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Agriculture and Agricultural Science Procedia 8 (2016) 10 – 16

Agriculture and Agricultural Science

Procedia

Florence “Sustainability of Well-Being International Forum”. 2015: Food for Sustainability and not just food, FlorenceSWIF2015

Would you pay a price premium for a sustainable wine? The voice of the Spanish consumer

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Abstract

Sustainability has become one of the most important challenges for wineries over the last decade. From a marketing point of view sustainability can be considered as a way to differentiate wines to meet some market segment demands. Furthermore, this strategy can be also considered necessary to guarantee the future development of the wine sector. Given that some wineries have stated that production costs are higher for sustainable wines than for conventional wines, the goal of this paper is to analyze the premium price that consumers are willing to pay for a sustainable wine with respect to the price of a conventional wine with similar characteristics. Contingent valuation has been used to test the differences in the willingness to pay for sustainable wines among the main Spanish wine market segments. Results reveal that most Spanish consumers are willing to pay a higher price for sustainable wines, and that there are differences among the main market segments.

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Peer-review under responsibility of Fondazione Simone Cesaretti

Keywords: Sustainability; Willingness-To-Pay; Wineries

1. Introduction

In the last few decades wine producers all over the world have implemented environmental, social and economic aspects of sustainability at various stages in their business behavior (Forbes and De Silva, 2012). One of the main reasons for this growing interest in sustainability in the wine industry is that consumers are changing their behavior to integrate sustainable and environmental considerations into their lifestyle choices (Smith and Marsen, 2004). In this sense, some consumers' purchasing decisions are based not only upon how well products satisfy their needs but

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also how these products affect society at large. Thus, more and more wineries have claimed socially or environmentally friendly orientations when producing and marketing wines, integrating sustainability into their communication strategy in an effort to reinforce their brand and market positioning. According to Nowak and Washburn (2002), product differentiation, competitive advantage and increased sales could be achieved by wineries through the adoption of these practices.

Several authors have analyzed the impact of these production practices on wine consumers. Most of these studies are focused on the environmental aspects of the production process (e.g. Barber et al., 2009; Barber, 2010; Bazoche et al., 2008) or deal with organic wines (e.g. Brugarolas et al., 2005; Delmas and Grant, 2014; Mann et al., 2012). Only a limited number of studies consider the three essential pillars of sustainability (environmental, social and economic aspects) as a whole (e.g. Zucca et al., 2009; Forbes et al., 2009).

Regarding the production of sustainable wines, two important considerations arise: firstly, the willingness of consumers to pay for these wines and, secondly, the way wineries signal their sustainable commitment. One of the main problems of sustainable wines is their higher production costs, which can lead to their prices being between 25 and 30% above the costs of similar “conventional” wines. This price premium could be justified by the higher utility that these products have for consumers who perceive them as having a higher quality, being healthier and environmentally friendly (Brugarolas et al., 2005). Wineries also have to take into account that sustainable products are credence goods, in the sense that consumers cannot ascertain their sustainable qualities during purchase or consumption (Crespi and Maret, 2005). As consumers are not present during the production process of the wine they cannot assess the sustainable friendliness of production. Therefore, extrinsic cues (such as labeling) are used to reduce the information asymmetry that exists between wineries that produce these wines and consumers, providing credible information related to the sustainable credentials of the product (Leire and Thidell, 2005).

Thus, the goal of this paper is to analyze the willingness to pay (WTP) a price premium for a sustainable wine in the Spanish market. Furthermore, this paper analyzes the WTP of the different market segments.

2. Theoretical background

Over the last decade, the concept of sustainability has created great interest in the wine industry (Remaud et al., 2008). As wineries are increasingly competing in the area of product differentiation, several wineries have integrated sustainability into their production in an attempt to respond to consumer demand. However, in spite of its popularity, Szolnoki (2013) demonstrates that it is still very difficult to define the term sustainability. One of the main reasons that could explain this lack of consensus is that in the wine industry each country and even each winery has a different understanding of sustainability. Even today, the term is mainly (or only) associated with the environmental aspects of wine production, neglecting other important issues.

The most accepted concept of sustainability defines it through the three overlapping principles of environmentally sound, economically feasible and socially equitable production. Generally speaking, sustainable winegrowing comprises growing and winemaking practices that are sensitive to the environment (environmentally sound), responsive to the needs and interests of society at large (socially equitable) and economically feasible to implement and maintain (economically feasible).

One of the conditions for effective sustainable management practices is that customers are willing to pay a price premium to defray the higher cost of these practices, especially those related with the environment. This is particularly important for organic products, as many wineries claim that the costs of producing these wines are higher than those of producing a “conventional” similar wine.

From an academic point of view, some authors have tried to forecast the number of wine consumers willing to buy sustainable wines, and especially to forecast the willingness to pay for a sustainable wine. However, only a few studies consider the three essential pillars of sustainability as a whole (e.g. Zucca et al., 2009; Forbes et al., 2009), while most of them deal with environmental friendly wines (e.g. Brugarolas et al., 2005; Delmas and Grant, 2014; Mann et al., 2012; Barber et al., 2009; Barber, 2010; Bazoche et al., 2008). Furthermore, consumers appear to have mixed opinions about sustainability as the circumstances under which these strategies can command price premiums are not fully understood. On the one hand, several authors state that consumers will not be willing to trade off the

quality of a wine for environmental and/or social features (Lockshin and Corsi, 2012), finding that customers' demand is not one of the most important drivers behind the adoption of sustainable practices by wineries (Gabzdyllova et al., 2009). On the other hand, some authors argue that sustainability is very likely to become a major competitive advantage in the international arena (e.g. Pullman et al., 2010, Forbes et al., 2009, Bison et al., 2002), showing that consumers consider sustainable practices an important feature of wine production and would buy the products from such vineyards, paying a price premium for this type of wine.

Regarding sustainable wines, Forbes et al. (2009) show that nearly 73 percent of New Zealand respondents stated they were interested in sustainable wines. Zucca et al. (2009), conclude that the overwhelming majority of Californian customers liked the idea of sustainable wine, even if they really did not have a clear idea what sustainability meant in practice or what wineries actually do to achieve it. Finally, Mueller and Remaud (2013), based on a cross-national study, find that although social and environmental responsibility claims had highly comparable awareness and penetration and similar consumer trust, marginal WTP for environmentally responsible claims was about three times as high as for the specific socially responsible claim. Moreover, even if the WTP for environmental responsibility was non-negative across all the markets investigated, it was negative for the socially responsible claim in France and Francophone Canada. Pomarici, and Vecchio (2014), based on a survey of 500 Italian respondents, assessed millennial consumer interest and willingness to buy three wines with specific labels certifying environmental, social and ethical attributes (a carbon neutral wine, wine produced on land confiscated from a criminal organization and wine that devolves money to African institutions that combat AIDS). Their findings reveal that the label related to social features (Libera Terra) obtains the highest patronage rate (almost 75% of respondents). Their results show that living in an urban area and being female and older (age cohort 27-35) significantly increase the probability of buying sustainable wines.

Regarding environmentally friendly wines, most papers show a positive willingness to pay. Berghoef and Dodds (2011) reveal that most consumers were at least somewhat interested in purchasing eco-labeled wine and that the majority (65%) were also willing to pay a premium of half a dollar or more, although this WTP can vary among different types of consumer. Brugarolas et al. (2005) estimate the premium price that Spanish consumers are willing to pay for an organic wine with respect to the price of a conventional wine with similar characteristics. Their results show that the average premium price is between 16.29% and 16.92%, depending on the method used. Consumers with a healthy life style are those willing to pay a higher price for an organic wine. Barber et al. (2009) find that consumer environmental knowledge influences willingness to purchase environmentally friendly wines. Barber (2010) shows that the importance of being environmentally friendly, considering environmental issues when making a purchase, and collectivism were all very good predictors of consumers' intention to pay more for green wine packaging. Laoroche et al (2001) investigate the demographic, psychological and behavioral profiles of consumers who are willing to pay more for environmentally friendly products, finding that this segment of consumers were more likely to be females, married and with at least one child living at home. Loureiro (2003) estimated that environmentally friendly wines receive a very limited premium compared with conventional wines. In this line, Delmas and Grant (2014) find that consumers are not willing to pay a premium for wine eco-labels but that certified though unlabeled wine enjoys a significant premium. They demonstrate that effective eco-labels are associated with changes in production processes that result in superior products, even if this might not be necessarily communicated directly to consumers through the label. Delmas and Grant (2014) show that although certifying the wine increases the price by 13%, including an eco-label reduces the price by 20% confirming the negative connotation consumers apply to "green wine".

3. Methodology

To estimate consumers' willingness-to-pay (WTP) for a sustainable wine a survey based on contingent valuation has been designed.

WTP can be defined as the maximum amount a consumer is willing to pay for a given quantity of an item (Kalish and Nelson, 1991; Varian, 1992). Specifically, a questionnaire was designed to test whether consumers would pay a premium price or not (in percentage) for a sustainable wine with respect to a conventional wine with similar

characteristics. The survey was created as an internet based questionnaire, which has been shown to be superior to the traditional offline (paper-and-pencil) method (Sethuraman et al., 2005). The target population corresponds only to wine consumers because contingent valuation has to be applied to goods which are familiar to consumers (Cummings et al., 1986; Bateman and Turner, 1993). According to Tversky and Kahneman (1974), contextual factors such as random starting points (also referred to as anchors) often influence value judgments, such that individuals given a low starting point tend to give lower estimates than those given higher starting points (Chapman and Johnson, 1994). Thus, the participants were randomly divided into three sub-samples and three different anchors were selected (5, 10 and 15 euros) for the price of the conventional wine. In the first question participants were invited to suppose they were going to buy a (5, 10 and 15 euros) bottle of wine and then asked: “Are you willing to pay more for a sustainable wine with respect to a conventional wine with similar characteristics?”. To be realistic, the concept of sustainability wasn’t explained to the participants. In the second question, with an open format, participants were asked about the maximum premium price that they would pay for a sustainable wine with respect to a conventional one. To classify the participants into different segments, information on socio- demographics, lifestyle, attitudes and wine consumption habits was also collected through a multiple item Likert scale that was developed from the OEMV (2009) study. The questionnaire was available online in December of 2014 and distributed and promoted through wine and marketing blogs. After some adjustments to discard incomplete responses, the final sample is comprised of 553 participants (182 in the first sub-sample, 187 in the second sub-sample and 184 in the third sub-sample). Most respondents were aged between 25 and 40 (52.8%) and university educated (52%). In terms of sex, 63.3% were men and 36.7% women.

In order to analyze the impact of several variables on WTP, several parametric tests and regression analyses were employed.

4. Results

Table 1 shows the results of the percentage of premium price that the total sample of consumers is willing to pay for a sustainable wine. In general, from the sample considered, 77.9% of participants would pay a premium price for a sustainable wine. The average premium price consumers would pay is 12.87% (SD=5.32).

Table 1. Average WTP by anchor price for conventional wine.

	Sub-sample 1 (Anchor 5 euros)	Sub-sample 2 (Anchor 10 euros)	Sub-sample 3) (Anchor 15 euros)	Global
<i>% of consumers willing to pay a premium price</i>	82.4	76.5	75	77.9
<i>Average % of premium price (S.D.)</i>	12.53 (5.45)	12.90 (5.32)	13.19 (5.19)	12.87 (5.32)

The average WTP varies slightly depending on the anchor proposed (see Table 1), from a minimum of 12.53 (sub-sample 1) to a maximum of 13.19 (sub-sample 3). This difference is not statistically significant ($F=0.548$; $p=0.578$).

The results show that WTP varies depending on consumers’ knowledge of wine culture. As can be seen in Table 2, as consumers’ knowledge increases the average premium price WTP decreases. This difference is statistically significant ($F=455.75$; $p=0.00$).

Table 2. Average WTP by consumer knowledge of wine culture.

	(1) Beginner	(2)	(3)	(4)	(5) Expert	Global
<i>% of consumers willing to pay a premium price</i>	87.2	76.5	81.2	75	61.6	77.9%
<i>Average % of premium price (S.D.)</i>	18.72 (3.26)	15.02 (3.39)	10.97 (2.31)	8.1 (2.44)	5.08 (2.08)	12.87 (5.32)

Table 3. Average WTP by market segment.

	Traditional	Urban	Trendy	Routine	Occasional	Social	Global
<i>Average % of consumers willing to pay a premium price</i>	76.9%	84.6%	80.2%	70.2%	74.3%	84.1%	77.9%
<i>Average of premium price paid</i>	9.75 (4.79)	13.11 (5.66)	14.41 (5.15)	13.25 (4.57)	11.92 (4.91)	12.97 (5.91)	12.87 (5.32)

Finally, regarding the different market segments, results also show important differences in the WTP between segments. As shown in Table 3, Urban consumers show the highest WTP for a sustainable wine, while Trendy consumers would pay the highest premium price. Occasional and Traditional consumers show the lowest WTP for a sustainable wine. These differences are statistically significant ($F=455.75$; $p=0.00$).

Although previous analyses for the Spanish market only analyze the WTP for an organic wine (e.g. Bugarolas et al., 2005), these results confirm the idea that Spanish wine consumers have a positive attitude towards these wines, that not only do they consider the intrinsic characteristics of the wine itself but also the winery's attitude to sustainability.

In order to explain and predict the WTP for a sustainable wine, several regression analyses have been conducted. Firstly, a logistic regression where the dependent variable is a dichotomous variable that takes the value "1" if the consumer is willing to pay a price premium for a sustainable wine, and "0" if the participant will not pay the premium price. Secondly, an OLS regression where the dependent variable is the percentage of price premium the consumer is willing to pay.

Regarding the first regression, as can be seen in Table 4, the parameter of the variable that considers the participant gender is not significant. Regarding age, results show a positive impact of this variable on consumers' willingness to pay (older consumers are more willing to pay a price premium). Further, the level of knowledge about wine culture has a negative impact on WTP while the level of knowledge about sustainable products has a positive impact on WTP. Finally, the monthly household income variable also has a positive impact.

Table 4. Determinant factors of WTP (Logistic).

	B	S.D.	Wald	Sig.	Exp(B)
<i>Constant</i>	-2.683	0.634	17.913	0.000	0.068
<i>Sex (1=male; 0=female)</i>	-0.049	0.253	0.037	0.847	0.952
<i>Age</i>	0.029	0.012	5.742	0.017	1.030
<i>Level of knowledge about wine culture</i>	-0.432	0.090	22.806	0.000	0.649
<i>Level of knowledge about sustainable products</i>	0.835	0.114	53.995	0.000	2.304
<i>Monthly household income</i>	0.880	0.116	57.155	0.000	2.411

B: estimated coefficient. SD: standard deviation. Wald: $(B/S.E.)^2$. If the Wald statistic is significant (less than 0.05) then the parameter is useful to the model.

Regarding the determinant factors of the percentage of price premium consumers are willing to pay, Table 5 shows that the parameter of the gender variable is significant (females are WTP a higher price premium), but the age variable is not significant. The level of knowledge about wine culture has a negative impact on the WTP a price premium while the level of knowledge about sustainable products has a positive impact. Finally, the monthly household income variable is not significant.

Table 5. Determinant factors of the WTP price premium (OLS).

	B	S.D.	t	Sig.
<i>Constant</i>	20.023	0.556	36.035	0.000
<i>Sex (1=male; 0=female)</i>	-0.511	0.223	-2.290	0.022
<i>Age</i>	0.010	0.009	1.048	0.295
<i>Level of knowledge about wine culture</i>	-3.485	0.079	-44.090	0.000
<i>Level of knowledge about sustainable products</i>	0.503	0.081	6.223	0.000
<i>Monthly household income</i>	0.138	0.087	1.583	0.114
<i>F</i>	401.214			0.000

5. Conclusions.

The objective of this paper has been to analyze the willingness to pay a price premium for a sustainable wine and to estimate the average premium price that consumers are willing to pay for a sustainable wine. The percentage of premium price is given with respect to a conventional wine with the same characteristics. For the first time, this paper analyzes the WTP of the different market segments identified in the Spanish wine market.

Results show that most Spanish wine consumers are willing to pay a price premium for a sustainable wine. Results also show important differences in the WTP between different market segments. Several variables regarding socio-economic characteristics of the consumer and the level of knowledge about wine culture and sustainability affect WTP.

Given that in Spain the consumption of quality wine is in a very competitive situation, the results show that sustainable wines can be considered as a market opportunity for wineries.

However, wineries should not forget that the intention to purchase does not always translate into actual purchase behavior when consumers are confronted with a purchase situation. Thus, future research should try to deal with real situations to evaluate the “real” WTP of the consumer.

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