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Marketing Wine on the Web

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1. MOTIVATION AND OBJECTIVES

E-commerce is penetrating agriculture, particularly for selling products directly to consumers. The wine industry is a case in point. The industry has long-term experience in direct marketing. Many wineries welcome patrons at their premises for wine tasting and for selling wine to them. Moreover, where the practice is allowed, shipping wine directly to consumers without the assistance of trade intermediaries is a significant sales channel.

E-commerce was adopted early in the wine industries of wired high-income countries and the wine industry provides an opportunity for studying the adoption, use, and impact of e-commerce. Moreover, because e-commerce has not spread evenly through all branches of agriculture, lessons learned from the wine industry may provide useful insights for entrepreneurs and policy makers concerned with sections of agriculture or the food industry where e-commerce adoption lags behind.

The specific objectives of the dissertation research project which we report here therefore were:

- (1) to assess the extent of e-commerce diffusion in the wine industries of Australia, California, Germany;
- (2) to identify e-commerce practices used by wineries for marketing wine;
- (3) to explain differences in wineries' e-commerce practices, and
- (4) to derive insights and implications for sections of agriculture that lag behind in e-commerce adoption.

The poster reports the most important results of the study and how they have been obtained.

2. RESEARCH APPROACH AND METHODS

2.1 Choice of wine industries

E-commerce practices and their diffusion in the wine industry were expected to be affected by external factors that do not vary within any one country or that vary only by little, such as costs of Internet access and the laws and regulations that govern the marketing of wine. Australia, California and Germany were therefore chosen for study because they were expected to provide sufficient variation in economic conditions, political and regulatory environments, e-commerce readiness, costs of Internet access, and the size distribution of their wineries. Also, the wine industries in Australia, California and Germany are among the largest wine industries in the World in terms of production and exports [FAO 2003; Winetitles 2003].

The wine industries of the three regions differ with respect to the size composition of their wineries and sales channels. California's 850 wineries are predominantly family owned and operated businesses [Wine Institute 2003a]. A small number of large wineries, such as Ernst & Julio Gallo, Robert Mondavi, Beringer Wine Estates and Sebastiani Vineyards, have established brands that are well known at home and abroad and they market their product through established retail channels. Many of the smaller wineries are unknown but to a small band of cognoscenti and they sell wine directly to consumers. The wine industry in Germany is also characterized by many small wine producers, who often market their wines themselves. In contrast to the industry in California, however, there are no large wineries with well established brands and 18 percent of wine is sold directly from the cellar to the consumer, making Germany the country with the highest share of direct sales of wine in Europe [Pomarici, 1999]. The organizations of the Australian and California wine industries are more similar to each other than either is to the German industry.

The regulatory environments differ. The marketing activities of the small wineries in California, which do not have extensive distribution channels, have until recently been obstructed by wine

shipment regulations of most states in the USA and, at the time this research was conducted, only 12 states allowed free trade of wine over state borders [Wine Institute 2003b]. In Germany, in contrast, the production of wine is subject to elaborate European Union (EU) and national regulations but the trade of wine is free within the EU. Australian wine trade suffers from complex tax laws [Australian Taxation Office 2003].

There are likely to be significant differences in the e-commerce readiness of the wine industries in the three countries. In particular, the California wine industry is likely to benefit from the head start in Internet diffusion and the lower PC and Internet access costs.

2.2 E-commerce and transaction costs

Transaction cost theory was used to identify factors that can be expected to determine e-commerce adoption by wineries. Transaction costs are often disaggregated according to certain phases of the transaction [Coase 1937; Dahlman 1979], such as search and information costs, bargaining and decision costs, and policing and enforcement costs. Milgrom and Roberts (1992) distinguish between two subsets of transaction costs: coordination costs and motivation costs, in which the coordination costs comprise similar items as Dahlman's transaction costs. Motivation costs, in contrast, arise from imperfect and asymmetric information and from imperfect commitment within market transactions.

E-commerce is an attempt to exploit the performance and cost advantages of the Internet, especially the World Wide Web (Web), for buying and selling of goods and services [OECD, 2003]. Obviously, different transaction-cost items are affected differently when transactions are in part or in whole conducted on the Web. Buyers' search costs are reduced when wineries post their wine lists on the Web. Price negotiation is unnecessary when wineries post prices on the Web and when specialized Web sites allow price comparisons for identical wines sold through different channels. Also, payment

is made easily when credit cards can be used in e-commerce transactions, and costs of delivery may be reduced if the services of a logistics service provider are integrated into the e-commerce transactions.

Although the coordination-cost component of e-commerce transactions is likely to be lower than in conventional transactions, motivation costs may be higher in e-commerce transactions [Williams 2001]. The Web extends the reach of wineries into unfamiliar markets and brings into contact e-commerce buyers and sellers that do not know each other. E-commerce traders therefore may have to expend additional effort to secure the transactions conducted on the web [Williams 2001].

2.3 Winery survey

We obtained our empirical data on e-commerce practices by wineries from a questionnaire survey conducted in July 2003. The questionnaire consisted of four parts: Wineries were asked about their general characteristics, their current wine marketing practices, their Web site, and about their use of the Internet for business purposes. The questionnaire was slightly modified for each region to account for regional idiosyncrasies.

Respondents were approached by email and requested to fill in a questionnaire on the Web. Access to the online-questionnaire was controlled so that each respondent could submit only one filled-in questionnaire. In addition, a sub-sample of randomly selected wineries in Germany was approached by telephone until 100 responses had been received.

In total 368 filled-in questionnaires were received, mostly from Germany, followed by California and Australia (Tab. 1). The response rate of the respondents that had actually received invitations to participate in the survey was 16 percent.

[Table 1 about here]

2.4 Analysis of results

We analyzed our survey data using several standard uni- and multivariate statistical methods. We also explored whether event history analysis would add insights to the insights gained from binary logistic regressions. Probably because e-commerce adoption was already far advanced in our sample, the gains in insight from event history analysis were negligible.

3. RESULTS

3.1 Web site diffusion

Having a Web site is a must for e-commerce participation by sellers. Web sites have spread quickly in the wine industries of all three regions. In California, where diffusion was the most rapid, 98 percent of all wineries maintain a Web site and Web site diffusion is complete. In Australia, where 87 percent of wineries had a Web site in 2003, the diffusion curve was approaching its ceiling in 2003 (Fig. 1). Only in Germany, where Web site adoption is lagging behind, was diffusion of Web sites still advancing at a rapid rate, particularly among the wineries that had an email address.

[Fig. 1 about here]

Winery size is a main factor determining the adoption, time of adoption and the intensity of using the Internet and its applications, including e-commerce. However, the country where the winery is located conditions e-commerce participation. Compared to German wineries, California wineries are more likely to adopt e-commerce applications and they use their Web sites more intensively for their businesses.

3.2 E-commerce adoption and impact

The regions' ranking with regard to Web site adoption is mirrored by their ranking with respect to the use of the Web for marketing wine: 73 percent of the California wineries used the Web as a sales channel for marketing wine compared to 59 percent in Australia and only 42 percent in Germany.

Wineries were asked if their website had increased the volume of their direct marketing sales. Overall, most wineries (61 percent) answered that their Web site had increased the direct sales (Table 2).

[Table 2 about here]

However, assessments differed between regions. Most California wineries claimed that their Web site had increased direct sales, while only about two out of five Australian and little more than half of all German wineries surveyed reported an impact of their Web sites on direct sales. Nevertheless, our results show that for most wineries having a web site increases the volume of direct marketing sales.

Variables contributing to a Web site's success in terms of increasing direct wine sales are the winery's e-readiness and the maintenance level of the Web site. Wineries that do not solely rely on direct marketing, mostly this are larger wineries, could generate a conflict between sales channels when offering the same product lines on the Web and through distributors. A solution may be to differentiate the product line offered on the Web from the product line offered using other sales channels. California wineries have differentiated their Web- product line, often selling only a selection of their higher priced wines on the Web. In contrast, few Australian and German wineries offer differentiated product lines on the Web as indicated by the differences in average prices of wines offered online and through conventional channels. In addition, California wineries may have recognized that higher priced wines are more likely to be ordered on the Web and have adapted their product accordingly. This confirms the general experience in e-commerce that products with a lower bulk-to-value ratio are more likely to be ordered for home delivery because they are worthwhile transporting [Liebowitz, 2002].

3.3 Transport cost constrain direct marketing of wine over long-distances

The Web was expected to increase wineries' market reach beyond national borders. The expectation has not materialized. Hardly any winery in California and Germany is willing to take orders from abroad.

The few wineries that do, charge high shipping and handling fees. German wineries report that they occasionally receive inquiries from the United States, but the buyers' interest evaporates when they learn the total delivery price, including shipping and handling. An Australian winery shipping abroad charges US\$ 154 per case shipped to the United States and US\$ 188 to the United Kingdom.

Buying and selling wine on the web is still a national, not an international, option and the only marketing potential identified for international sales is the gift order.

3.4 Surprise: The Web promotes winery tourism

Winery tours and wine tasting are tourism activities popular among wine lovers and the web has become an effective means for promoting the wineries' tourism activities. In particular, only 7 percent of the California wineries claimed that promoting tourism activities on the web has not added to their business.

4. IMPLICATIONS FOR OTHER SECTIONS OF AGRICULTURE AND THE FOOD INDUSTRY

Our research was intended to provide useful information for policy makers and managers concerned with promoting the use of the Internet in other sections of agriculture and agribusiness. In our opinion, the key lessons of our research for this audience are: (i) diffusion ceilings for Web sites are likely to be very high – in California the ceiling is nearly 100 percent of all potential adopters; (ii) Web sites promote sales, but e - commerce Web sites, like most business activities, require continuous attention and they must be maintained to be effective; (iii) conflicts between e-commerce and direct marketing channels must be addressed, (iv) expect surprises, as the impact of Web sites on tourism has shown.

5. REFERENCES

- Australian Taxation Office (2003a) "Questions and answers - wine equalization tax." <http://ato.gov.au/taxprofessionals/content.asp?doc=/content/6806.htm> (08/21/03)
- Coase, R. H. (1937) "The Nature of the Firm." *Economica* 10: 386-405.
- Dahlmann, C. J. (1979) "The problem of externality." *Journal of Law & Economics* 22: 141-162.
- FAO (2003) "FAOSTAT - FAO Statistical Databases." <http://apps.fao.org> (08/19/03).
- Liebowitz, S. J. (2002) *Re-Thinking the Network Economy - The True Forces That Drive the Digital Marketplace*. New York: AMACOM.
- Milgrom, P., and J. Roberts (1992) *Economics, Organization and Management*. Edited by A. S. S. C. Prentice Hall Inc. New Jersey: Prentice Hall.
- OECD (2003) "Measuring the Information Economy 2002." *OECD*, <http://www.oecd.org/dataoecd/16/14/1835738.pdf> (09/15/03).
- Pomarici, E. (1999) *Competitiveness of the Western European wine sector.*, in: The European agro-food system and the challenge of global competition. Rome, ISMEA.
- Williams, J. (2001) "E-Commerce and the Lessons from Nineteenth Century Exchanges." *American Journal of Agricultural Economics* 83:5: 1250-1257.
- Wine Institute (2003a) "California Wine Industry Statistical Summary." www.wineinstitute.org (08/21/03).
- Wine Institute (2003b) "Direct Shipment Laws by State for Wineries." http://www.wineinstitute.org/shipwine/analysis/intro_analysis.htm (11/25/03).
- Winetitles (2003) "Australian Wine Industry Overview." <http://www.winetitles.com.au/awol/overview/world.asp> (08/24/03).

TABLES AND GRAPHS

Table 1: Number of respondents approached and responses received from the online-survey of wineries in Australia, California, and Germany

Item	Total	Australia	California	Germany
No. of wineries	7.469	1.624	845	~ 5.000 ⁽¹⁾
Addresses available	1.950	663	699	588
Email invitation delivered	1.690	566	569	555
Web responses received	268	70	89	109
Telephone contacts	100	-	-	100

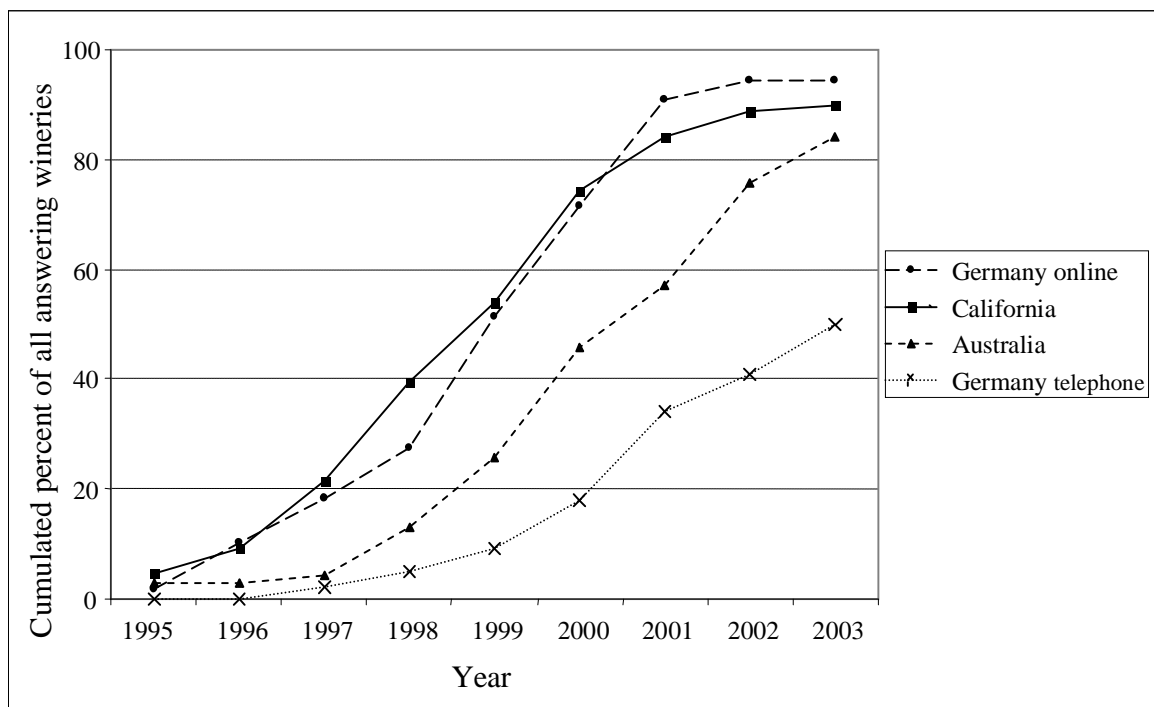
(1) There are about 29.000 wineries in Germany but only about 5.000 participate in wine markets (personal communication, D. Hoffmann, FH Geisenheim, Germany)

Table 2: Relative frequency of wineries that recognize an impact of their website on the volume of direct wine sales (n=233)

Region	Number of wineries	Website has increased direct wine sales*	
		yes [%]	no [%]
California	67	83.6	16.4
Australia	51	43.1	56.9
Germany total	115	55.7	44.3
Germany online	79	63.3	36.7
Germany telephone	36	38.9	61.1
All	233	60.9	39.1

* chi-squared test for contingency tables significant at the one-percent-level

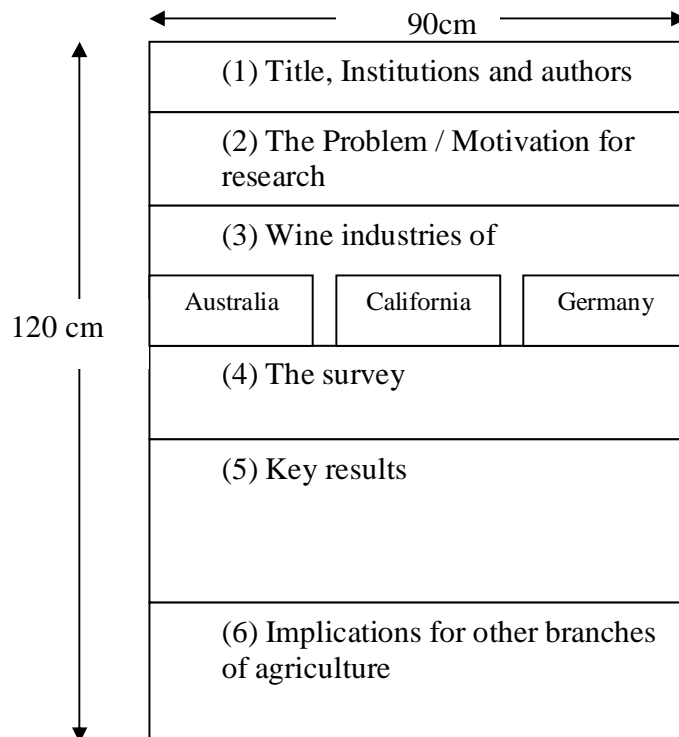
Figure 1: Cumulative share of wineries with websites, by region, 1995 - 2003 (n=368)



Proposal for the layout of the poster

„MARKETING WINE ON THE WEB”

The Poster will be 90cm by 120cm and contain 6 interconnected sections:



1. TITLE, INSTITUTION AND AUTHORS

The topmost section contains the title “Marketing Wine on the Web” and the authors’ names and institutions at application.

2. THE PROBLEM / MOTIVATION FOR RESEARCH

The problem is whether or not and how direct marketing agricultural enterprises profit from marketing their products on the Web. This will be graphically enforced for the observer to directly recognize the research question.

3. AUSTRALIA, CALIFORNIA AND GERMANY

This section will explain why the wine industry was chosen to be studied in order to answer the research question. Also, why Australia, California and Germany were chosen as regions to study will be explained here. The differences in the countries' wine industries in terms of winery size and marketing practices, their e-commerce readiness, as well as their differing regulatory environments will be described here, as they have main impact on the differing e-commerce participation of the wineries surveyed.

This section will also show pictures of vineyards as well as maps from these three areas for the observer to quickly recognize and memorize these regions.

4. THE SURVEY

This section will give an overview over the empirical research conducted to answer the research question. The universe, response rates and sample sizes will be presented in a figure. Also the main characteristics of the respondents are presented in a table, making it possible to get a quick overview and compare the respondents from the three regions.

5. CENTRAL RESULTS

We limit our presentation to four central results to be presented as key statements. These are:

- (a) Transport costs still constrain long distance direct marketing of wine.
- (b) Web wine marketing drives sales.
- (c) High quality / high priced wines sell better on the Web than low quality / low priced wines.
- (d) Surprise: Web increases winery tourism.

Tables and figures will be used to illustrate and underline these key statements. One table or figure is displayed for each statement.

6. IMPLICATIONS FOR DIRECT MARKETING AGRICULTURAL PRODUCTS

This refers back to the problem / motivation for conducting research. Yes, the Web does increase the direct marketing sales of an agricultural enterprise!