i.e. output nodes) and macro (i.e. aggregation of output nodes) segments of tourists.

Kohonen Maps (Kohonen, 1984), also known as Self-Organizing Maps (SOM), is an unsupervised artificial neural network that has the capacity to map the observed points (input data) from a n -dimensional input layer (or space) to a lower dimensional output layer (i.e. the Kohonen layer) while maintaining the original topological relationships, meaning the order of the interrelationships among the units are preserved. The results of SOM are usually represented through two types of graphs, the U -matrix and the component plane, i.e. a set of U -matrices each of which represents a segmentation variable. The U -matrix is built on the basis of the distance matrix calculated between neighbourhood output nodes. SOM as a segmentation technique is more robust and stable compared to traditional clustering techniques (Kohonen, 1995; Venugopal & Baets, 1994). The batch version of the SOM algorithm has been used to arrange the nodes in a hexagonal grid (see Figure 2). This version of SOM was chosen because it is computationally faster, does not require the specification of a learning rate (Kohonen, 1998), and allows to obtain higher performance compared to the more traditional sequential SOM algorithm (Vesanto & Alboniemi, 2000). The initial values of the weight vector were chosen using a linear initialization procedure and the number of nodes in the output layer is $M = 5\sqrt{N}$ (Sang, Gelfand, Lennard, Hegerl & Hewitson, 2008) resulting in a 13×10 SOM. A more detailed overview of this approach is provided in other studies (Brida et al., 2012; Li et al., 2010).

Next, the SOM findings are clustered again by means of the BC algorithm in which the k -means is used as the partitioning method, with $K = 20$ centers and 10,000 iterations used as the base method. The bagging (“bootstrap aggregating”) procedure has been extensively described in previous studies (see Prayag et al., 2015). A number of bootstrap samples ($B = 1,000$) were considered, resulting in a total of 20,000 centers, which were then hierarchically clustered using Euclidean distance and Ward’s agglomerative linkage method. These parameters were chosen as they have provided the best performances in previous studies (Dolnicar & Leisch, 2004). In the final stage of the segmentation procedure, the motivation clusters were profiled by means of multinomial logistic regressions using the destination image items and behaviours at the cellar doors, as well as several socio-demographic tourist characteristics, as explanatory variables.

[Take Figure 1 in here]

4. RESULTS

4.1 Socio-Demographic characteristics of sample

The demographic profile of the sample showed a majority of males (52.7%) as tourists at the cellar doors. Different age groups were captured: 18 to 28 years old (21.5%), 29 to 40 years old (30.9%), 41 to 54 years old (28.3%), and 55 years old and above (19.4%). Of the respondents, 21.1% had completed secondary school, 17.2% had completed a TAFE certificate or diploma, and 29.5% had completed a Bachelor's degree. The remaining 32.2% of respondents had completed postgraduate studies. The sample earned AU\$ 50,000 and less as their annual household income (13.3%) with the majority (50.5%) earning more than AU\$ 100,000 a year. In total, 84.2% were domestic visitors with the majority of international visitors coming from the UK (29%), the USA (25.2%), Germany (11.2%), and New Zealand (9.3%). The sample had slightly more repeating (51.7%) visitors to the Barossa region. A more detailed overview of the sample characteristics is provided in Table 3.

4.2 Motivation clusters using SOM and BC

In the *U*-matrix (Figure 2), the red colour represents a large distance between neighbouring neurons and, therefore, indicates cluster borders, while the blue colour represents neighbouring neurons with similar characteristics. The number of input units grouped in each output node (or microsegment) is reported when this value is greater than 9. From Figure 2, it is difficult to identify macrosegments, which have similar characteristics given that the borders of these potential groups are not clearly identified. Hence, the choice to adopt the two-level approach (Figure 1) and to process the weight vectors with another clustering technique to identify clearly discernible clusters.

[Take Figure 2 in here]

In Figure 3, the results of the BC algorithm are shown, with the upper part of the figure (the dendrogram) showing aggregation distances of each of the clusters. The lower part reports the standardized absolute heights (black line) while the grey line denotes first differences. 'Sudden bends' of the black line and/or local peaks of the grey one drive the selection of the final number of clusters (Everitt, Landau, Leese & Stahl, 2011). The results suggest that respondents can be segmented in either two or five clusters. Given that the purpose of the analysis is also to identify micro-segments of tourists, the five-cluster solution is interpreted.

[Take Figure 3 in here]

As shown in Table 1, cluster three (CL3) is the largest (49%) while cluster four (CL4) is the smallest (4%). Cluster one (CL1) ranked the motive of tasting wine (52%) as the most important for visiting the cellar door followed by atmosphere, buy wine and day out (21%) ranked as the second most important motives. This cluster was also driven by the motive of learning about wine (23%), ranked third and fourth most important, and thus was labelled as “Wine Learners”. Cluster two (CL2) ranked the motive of eating at the winery (25%) as the most important followed by experiencing the atmosphere (13%) in second and third positions. This cluster ranked the visit to a rural setting as the fourth most important motive and, thus, was labelled as “Dining Enthusiasts”. CL3 was driven mainly by motives of tasting (61%) and buying wine (26%) ranked as second, third and fourth most important and thus was labelled “Wine Buyers”. While CL4 was also largely driven by tasting wine (33%) as the most important motive, this cluster assigned high importance to the motive of learning about wine (19%), ranked as the third most important, and the day out (19%) as the fourth most important motive for visiting the cellar door. This cluster was thus labelled “Wine Enthusiasts”. Cluster five (CL5) also ranked the motive of tasting wine as the most important (47%) and this motive featured more prominently in this cluster compared to all other clusters. This cluster was also motivated by the need to buy wine as shown by the ranking of fourth and fifth in terms of importance levels (16% and 12% respectively), while the motive of finding a unique wine was ranked fifth (12%). As such, this cluster was labelled “Wine Connoisseurs”.

[Take Table 1 in here]

4.2 Destination image clusters using SOM and BC

The same procedure described in Figure 1 was applied to the destination image attributes to cluster respondents. The best partitioning solution was represented by three clusters as shown in Table 2. ANOVA with post-hoc tests (Tukey’s pairwise comparisons) was used to identify similarities and differences between the clusters in image perceptions. The results showed significant differences on 12 of the 24 items.

The results indicate that a higher proportion of respondents in cluster 2 (76.8%) in comparison to cluster 3 (63.2%) associated local food/cuisine with the Barossa region, while cluster 1 does not differ significantly from either cluster 2 or cluster 3 regarding this particular attribute. On the attribute of quality of restaurants/pubs, cluster 1 (94%) had a higher proportion of respondents that associated this attribute with the region compared to cluster 2 (84.6%) but does not differ significantly from cluster 3. Cluster 3 by far had the highest proportion of respondents (82.5%) that associated availability of tourist information with the region compared to both cluster 1 (55.5%) and cluster 2 (56.6%). Though only 30.3% of the whole sample associated the attribute value-for-money with the region, there was a statistically significant difference between cluster 2 (27.7%) and cluster 3 (40.4%). In contrast to cluster 1, cluster 2 contains the majority of people (3.36%) that associate friendly residents with the region. Overall, local food/cuisine (73.2%), quality of restaurants/pubs (88.7%), availability of tourist information (60.7%) and scenery/natural environment (59.3%) are the attributes associated the most with the region by tourists that characterised the clusters.

[Take Table 2 in here]

4.3 Cluster profiling by image, behaviours and socio-demographic characteristics

Table 3 shows the results of profiling the motivation clusters by destination image clusters, wine and cellar door related behaviours, and socio-demographic characteristics. The motivation clusters were statistically different on their visitation status to the wine region. A higher proportion of respondents that were repeat visitors to the region (54.7%) belongs to CL5 compared to CL1 (31.3%) and CL4 (40.7%). In terms of socio-demographic characteristics, a higher proportion of males 69.5% belong to CL2 in comparison to CL3 (43.7%), CL4 (48.2%), and CL5 (53.1%). On all the other socio-demographic characteristics, the motivation clusters were not different.

[Take Table 3 in here]

4.4 Predicting cluster membership

The results were further analysed using a multinomial logit model to predict motivation cluster membership on the basis of destination image clusters, wine-related behaviours, and socio-demographic characteristics. The model was configured using CL4 as the baseline group given that it was the smallest cluster. Table 4 shows that in comparison to CL4, all other motivation clusters are different on the basis of the destination image clusters. For example, ‘Wine Connoisseurs’ were less likely to belong to this cluster when compared to ‘Wine Enthusiasts’ if they associated the Barossa region with images such as “local food/cuisine”, “friendly residents”, “shopping facilities” and “cleanliness” (Destination image - CL2). Respondents were less likely to belong to the ‘Dining Enthusiasts’ cluster in comparison to the ‘Wine Enthusiasts’, if they associated images of “availability of tourist information”, “value-for-money” and “other local products” with the region (Destination image - CL3).

[Take Table 4 in here]

Similarly, Table 4 shows that males and tourists who spend more money at the cellar door are more likely to belong to the cluster of ‘Dining Enthusiasts’ rather than ‘Wine Enthusiasts’. Tourists of European origin are less likely to belong to the cluster of ‘Wine Connoisseurs’ in comparison to ‘Wine Enthusiasts’. Tourists with an annual household income of between AU\$ 50,000 to \$75,000 and those earning \$100,000 or more tend to belong to ‘Wine Learners’ rather than ‘Wine Enthusiasts’.

5. CONCLUSIONS, IMPLICATIONS AND FUTURE RESEARCH

The objective of the study is to identify any relationship between motivation and destination image of tourists at cellar doors. The results suggest the existence of five motivation clusters and three destination image clusters with some relationships between the two sets of clusters as well as socio-demographic characteristics. From a theoretical perspective, the results suggest that tourists at cellar doors are not homogeneous in both their push and pull factors of visitation. In line with other wine tourism studies (Alant & Bruwer, 2004; Charters & Ali-Knight, 2002), we confirm that tasting and buying wine are the primary motives for visitation. However, the findings also suggest that hedonic motivations associated with the atmosphere, dining, and learning about wine at the cellar door are more significant motives of visitation for some tourists (Wine Learners and Dining Enthusiasts) than others (Bruwer & Alant, 2009).

Therefore, not all tourists can be treated as wine drinkers since they don't have wine-related motivations (Douglas et al., 2001).

This has managerial implications for how wineries market the cellar door experience aspect of wine tourism. The importance of the hedonic side of the experiential aspect of wine tourism is highlighted in that hedonically-based motivations are strong drivers towards visitation (Bruwer & Alant, 2009). Aspects such as tasting wine, eating at the winery, and enjoying the relaxing setting should be regarded by wine tourism providers as of paramount importance and hence developed and utilised to the fullest extent possible. The findings also confirm the importance of atmospherics and learning in marketing the experiential aspects of the cellar door experience. As such, the role of the winescape (Bruwer and Gross, 2017; Quintal et al., 2015) is highlighted and must be managed to meet the expectations of different segments. While some aspects, for example the scenery, is beyond the control of the providers it should be showcased to the maximum extent through smart building design, outdoor patios for summer time, etc. Several experiential aspects are however, well within the control of the providers. For example, staff should be professionally trained and made to understand what the needs of visitors are likely to be, i.e. there can be no 'excuse' for lack of knowledge about the winery, the region, its history, and so on as visitors are likely to want this type of information. The findings highlight that buying wine is not necessarily an important motive for some wine tourists (Wine Enthusiasts) suggesting that an overemphasis on merchandising by wineries may be counter-productive for some segments.

By applying the push-pull motivation framework to segment tourists at the cellar door, the findings confirm the interrelationships between the two factors suggested in previous studies (Baloglu & Usyal, 1996; Li et al., 2013; Prayag & Hosany, 2014). Specifically, in the case of the Barossa region, the destination attributes are not homogeneous in pulling visitors to the region. Some visitors (destination image - CL2) are more sensitive to the local food/cuisine of the region while others (destination image - CL1) are more sensitive to the quality of restaurants/pubs in the region. These findings highlight the need for wineries to understand the experience of the tourist beyond the cellar door and how the cellar door experience fits within the larger regional tourist experience. Such an understanding can improve the marketing of wineries within the region but also contribute to more precise targeting strategies for different segments of tourists. For example, the findings suggest the need to offer a holistic experience of the region for some segments by pairing wine and food experiences. To this end, co-branding

initiatives between wineries and local food companies can make a region more attractive to both tourists and wine tourists.

From a destination marketing perspective, the findings highlight the sensitivity of different groups to different attributes of the region. For example, some visitors (destination image - CL3) are more sensitive to the availability of information about the region than others. This is particularly important for those who have not visited the region before. As the findings indicate, for some tourists (Wine Enthusiasts), the value-for-money and availability of other local products are important image associations to create a positive image of the region despite being primarily driven by the motive of tasting wine on their visit. This pinpoints to the type of destination attributes that must be emphasized in communication strategies to attract specific segments. However, it must be noted that the majority of visitors belong to the Wine Buyers cluster, which in itself suggests that marketing efforts of the region must still emphasize the quality of the wines and uniqueness of the region in comparison to other wine regions in Australia. Destination marketers should also look at ways of building local support for the tourism industry given that the destination attribute “friendly local residents” was not associated with the region by a considerable proportion of visitors (Destination image - CL1).

From a methodological perspective, while several wine tourism segmentation studies (Chen & Sasias, 2014; Cho et al., 2017; Nella & Christou, 2014) continue to use the much-criticized factor-cluster analysis (Dolnicar & Grün, 2008) to derive segments, this study offers a novel method to segment markets. Using well-established criteria of robustness and stability, which are important markers for identifying segments that are reproducible, we provide a step-by-step analytical framework that can be applied to other segmentation studies within and outside the field of tourism. The study extends the growing literature on relatively newer methods for segmenting markets by offering an ensemble method that is based on two segmentation methods, BC (Dolnicar & Leisch, 2003; Prayag et al., 2015) and SOM (Brida et al., 2012; Mazanec, 1994) that have been applied separately in tourism studies.

In summary, the study offered both theoretical and managerial implications for understanding the tourist experience at the cellar door. However, it is not without limitations. First, the results are not generalizable beyond tourists to the region. Second, while the measured motivations reflect mainly those of wine tourists, it is possible that other motives that have not been captured by the study such as novelty and escape might also play a role in cellar door visits. Third, the destination image attributes measured reflect only cognitive images of the

destination. As such, these limitations open several avenues for further research. Future studies can assess a broader set of motives that encapsulate both those pertinent to wine tourists but also the general motives of holidaymakers. While destination image remains a topical area of research within the tourism literature, the evolution of the image of wine tourism regions (i.e. Barossa) and the corresponding effects on the broader regional destination image (South Australia) should be investigated. Likewise, the dynamics between the cognitive and affective images of wineries and how they impact the wine region image remains to be assessed.

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Figure 1: Stages of the segmentation process

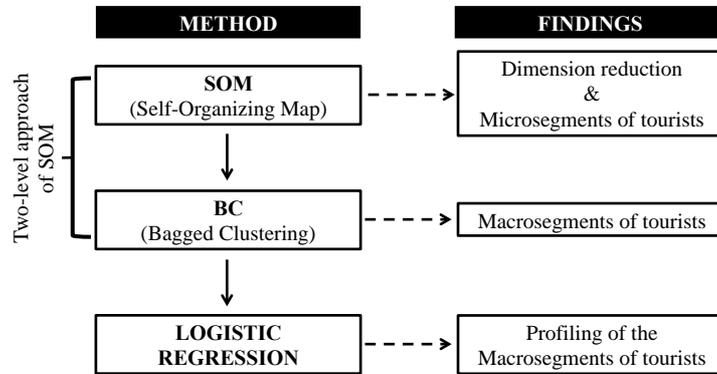


Figure 2: U-matrix for the SOM algorithm

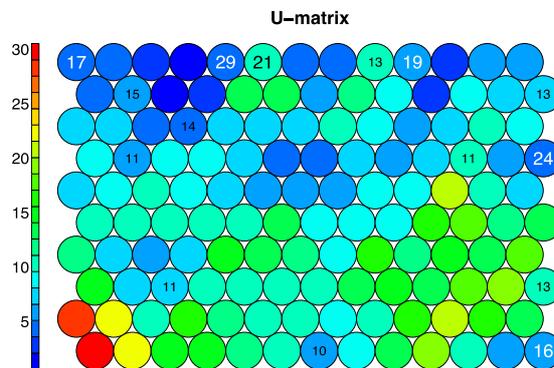


Figure 3: Dendrogram and plot of relative height of aggregation (black line) and first differences (grey line)

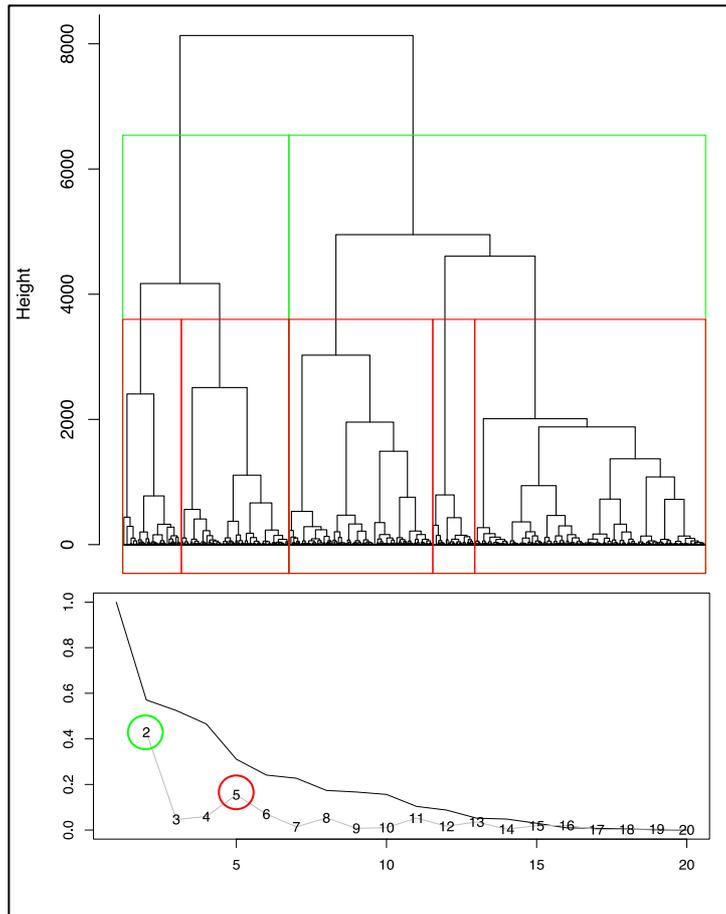


Table 1: Motivation Clusters

No. of observations	n=48	7%	n=141	21%	n=332	49%	n=27	4%	n=128	19%
RANK	CL 1 (Wine Learners)		CL 2 (Dining Enthusiasts)		CL 3 (Wine Buyers)		CL 4 (Wine Enthusiasts)		CL 5 (Wine Connoisseurs)	
1	Taste wine	52%	Eat at winery	25%	Taste wine	61%	Taste wine	33%	Taste wine	47%
2	Atmosphere, Buy wine, Day out	21%	Atmosphere	13%	Buy wine	26%	Taste wine	37%	Taste wine	20%
3	Learn about wine	23%	Atmosphere	13%	Buy wine	12%	Learn about wine	19%	Taste wine	13%
4	Learn about wine, Information, Unique wine	10%	Rural setting	7%	Buy wine	10%	Day out	19%	Buy wine	16%
5	Atmosphere	23%	Entertainment	6%	Atmosphere, Unique wine	5%	Winery tour	30%	Buy wine, Unique wine	12%
6	Picnic/BBQ	17%	Learn about wine	4%	Unique wine	2%	Unique wine	7%	Atmosphere	15%
7	Entertainment	10%	Unique wine	3%	Day out	1%	Taste wine, Buy merchandise, Winery tour	4%	Day out	12%
8	Information	15%	Learn about wine, Rural setting, Buy merchandise, Socialise	1%	Learn about wine, Buy merchandise	0%	Day out	7%	Day out	12%
9	Picnic/BBQ	19%	Rural setting, Buy wine, Unique wine	1%	Unique wine	1%			Information	8%
10	Meet winemaker	17%	Unique wine	2%	Rural setting	0%			Entertainment, Meet winemaker	7%
11	Unique wine	10%	Buy merchandise	3%					Socialise	9%
12	Socialise	10%	Entertainment, Meet winemaker	1%					Picnic/BBQ	8%
13	Socialise	13%	Information, Unique wine	1%					Picnic/BBQ	11%
14	Eat at winery	13%	Winery tour	1%					Picnic/BBQ	12%
15	Eat at winery	63%	Picnic/BBQ	100%	Picnic/BBQ, Meet winemaker, Winery tour	100%	Picnic/BBQ, Meet winemaker	100%	Picnic/BBQ	62%

Table 2: Destination image clusters

Destination image attributes	Items	Proportion of Yes				Significance		
		Sample (n=671)	CL1 (n=200)	CL2 (n=357)	CL3 (n=114)	ANOVA	Tukey's pairwise comparison	
						cl1-cl2	cl1-cl3	cl2-cl3
Local food/cuisine	1	73.17%	72.50%	76.75%	63.16%	*		*
Quality of the restaurants / pubs	2	88.67%	94.00%	84.59%	92.11%	**	**	
Availability of tourist information	3	60.66%	55.50%	56.58%	82.46%	***	***	***
Local transportation	4	19.52%	17.00%	22.13%	15.79%			
Heritage and cultural attractions	5	54.25%	54.50%	51.26%	63.16%			
Scenery, natural environment	6	59.31%	64.00%	57.14%	57.89%			
Reputation	7	20.42%	18.50%	19.89%	25.44%			
Value-for-money	8	30.25%	29.00%	27.73%	40.35%	*		*
Vineyard landscape	9	6.71%	5.50%	6.72%	8.77%			
Friendly local residents	10	1.94%	0.00%	3.36%	0.88%	*	*	
Safety and security	11	16.84%	16.00%	17.37%	16.67%			
Signage to get to and move through the region	12	19.97%	13.00%	26.33%	12.28%	***	***	**
Leisure time facilities / activities	13	15.50%	17.50%	15.97%	10.53%			
Accommodation offered (hotels, B&Bs, apartments)	14	14.01%	14.50%	12.89%	16.67%			
Nightlife and entertainment	15	33.68%	29.50%	36.97%	30.70%			
Lack of urbanization	16	22.80%	24.00%	23.53%	18.42%			
Atmosphere / climate / ambience	17	4.47%	1.00%	7.84%	0.00%	***	***	***
Shopping facilities	18	31.89%	31.50%	35.57%	21.05%	*		**
Other local products / cottage industries	19	32.19%	34.50%	27.73%	42.11%	*		*
Wines	20	31.00%	25.50%	32.49%	35.96%			
Proximity of the region to a main city	21	12.22%	2.00%	19.33%	7.89%	***	***	**
Towns / villages	22	50.37%	51.00%	51.26%	46.49%			
Cleanliness	23	16.39%	11.50%	19.61%	14.91%	*	*	
Natural settings of the wineries	24	22.80%	27.00%	22.97%	14.91%	*	*	

Note: ***Significant at $p \leq 0.001$, **significant at $p \leq 0.01$, *significant at $p \leq 0.05$

Table 3: Profiling of clusters by image and socio-demographic characteristics

	Motivation Clusters					Sample (%)	p-value	Significance
	CL1 (%)	CL2 (%)	CL3 (%)	CL4 (%)	CL5 (%)			
Destination Image Clusters							0.485	
CL1	35.42	33.09	30.00	11.11	27.56	29.81		
CL2	45.83	52.52	52.12	70.37	55.91	53.20		
CL3	18.75	14.39	17.88	18.52	16.54	16.99		
Visitation status to the wine region (first-time vs repeat)	31.25	53.90	47.29	40.74	54.69	48.67	0.038	*
Average number of previous visits	2.167	3.617	3.428	2.333	3.578	3.362	0.495	
Main purpose of visit to the wine region							0.205	
Wine tourism	39.58	43.26	44.28	55.56	50	45.27		
Holiday	50	33.33	33.43	25.93	34.38	34.47		
Other purpose	10.42	23.4	22.29	18.52	15.62	20.27		
Previous visit to Winery's cellar door	77.08	78.01	71.39	74.07	65.62	72.19	0.210	
Average number of times visited the Winery's cellar door in the past	1.521	1.574	1.804	1.481	1.867	1.735	0.397	
You heard of this Winery before today	70.83	78.72	78.92	74.07	74.22	77.22	0.619	
You bought any of this winery's wine(s) at retail stores or elsewhere in the last 2 months	20.83	19.15	25.6	25.93	25.98	24.00	0.578	
You tasted wine at this winery's cellar door today	91.49	87.23	87.77	100.00	87.1	88.29	0.348	
Average number of different wines tasted	5.191	5.071	4.819	4.741	4.894	4.910	0.893	
Any purchase(s) at this winery's cellar door today	54.17	62.14	59.76	59.26	64.29	60.69	0.771	
Average number of bottles bought	2.917	3.823	2.630	2.296	2.906	2.938	0.409	
Average amount spent on wine alone	55.729	92.485	64.112	47.726	74.293	70.708	0.297	
Average amount spent at this winery's cellar door on food and merchandise	15.104	10.411	6.108	5.3704	5.234	7.450	0.166	
Average total amount spent at this winery's cellar door	70.833	102.896	70.220	53.096	79.527	78.158	0.240	
Wine consumption frequency							0.870	
Once a day	16.67	19.15	15.66	11.11	12.5	15.68		
A few times a week	56.25	51.06	51.51	51.85	54.69	52.37		
Once a week	12.5	10.64	12.05	22.22	10.94	11.98		
Less than once a week	14.58	19.15	20.78	14.81	21.88	19.97		
Average amount spent as a household on wine in total in a typical month	127.604	143.901	125.889	152.593	134.648	132.49	0.522	
Socio-demographic and economic variables								
Male	66.67	69.50	43.67	48.15	53.12	52.66	0.000	***
Age							0.839	
18-28 years	20.83	20.57	19.58	14.81	28.91	21.45		
29-40 years	25.00	32.62	31.63	33.33	28.91	30.92		
41-54 years	31.25	28.37	28.31	33.33	25.78	28.25		
55 years and older	22.92	18.44	20.48	18.52	16.41	19.38		
Level of education							0.069	
School Leaving Certificate (15 yrs+), HSC	22.92	26.95	22.66	11.11	11.81	21.07		
TAFE certificate/diploma	12.50	17.02	16.01	14.81	22.83	17.21		
Bachelor's degree	25.00	30.50	26.59	51.85	33.07	29.53		
Graduate/Postgraduate diploma	25.00	15.60	20.85	11.11	22.83	20.03		
Masters/Doctorate degree	14.58	9.93	13.90	11.11	9.45	12.17		

State of origin								0.410
Australia	75.00	83.69	84.64	74.07	89.06	84.17		
EU	14.58	7.80	8.73	14.81	5.47	8.58		
Other countries	10.42	8.51	6.63	11.11	5.47	7.25		
Household's approximate total annual income (before taxes)								0.593
less than \$50,000	4.17	10.64	15.66	18.52	12.50	13.31		
\$50,001 to \$75,000	18.75	19.86	18.07	7.41	13.28	17.16		
\$75,001 to \$100,000	20.83	18.44	16.87	25.93	23.44	19.08		
\$100,001 to \$150,000	18.75	23.40	20.18	22.22	21.09	21.01		
\$150,000 plus	37.50	27.66	29.22	25.93	29.69	29.44		

Note: Significance of both the Chi-square test (for qualitative data) and the repeated measures ANOVA (for quantitative data) are reported.

Test results are not significant unless indicated otherwise: **Significant at $p \leq 0.05$, *Significant at $p \leq 0.1$

Table 4: Multinomial logit stepwise estimations

Independent variables	Motivation Clusters			
	CL1	CL2	CL3	CL5
Q6_cl2	-1.503 (0.71)**	-1.403 (0.65)**	-1.311 (0.64)**	-1.158 (0.66)*
Q6_cl3	-1.137 (0.86)	-1.378 (0.80)*	-1.029 (0.77)	-1.005 (0.80)
How much in total did you spend here on wine alone?	0.001 (>0.01)	0.002 (>0.01)*	0.001 (>0.01)	0.001 (>0.01)
Male	0.776 (0.49)	1.02 (0.43)**	-0.111 (0.40)	0.288 (0.42)
State of origin: EU	-0.325 (0.70)	-0.884 (0.66)	-0.668 (0.59)	-1.204 (0.68)*
Household's approximate total annual income (before taxes) category				
\$50,001 to \$75,000	2.291 (1.14)**	1.441 (0.88)	0.975 (0.85)	0.904 (0.90)
\$75,001 to \$100,000	1.113 (0.98)	-0.031 (0.67)	-0.375 (0.62)	0.177 (0.67)
\$100,001 to \$150,000	1.311 (1.00)	0.53 (0.71)	0.103 (0.65)	0.359 (0.70)
\$150,000 plus	1.665 (0.96)*	0.355 (0.69)	0.195 (0.63)	0.401 (0.68)
Constant	-0.106 (1.01)	1.681 (0.73)**	3.461 (0.67)***	2.031 (0.72)***

Note: Test results are not significant unless indicated otherwise: ***Significant at $p \leq 0.01$, **Significant at $p \leq 0.05$, *Significant at $p \leq 0.1$. Robust standard errors are in parentheses. $N = 661$; Wald $\chi^2(36) = 61.60$; $p > \chi^2 = 0.0050$; pseudo- $R^2 = .0418$; McFadden $R^2 = .037$