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How environmental values and beliefs drive the attitude of consumers towards sustainable labeled wine in Italy

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What do we mean for sustainable wine?

- Sustainable vitiviniculture is defined by the OIV as a "Global strategy on the scale of the grape production and processing systems, incorporating at the same time the **economic sustainability of structures and territories**, **producing quality products, considering requirements of precision in sustainable viticulture, risks to the environment**, **products safety and consumer health and valuing of heritage, historical, cultural, ecological and landscape aspects**"
- **Many sustainability programs worldwide and also in Italy**

- CSWA – California
- LODI Rules – California
- Napa Green – California
- NSWG California
- SIP – California
- VineBalance – New York
- WineWise – Washington
- LIVE – Oregon

- SWNZ - Sustainable Winegrowing New Zealand
- EntWINE
- GEM – Good Environment Management

- IPW – Integrated Production of Wine

- Terra Vitis
- AgriConfiance
- Vigneron Development Durable

- V.I.V.A. Sustainable Wine
- SOStain
- Tergeo
- Magis

Key factors when choosing a wine

Sustainable claims compete with other quality cues and attributes in wine purchase

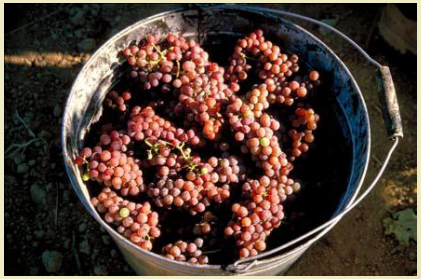
1. Price per bottle
2. Type of wine (e.g. dry/sweet)
3. Colour (red/white/rose')
4. Grape variety
5. Which wines are on promotion
6. Information on the back label
7. Recommendations from friends/relatives
8. Country of origin
9. Brand name
10. …

16. Environmentally sustainable production process

Source: Fearne et al., (2009)

Consumers and sustainable claims

- Background research has shown that people generally appreciate the idea of "sustainable winemaking", but they do not know much about it, its meaning or processes (Zucca et al., 2009).
- Most of the consumers associated the term sustainable to the environmental dimension of sustainability.
- Consumers can be confused by the complex systems of sustainable labelling and some of them are doubtful about “green” claims (Forbes et al., 2009).
- In this case, **sustainable certifications and labels** play a very important role:
  i. to convey useful information for discerning more sustainable wine and, thus promote more sustainable consumption patterns;
  ii. to increase product trustworthiness;
  iii. to "educate" consumers on the topic and the different meanings of sustainability.



Outline of the research

- Exploratory study to investigate in depth consumer attitude for sustainable wine which has been associated with environmental protection value, belief that sustainable products provide benefits for the environment and beliefs about sustainable labelling.
- The objective of this study was to explore which factors (environmental concerns, beliefs of sustainable certification) might influence the attitude towards sustainable wine. Then through Cluster Analysis different groups were identified and examined based on several measure variables.

Courtesy of Bonterra Vineyards.

Methodology

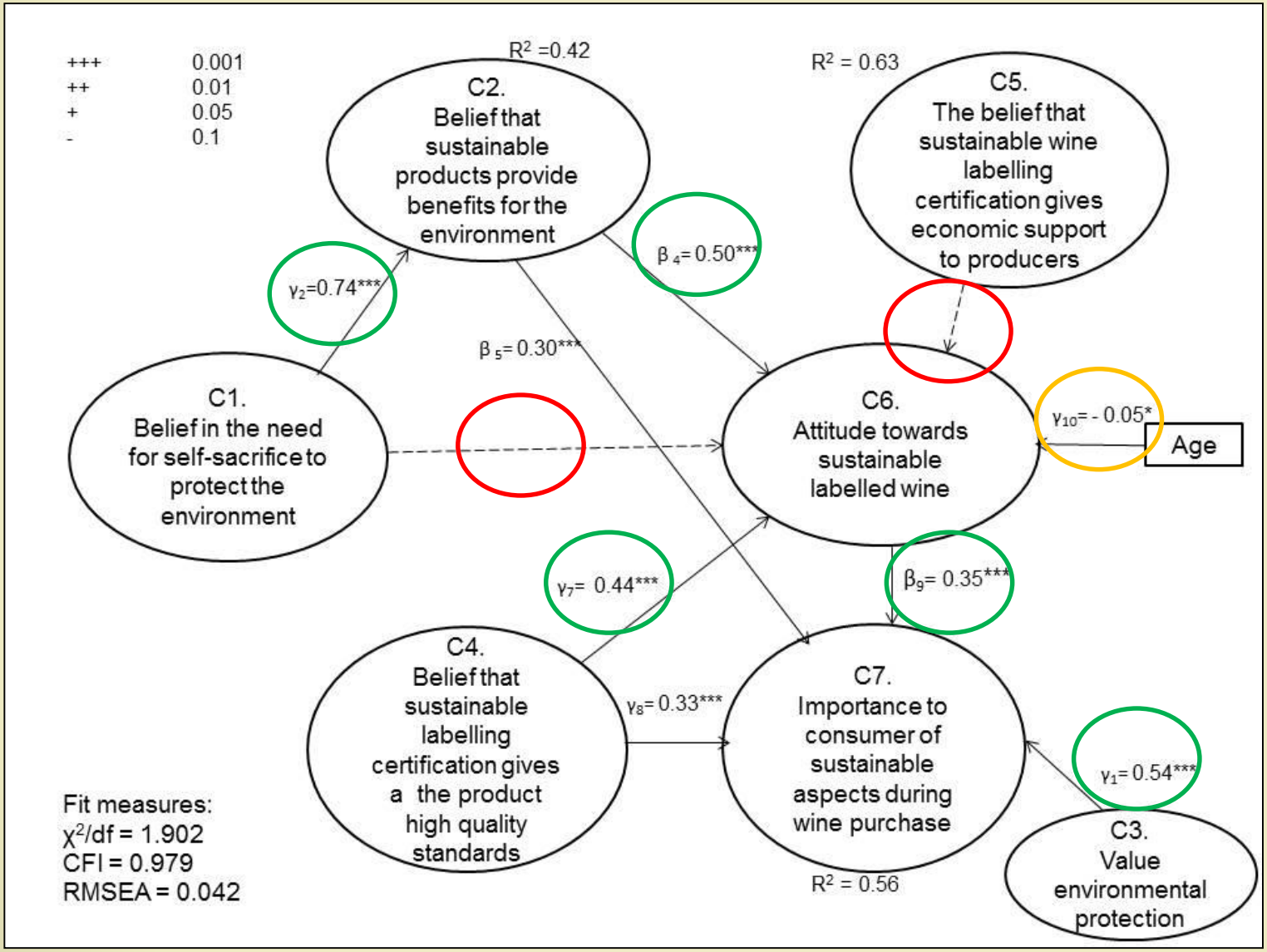
Data were collected with an online questionnaire from 495 Italian wine drinkers in Autumn 2013.

The questionnaire consisted of three blocks of questions:

1) wine consumption and purchase habits (place, frequency, etc.);
2) measure variables such as values, beliefs and attitude towards sustainable labelled wine and willingness to pay for sustainable wine;
3) respondents' demographic and socio-economic characteristics (region of origin, gender, educational level and age).

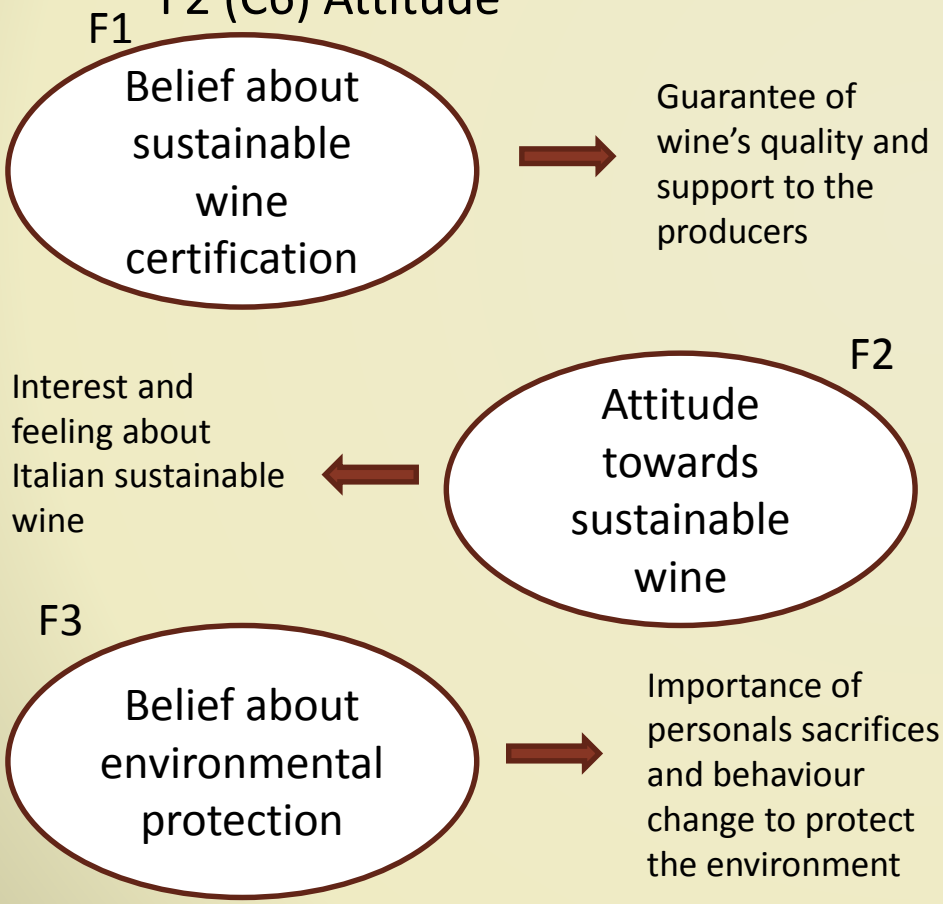
Data analysis: a factor analysis (confirmatory fa) and cluster analysis (quick cluster) has been conducted using SPSS v. 20.0

A previous step of the research was dedicated to evaluate the influence of variables to shape the attitude through a Structural Equation modelling with 6 factors.



Factor Analysis

- FA is used to gather information about the interrelationships among a set of variables and summarize data (Pallant, 2007)
- 16 items (levels of agreement)→ 3 factors
- Variables: F3: Beliefs (C1, C2, C3); F1 (C4,C5) Beliefs in wine cert and F2 (C6) Attitude



Matrix of rotated components (varimax method)			
16 items	Componente		
	1	2	3
X1			0.737
X2			0.768
X3			0.418
X4		0.575	
X5			0.795
X6			0.820
X7	0.679		
X8	0.772		
X9	0.749		
X10	0.748		
X11	0.776		
X12	0.710		
X13		0.764	
X14		0.749	
X15		0.697	
X16		0.786	

Cluster Analysis

- CA to determine whether respondents hold common attitudes and expectations → Identify distinct groups significantly different from each other based on the three factors.
- Four groups were indentified:
- 1: Devoted
- 2: Not interested in EP
- 3: Not belive in certification
- 4: Hostile

Number of cases in every cluster		
Cluster	1	257
	2	63
	3	107
	4	68
Total		495

Cluster	Mean		
	Beliefs sustainable wine certification	**Attitude towards sustainable wine**	**Beliefs environmental protection**
1	0.60	0.23	0.28
2	-0.07	0.02	-2.05
3	-1.20	0.54	0.36
4	-0.32	-1,76	0.27
Totale	0.00	0.00	0.00

Cluster segmentation

Cluster:

1. Very high in the belief about sustainable certification, positive attitude towards sustainable wine, female consumers, age 31-40 years old,
2. Very low belief about environmental protection, mostly younger 18-30 years old,
3. Very positive attitude towards sustainable wine, low belief about sustainable certification, age 51-60 years old
4. Very low attitude towards sustainable wine, mostly male consumers, over 60 years old

Cluster	Frequency of sustainable Food purchase	Frequency of wine consumption	Place of wine purchase
1	High	High	Supermarkets
2	Low	Medium	Supermarkets
3	Medium	High	At the winery
4	Low	High	At the winery

Average WTP % for price level (in green answers more frequent)

Questions		How much do you usually pay for a bottle 75cl of wine?						Total
		1.5€	4.5€	7.5€	10.5€	13.5€	1.5€	
How much would you willing to pay more for a bottle of wine claimed to be sustainable?	Nothing and less than 1€	63.2%	29,1%	20.4%	14.2%	17.5%	13.4%	21.2%
	1,01-2€	21.1%	38,8%	38.7%	25.5%	23.8%	17.9%	30.5%
	2,01-3€	10.5%	15,5%	28.5%	34.9%	27.0%	20.9%	25.3%
	3,01-4€	5.3%	6,8%	9.5%	14.2%	14.3%	14.9%	11.1%
	4,01-5€	0.0%	4,9%	1.5%	3.8%	7.9%	11.9%	4.8%
	More than 5€	0.0%	4.9%	1.5%	7.5%	9.5%	20.9%	7.1%
	Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Cluster	Total (% values)	Price range				
		1.5€	4.5€	7.5€	10.5€	13.5€
1	29,22	45.5	44.2	25.7	23.4	18.8
2	23,77	100.0	30.9	20.0	18.6	9.9
3	26,67	55.6	33.3	27.4	19.4	18.5
4	15,99	33.3	23.1	15.2	13.7	9.6
Total	26,25	50.0	36.7	24.3	20.5	16.2
N	404*	16	98	135	98	57

*Number obtained eliminating outliers

Main results

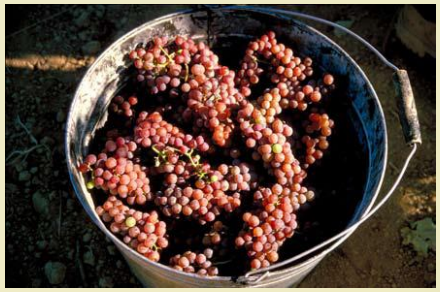
- Consumer with a positive attitude towards sustainable wine and high belief in its certification show the highest % of WTP for sustainable wine.
- Consumer with a positive attitude towards sustainable wine but low belief in its certification are less willing to pay for such products.
- WTP is decreasing meanwhile the average price per bottle increased. Consumers who pay over 10.5€ per bottle have a lower WTP (%) than who pay less than 6€.
- “Credible” WTP raise from 1 to 2 euro.

Final considerations

- Communication strategies about sustainable wine should improve the positive outputs of all the three dimensions of sustainability and look for a trustworthy system of certification labelling.
- In fact, sustainable certification on wine labels may help wineries to become more competitive by differentiating among producers who do not use verifiable sustainable claims for their products.
- Adequate marketing programs (such as a simple sustainable logo on the label) might help consumers to identify sustainable products during wine purchase.

Limitations & future research

- Representativeness of the sample (online survey and limited costs)
- Future research will involve investigating whether a sustainable certification on wine labels might have a positive impact on price (WTP) and the trade-off with other attributes.
- Future research will estimate multi-group model with SEM to asses the behaviour and intention for target consumers.



Thank you for your attention

Courtesy of Bonterra Vineyards.

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