

**HOW SUSTAINABLE ENVIRONMENTAL PRACTICES EFFECT THE  
AUSTRALIAN WINE INDUSTRY**

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# **HOW SUSTAINABLE ENVIRONMENTAL PRACTICES EFFECT THE AUSTRALIAN WINE INDUSTRY**

## **ABSTRACT**

Sustainability has remained an issue for the Australian wine industry. For wineries to remain competitive, they must adopt innovative strategies to differentiate themselves in a saturated industry. Research has identified a prominent gap in literature, involving sustainable environmental practices and the impact they have in the wine industry. This paper addresses sustainability in wine by drawing from qualitative semi structured in depth interviews. The findings indicate the association sustainability has in the wine industry, establishing potential strategies that could be implemented by wineries in the future. In conclusion, the paper contributes to further exploring sustainability in the scope of wine.

Keywords: Wine, Sustainability, Environmental Issues, Wine Strategies

## **1. Introduction**

Klewitz and Hansen (2014) state sustainable practices are required for businesses to achieve industry success. In the field of wine literature qualitative research has established sustainability's influence in the wine industry (Pullman et al., 2009). Contrasting arguments have criticised the effectiveness of sustainable practices, where the purpose of this paper is to address the degree of influence sustainability has towards wine practices. The paper will address the research problem by: establishing a contextual background, methodology, results and findings and draw from conclusions to provide avenues for future research. Previous literature will provide the foundation for this pilot study and guide the data collection process aiming to draw from the results to address the research question.

## **2. Background**

### **2.1 Sustainability**

Costanza et al. (1991) suggests sustainability in practice is ensuring the natural, physical and human environments are upheld. Edwards (2005) further explores sustainability claiming it has a profound influence over everything. Over the past four decades, a wide range of environmental policy mechanisms have been adopted to shift society towards practicing environmental sustainability (Cordano et al., 2009). Nielsen (2011) found that over 83% of consumers were concerned with purchases that impacted the environment. Sustainability has become increasingly important across every industry (Christ & Burritt, 2013). Sustainability has evidently become an issue across the world, where this research will provide valid contributions towards addressing sustainability in the wine industry.

### **2.2 Wine industry**

Environmental regulations enhance company performance which has become evident across business, academic and regulatory communities (Chen et al., 2006). The Australian wine industry, has seen exponential growth in recent decades which was positively influenced by the successful adoption of sustainable practices (Barber, 2012). This was in response to consumers increased environmental awareness and held importance to sustainable practices. Australian consumers are demanding companies to embrace sustainability (Williams & Schaefer, 2013), and further implement innovative strategies (Hanna & Walsh, 2002). The production of wine has followed traditional practices, however new technologies have created changes in wine making (Sheridan, 2005). Wineries are beginning to adopt technology, in response to the elevated pressure from consumers in regards to the level of environmental degradation from wine production (Sautier et al., 2018). Qualitative research reported water, chemical use and effluent as the most determinantal components of environmental sustainability for wine production (Pullman et al., 2010).

## **3. Methodology**

### **3.1 Research Method**

Liamputtong (2013) states rigorous and valid qualitative research aligns ontologies, epistemologies and methodological designs. The study's research methodology implemented was a case study which allowed for the purposeful investigation, deliberation and discussion of a singular contemporary issue currently experienced. Adopting a single source of research will elicit in depth data and establish findings and results (Creswell, 2012). In the case of this study, data was solely obtained from academics whose insights could deliver valuable findings in the context of Australian wine. The rationale behind this was that academics were familiar with the research problem providing valid responses.

### 3.2 Research Design

In establishing qualitative research involving how sustainable practices influence the Australian wine industry. The interpretivism philosophy was adopted in this study, which is defined as the concept of establishing the relationship between the observation and interpretation, to further comprehend social behaviour's which as a result became an fundamental component in qualitative research (Ormston et al., 2014). Data will be acquired through industry professionals in the wine industry obtained through semi structured in depth interviews incorporating the interpretive paradigm. Interviews can potentially deliver further insight by interpreting respondents judgements, opinions and ideologies towards a subject (Schmidt, 2004). The results found will assist in the understanding of the impact sustainable practices have in the Australian wine industry.

### 3.3 Purposive sampling

Purposive sampling is generally utilised in qualitative research to deliver validity and rigour to the study's findings (Suen et al., 2014). According to Valerio et al. (2016) purposive sampling can be referred to as a sampling strategy that permits the most applicable sampling frame for a specific issue. To adopt this sampling technique researchers must carefully allocate respondents based on the study's purpose, with the objective that each participant deliver rich and unique findings of value (Suen et al., 2014). Participants were selected based on a strict criteria to deliver rich responses addressing sustainability in wine. Valerio et al. (2016) further states the primary benefit purposive sampling provides is that the sampling strategy upholds rigor and identifies a sampling frame, based on explicit study driven variables. For this case study, identifying academics in the field of wine and being familiar with sustainability in the industry. Purposive sampling will provide a platform for "rich" context laden responses facilitating valid and transferable results (Creswell, 2012).

Furthermore, elite interviews were implemented to compliment the purposive sampling technique. It was advised elite interviews were the most appropriate method to gather specific information (Köker, 2014). By interviewing "elite" academics in the field of wine and sustainability would enable the investigator to ask complex questions, resulting in rich responses based on their knowledge with the topic.

Purposive Sampling	Gender	University	Faculty	Field of Research
Participant 1	Male	Curtin	Marketing	Wine
Participant 2	Male	Curtin	Marketing	Country of Origin

### 3.4 Sample Population Characteristics

The detailed sample description as displayed above were chosen amongst academics who were the most appropriate for the in-depth interviews. The primary criteria were that the respondents must be familiar with the wine industry and understand sustainability, providing a degree of insight to the wine industry.

### 3.5 Interview structure

The structure of an interview is paramount to its successful execution (Farago et al., 2013). The semi structured interviews consisted of 12 non-leading, open ended, concise questions developed to address the research problem. To optimise rigour and relevance, all interviews were consistently carried out by one investigator. The nature of the interview's structure and question base maximised interaction between the participant and interviewer. This in turn consolidated a relationship between the two parties ensuring authentic responses and flexibility within the structure of questions (Tong et al., 2007). Prior to the interviews, participants were

asked to sign a consent form discussing confidentiality of the responses and identifying the nature of the interview. The duration of each interview lasted approximately 30 mins. The interviews were held in the participant's offices, optimising convenience and environmental familiarity. Furthermore, Herzog (2012) states that a relaxing and familiar setting for participants would deliver the best results. A taping device recorded the interview to deliver an exact transcript. Prior to the commencement of the interview consent was provided by both respondents.

#### **4.0 RESULTS AND DISCUSSION**

The study was designed to ensure rigour was consistent throughout the case study's research. Although the study was impacted by limitations due to the sample size and interview question formulation, the results identified provide insight into the research question. Three prominent themes were established in the data analysis.

Theme 1: Both respondents to a degree confirmed the association sustainability has with the wine industry, in which if correctly implemented can yield benefits to wineries. The view held by both respondents was that sustainable practices can deliver economic and environmental benefits, where one respondent stated "*Wineries are doing what they can to improve environmental performance to achieve cost benefits*". In contrast, another participant believed "*It comes down to whether if they can afford to, so weighing up the cost saving and environmental and economic benefits*". The data analysis established that sustainability has direct association with the wine industry, delivering competitive advantages to wineries in the form of environmental and economic benefits if successfully executed. The insight identified was validated by previous research where Cordano et al. (2009) found environmental and economic performance improvements for wineries who successfully implement sustainable environmental practices.

Theme 2: The general consensus among respondents was the recognition of specific environmental issues in the Australian wine industry. It became evident in the emerging findings that people value sustainability in the workplace, where wineries need to consider environmental practices. The analysis conducted indicated that both respondents believed that "*Water, chemical and effluent practices are the most detrimental to the environment during the wine making process*". This finding is supported by Ruggieri et al. (2009) who found evidence suggesting contemporary wineries are increasingly concerned with water, chemical and effluent based practices to deliver competitive advantages.

Theme 3: One of the limitations addressed in the study was the assumed knowledge of participants to provide potential sustainable practices that could be implemented in Australia. When questioned about strategies a respondent replied "*Strategies are key, where on the agricultural side of things minimal intervention is everything including natural irrigation or handling grapes by hand which is an old world approach*". It became apparent through continued responses that "old world" strategies were more sustainable; however, the contradiction of the statement was that Australia is considered a "new world" wine market. This creates the issue of feasibility in implementing such strategies because they conflict with current practices adopted in the Australian wine market. On the other hand, a respondent stated "*The future is more collaborative with the opportunity to collaborate with other industries and diversify*", potentially amalgamating both "old world" and "new world" practices could potentially provide solutions to future sustainable practices (Sheridan, 2005).

#### **4.1 Limitations**

The research conducted identified multiple limitations. Purposive sampling delivered rich and insightful findings however since elite interviews require participants to pass a rigorous screening process, attaining participants was a difficult process. Valerio et al. (2016) stated that purposive sampling takes time since specific characteristics are required of its respondents. Furthermore, upon evaluating the respondents, it was deemed that the most appropriate participants to deliver the most accurate findings would have been winery owners. Consequently, per the outline established, the potential sample available was limited. Despite this, one respondent was a previous wine owner, however current and practicing winery owners would have been the most appropriate participants to address the research problem. Upon reflecting the interview guide it was noted that assumptions were made on subject's knowledge. The questions assumed that respondents had more knowledge than they had on the topic of sustainability in the wine industry. Therefore, the questions needed to be refined and more appropriate to respondents, requiring examples of sustainability or statistics to enhance responses.

The evaluation of qualitative research's rigour is gauged by the saturation of the data set, suggesting that the responses deliver the information required to answer the research problem (Lowe et al., 2018). For qualitative research the saturation point is a problematic notion to define (Bowen, 2008). Saturation's association in qualitative research is the point where there is sufficient data to ensure the research question can be appropriately answered (Turner, 2018). Per the unit outline of only conducting two in depth interviews, the study did not achieve saturation point. A definitive number does not exist in achieving saturation, nonetheless, when specific themes are consistently identified after several interviews, one can predict saturation is achieved. Therefore, to further validate the study's findings, increasing the number of semi structured interviews are necessary.

#### **5. Conclusion**

Sheridan (2005) was right in believing wine does adhere to traditional practices however technology will revolutionise wine making. Research in the field of wine literature has stipulated that technology can assist wineries in achieving long term sustainable practices contributing to success in the wine industry. Sustainability has a direct association with the wine industry where competitive advantages can be established by wineries addressing environmental issues such as water, chemical and effluent. Wineries who recognise these issues and address them through implementing sustainable practices such as natural irrigation will further consolidate their respective market positions. The study identified the potential avenue of combining both "old world" and "new world" strategies to address issues of sustainability within the wine industry, where the adoption of sustainable long term strategies can yield both economic and environmental benefits to wineries. The research enriches the body of knowledge for sustainable wine research by providing managerial contributions, addressing the benefits associated through the adoption of sustainable wine practices.

To further enhance the body of knowledge in the field of wine research, exploring the notion of combining "old world" and "new world" wine practices would be a viable avenue. Sautier et al. (2018) suggested a shift in wine growing to coordinate collective practices. Drawing from the results established in the study, incorporating elements of both "old world" and "new world" practices could assist in enhancing sustainability and overall performance in the wine industry. Encompassing the traditions of "old world" practices ensuring perceived dilution of product quality is minimised, while implementing the technology of "new world" practices in conjunction will elevate sustainability and performance in the wine industry.

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