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Electronic Service Quality Gaps in the Australian Wine Industry

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Abstract

The wine industry is very important in Australia and the advent of e-commerce has presented the industry with new challenges. This is especially so for smaller wineries in order to reach a wider audience and secure a competitive advantage. The old adage 'the customer is always right' has never been more important, as the foundation stone upon which electronic service quality (e-SQ) lies is customer requirements. Zeithaml, Parasuraman, and Malhotra, (2002) claim that the elimination of e-SQ gaps will lead to customer satisfaction which results in increased perceived e-SQ, value, purchases and repurchases. This paper proposes a formal mathematical definition for e-SQ gaps and a statistical method of testing for the existence of such gaps. This method was applied to a study of Australian winery customers, managers, and websites and it was found that e-SQ gaps did exist. Hence, Australian wineries are not meeting customer website requirements. Further research is being conducted to determine the extent of, and contributing factors to, these e-SQ gaps.

1 Introduction – Australian Wineries and the World Wide Web

The Australian wine industry is growing rapidly and is very important to the Australian economy. The wine industry has gained a new wine producer every 61 hours over the past three years (Winetitles, 2004). In 2000-2001, the wine manufacturing industry employed over 9,000 people and had a total turnover of \$3,575.6 million. An increase in employment of 5% and turnover of 8% since 1998-1999 is further evidence of the continual growth in this industry (ABS, 2002).

There has also been a steady increase in production. The 2004 vintage was a record 1.86 million tonnes, surpassing the 2002 record of 1.51 million tonnes (Strachan, 2004). The top 22 wine companies (parent companies and their subsidiaries) account for 94% of the total sales. This leaves the remaining Australian producers (approximately 1,600) to compete for a market share of only 6% (Winetitles, 2004). The large wineries have a huge market share resulting in competitive advantages over the smaller wineries in terms of distribution and influence with the major retail chains. Hence, the smaller players need to look at other, less traditional routes to markets such as the Internet (ACIL Consulting, 2002). Furthermore, wine production currently exceeds domestic consumption and exports, resulting in an oversupply; further evidence that wineries need to look at other ways of promoting their product with the intent of increasing overall sales (ACIL Consulting, 2002). This has led to a dramatic increase in the number of wine producers adopting a Web presence over the past few years.

Preliminary discussions with several wineries in the McLaren Vale region of South Australia uncovered a similar train of thought: that the winery should have a website because everyone else has one, but the winery managers do not really know how to use it to their best advantage. The prime purpose of this research is to assist wineries like those in the McLaren Vale region to have an effective Web presence by identifying the differences between winery customer website requirements, winery managements' beliefs about customer requirements, and what is currently provided on winery websites. Hence the research question addressed by this research is:

Is there a discrepancy between what customers require from Australian winery websites, what winery managers believe customers require, and what is generally being provided?

By answering the question this research will contribute to knowledge in two areas; it has practical implications and develops theoretical knowledge. Practically, this research is of benefit to the Australian wine industry as a comparison of the data collected from the three phases of this study (customers' survey, winery managers' survey, and website evaluations) provides evidence of e-SQ gaps. Once these gaps are known, winery management can work towards closing them. This will make a visit to the websites more satisfying for the customers and give the wineries a more effective Web presence. The resultant winery website design framework will provide wineries with a tool that will assist them to create a new, or improve an existing, Web presence.

From a scholarly perspective this research brings together theoretical and industry practices resulting in the development of a website design framework for the Australian wine industry. In addition, part of Zeithaml et al.'s (2002) conceptual model for understanding and improving e-service quality will have been tested and proven to be valuable in the context of this study, and as a result of this study a way of measuring e-SQ gaps is under development.

2 Research Method

2.1 E-Service Quality Conceptual Model

This research is based on Zeithaml et al.'s (2002) conceptual model of understanding and improving e-service quality (Figure 1). Electronic service quality (e-SQ) is "the extent to which a Web site facilitates efficient and effective shopping, purchases and delivery of products and services" (Zeithaml et al., 2000) with service including both pre- and post-website service aspects. Zeithaml et al.'s (2002) e-SQ model is a refinement of an earlier and well-accepted conceptual model of SQ (service quality) (Parasuraman, Berry & Zeithaml, 1991). The earlier model was set in the context of traditional SQ, while the revised model focuses on shortfalls in companies interacting with their customers through the Internet.

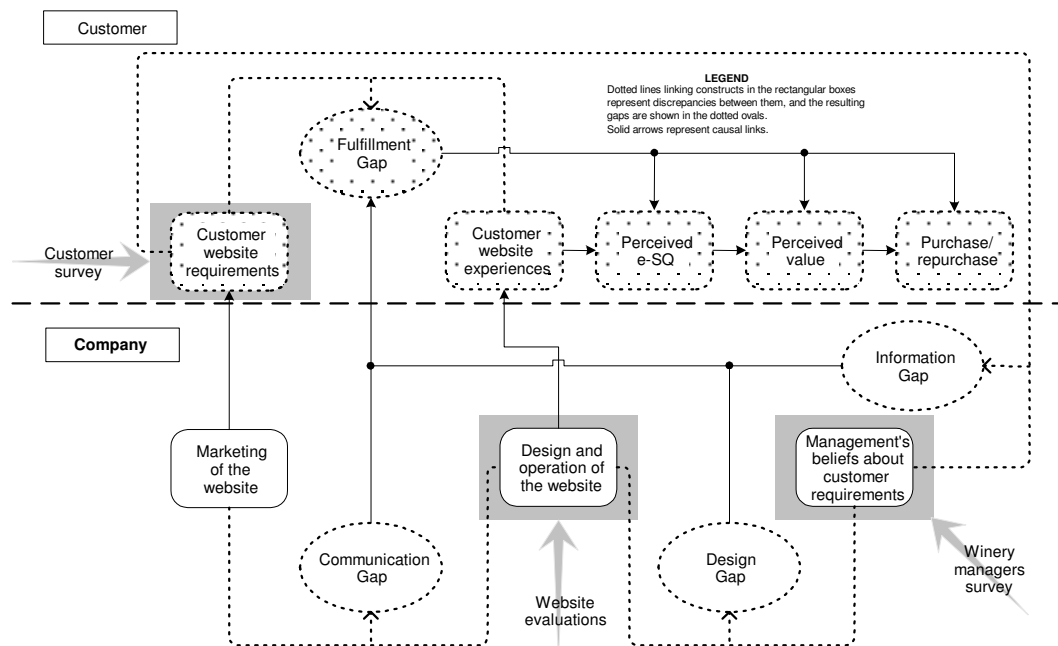


Figure 1: Conceptual Model for Understanding and Improving E-Service Quality

In this model a series of e-SQ gaps are identified, which when present, give rise to customer dissatisfaction. Zeithaml et al., (2002) purports that the elimination of e-SQ gaps will result in a better website experience for customers, with the expectation of experience being based on the customers' website requirements. Hence, the creation of satisfied customers which, in turn will lead to greater perceived e-SQ, value and ultimately purchases and repeat purchases.

The e-SQ gaps identified by Ziethaml et al. (2002) are the information, design, communication, and fulfilment gaps. The information gap represents the difference between customers' website requirements and managements' beliefs about those requirements. The design gap represents the failure to fully incorporate knowledge about customer requirements into the structure and functioning of the website. The communication gap represents the inaccurate or inflated promises made about a website made through traditional media and on the website itself, and the fulfilment gap which represents the discrepancy between customers' requirements and experiences (what they actually receive). The

fulfilment gap stems from the cumulative effects of the information, design, and communication gaps.

The shaded areas in Figure 1 denote where this research fits with the model. Customer website requirements and management's beliefs about customer requirements are measured, in addition to the evaluation of websites. Marketing of the website and the communication gap is excluded from this study due to the inability of the researcher to measure such a concept. Furthermore, the researcher has made no attempt to measure customers' experiences as it is inferred that the quality of the experience will increase as the customers' requirements are met. The result of closing the gaps, and thus having a better website experience, which supposedly leads to greater perceived e-SQ, value and purchases and repeat purchases is also not measured in this study. Therefore, a simplified model that covers the context of this research is presented in Figure 2.

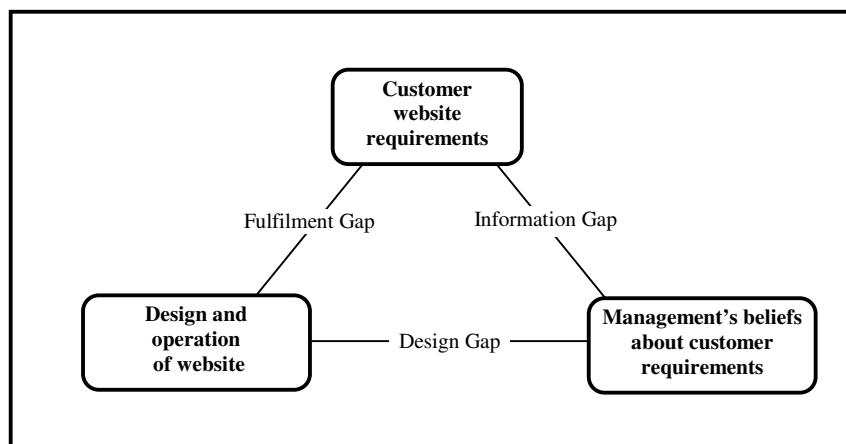


Figure 2: Simplified E-Service Quality Model

2.2 Design and Evaluation Framework

A thorough literature review was conducted to identify the main website design and evaluation frameworks. A website design framework specifically for Australian wineries (Davidson 2002, 2003) was then developed based on the following:

- The evaluation frameworks identified in the literature;
- Web style guides;
- Preliminary investigation of Australian and foreign winery websites;
- Consultation with electronic commerce researchers;
- Personnel in the website design/development industry; and
- Personnel from Australian wineries.

The developed framework is a little different to the norm in that the intention was to capture all of the content and design issues relevant for Australian winery websites, rather than the higher-level approach adopted in the past by researchers such as: Cockburn and Wilson (1996), Ho (1997), Burgess and Cooper (1999, 2000), and Timmers (2000). This website design framework, that was developed in previous research (Davidson 2002, 2003), is used in this research to underpin

the website evaluations and customer and manager surveys. These are used to gather data to determine the respective gaps as defined in the following section.

2.3 Formal Definition of E-SQ Gaps

From the simplified e-service quality model (Figure 2), it follows that there is no overall e-service quality gap when:

- The winery manager knows what the customer requires and there is no information gap.
- The website developer implements what the winery manager knows and there is no design gap.
- The customer gets what the customer requires and there is no fulfilment gap.

If there is not an information gap, winery managers' know exactly what customers require. Hence, there would be a perfect positive relationship between customer and manager responses. That is, when customers are asked of their website requirements, their responses will agree with winery managers' beliefs about customer requirements.

Similarly, there will be no design and fulfilment gap when there is a perfect positive relationship between managers' beliefs and the design and operation of the websites, and the websites and customers' requirements. These relationships can be shown graphically. A 'no gap exists' and a 'gap exists' situation is illustrated in Figures 3 and 4 respectively.

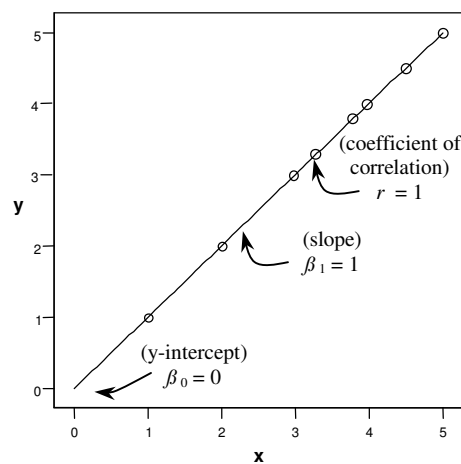


Figure 3: Scatterplot Representing 'No Gap Exists'

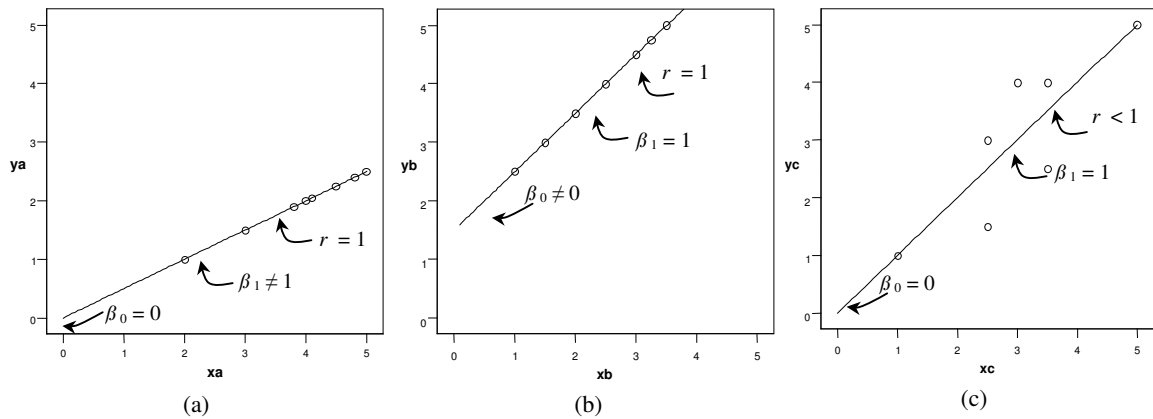


Figure 4: Scatterplots Representing ‘Gaps Exist’

The position of the y-intercept (β_0), the slope of the regression line (β_1), and the coefficient of correlation (r) influence the existence and extent of a gap. In a perfect positive relationship no gap exists and the line of regression intercepts the y-axis at zero ($\beta_0 = 0$), has a slope of one ($\beta_1 = 1$), and a coefficient of correlation of one ($r = 1$). Conversely, any deviation from these three conditions will result in the presence of a gap. Technically, r should equal 1, (as well as $\beta_0 = 0$ and $\beta_1 = 1$) for a perfect relationship. However, it is unusual for all data to occur in a straight line (Zar, 1999, p. 327) which would result in the condition $r = 1$ never being satisfied when in fact it could be very close. Therefore, a threshold for r is set at 0.75 (as recommended by Zar, 1999). Hence, the $r = 1$ condition becomes $r \geq 0.75$ and any r value that is significantly less than 0.75 results in a rejection of the condition.

2.4 Data Collection and Analysis

2.4.1 The Hypotheses

To answer the research question three hypotheses were formulated; one for each of the three e-SQ gaps. These hypotheses are based on the simplified e-SQ model (Figure 2) and the formal definition of e-SQ gaps presented in the previous section.

The three hypotheses are:

1. ***H₀: There is no information gap***
 - There is no difference between what customers’ require on winery websites and what winery managers believe customers’ require.
 - All of: $r \geq 0.75$, $\beta_0 = 0$, and $\beta_1 = 1$.
- H₁: There is an information gap***
 - There is a difference between what customers’ require on winery websites and what winery manager believes customers’ require.
 - At least one of: $r < 0.75$, $\beta_0 \neq 0$, or $\beta_1 \neq 1$.

2. ***H₀: There is no design gap***

- There is no difference between what winery managers' believe customers' require and what is implemented on winery websites.
- All of: $r \geq 0.75$, $\beta_0 = 0$, and $\beta_1 = 1$.

H₁: There is a design gap

- There is a difference between what winery managers' believe customers' require and what is implemented on winery websites.
- At least one of: $r < 0.75$, $\beta_0 \neq 0$, or $\beta_1 \neq 1$.

3. ***H₀: There is no fulfilment gap***

- There is no difference between what is implemented on winery websites and what customers' require on winery websites.
- All of: $r \geq 0.75$, $\beta_0 = 0$, and $\beta_1 = 1$.

H₁: There is a fulfilment gap

- There is a difference between what is implemented on winery websites and what customers' require on winery websites.
- At least one of: $r < 0.75$, $\beta_0 \neq 0$, or $\beta_1 \neq 1$.

To test these hypotheses data was collected from the following three sources and analysed:

- an evaluation of Australian winery websites;
- a survey of Australian winery customers; and
- a survey of Australian winery managers

2.4.2 Website Evaluations

A sample of 260 winery websites were chosen from a population of 796 using proportionate stratified random sampling based on size and geographical location of the winery to ensure that the sample fairly represented Australian winery websites. The researcher viewed all websites and conducted the evaluations. The evaluations involved scoring a 0-not present, or 1-present, for each of the 134 variables (Appendix A). Following the website evaluations, and after further discussions with website developers and e-commerce researchers, the design and evaluation framework was refined before commencing the customers' and managers' surveys.

2.4.3 The Customers' Requirements and Managements' Beliefs about Customers' Requirements Surveys

Two on-line survey instruments were developed. One instrument asked customers to rate the importance of 90 website features on a five-point Likert scale of 1-not important to 5-very important. The other survey asked managers to rate their beliefs about customers' requirements on a similar scale (Appendix B).

Customers were invited to participate by wineries, and through referrals made by participants. Wineries were asked to forward a letter onto their customers. This

letter invited customers to participate and provided the Web address of the on-line survey.

All managers of Australian wineries with websites for which there was also an email address and a manager's name available in the *Wine Industry Directory* (Winetitles, 2004) database were asked to participate. This resulted in a sample of 1,050 from a population of 1,163. Managers were invited to participate via a personalised email.

Both surveys were automated as much as possible. Personalised invitations were sent to winery managers and the customer referrals. Data entered and submitted via the html survey forms was piped into a MySQL database using php scripts. To enable easy downloading and monitoring by the researcher a password protected script was activated from an administration page on the web server that piped the data from the MySQL database into an Excel spreadsheet.

2.4.5 The Statistical Tests

The hypotheses are tested using correlation and regression analysis. Simple linear correlation and regression is used to determine the linear relationship between the pairs of variables. To test for $H_0: r \geq 0.75$, Fisher's (1915 cited in Zar, 1999, p.381) r to z transformation is used with a one-tailed test and a critical value of $Z_{\alpha(1)\infty} = t_{\alpha(1)\infty} = 1.6449$. For ease of understanding and consistency with the tests for β_0 and β_1 the 95% confidence interval for z is calculated then transformed back to an upper and lower limit for r . Therefore, for $H_0: r \geq 0.75$ and $H_1: r < 0.75$, if the upper or lower bounds of the 95% confidence interval are greater or equal to 0.75, accept H_0 .

The tests for the slope and y-intercept use the 95% confidence interval for β_1 and β_0 respectively. For $H_0: \beta_1 = 1$ and $H_1: \beta_1 \neq 1$, if 1 falls within the upper and lower bounds of the 95% confidence interval, H_0 is accepted. For $H_0: \beta_0 = 0$ and $H_1: \beta_0 \neq 0$, if 0 falls within the upper and lower bounds of the 95% confidence interval, H_0 is accepted. In summary:

- $H_0: r \geq 0.75$ is true if L or $U \geq 0.75$;
- $H_0: \beta_0 = 0$ is true if $L \leq 0 \leq U$; and
- $H_0: \beta_1 = 1$ is true if $L \leq 1 \leq U$.

A level of significance of 0.05 was chosen for this research, as 0.05 is the most conventionally accepted level for most business research (Cavana et al., 2001, p.271). Thus, there is a 5% chance of making a Type I error of rejecting H_0 and declaring there is an e-SQ gap when in fact there is not.

3 Results

3.1 Response Rate

As stated in section 3.2.3, a total of 1,050 winery managers were invited to participate in the manager survey, which yielded 171 usable responses. Thus a useable response rate of 16.3% was achieved, which compares favourably with

on-line survey response rates that are usually lower than equivalent mail surveys (Crawford, Couper & Lamias, 2001).

Invitations to participate in the customer survey relied on winery managers inviting their customers and referrals. It is not known how many wineries forwarded the 'customer invitation to participate' onto their customers or, of those that did, how many customers they passed it onto. Nor is it possible to know accurately how many referrals were made as not all used the automatic referral system but preferred to send their invitation onto their friends. Therefore, it is not possible to calculate a response rate for the customer survey. However, 401 persons visited the customer survey site of which 358 were usable.

From the sample of 260 websites, 228 were evaluated. Thirty-two sites (12.3%) were not retrievable or were under construction.

3.2 Respondent Profile

The profile of the manager respondents and retrievable websites were checked against their samples. The similar proportions in terms of size and location provide evidence that the results are a fair representation of the populations.

3.3 Non-Response Bias

Responses for both the manager and customer surveys were checked for questionnaire non-response and item non-response bias. It was found that there was no statistically significant difference between late and early responders (managers), winery invitees and referrals (customers), or those that answered all questions and those with at least one response missing (customers and managers), indicating no bias.

3.4 The Data

Tests were performed on the median value for each question in the customer and manager surveys and the standardised percentage that an item recorded 'present' for in the website evaluations. The median is used since it is the statistic most appropriate for describing the central tendency of scores in an ordinal scale (Siegel & Castellan, 1988, p.27). The percentage present is standardised to a value between 1 and 5 so that it is on a comparable scale to that of the customers' and managers' medians.

3.5 Hypotheses Testing

The three hypotheses were tested using the statistical tests described above. The key figures and tests are shown on Table 1. A '✓' in the column headed '*t*' indicates that the relevant test is true. The last column states whether H_0 is accepted or rejected based on the results of the three tests.

Each of the three null hypotheses has been rejected and the alternative accepted, establishing that information, design, and fulfilment e-SQ gaps do exist.

Hypotheses - Descriptive test	Test	t	r	r 95% CI	Test	t	β_0	β_0 95% CI	Test	t	β_1	β_1 95% CI	Test Result
1 H_0 : There is no Information Gap H_1 : There is an Information Gap	$r \geq 0.75$ $r < 0.75$	✓ ✓	0.922	L 0.8917 U 0.9447	$\beta_0 = 0$ $\beta_0 \neq 0$	✓ ✓	0.313	L 0.010 U 0.616	$\beta_1 = 1$ $\beta_1 \neq 1$	✓ ✓	0.910	L 0.829 U 0.992	Reject H_0 Accept H_1
2 H_0 : There is no Design Gap H_1 : There is a Design Gap	$r \geq 0.75$ $r < 0.75$	✓ ✓	0.542	L 0.4062 U 0.6544	$\beta_0 = 0$ $\beta_0 \neq 0$	✓ ✓	-0.659	L -1.626 U 0.308	$\beta_1 = 1$ $\beta_1 \neq 1$	✓ ✓	0.794	L 0.533 U 1.054	Reject H_0 Accept H_1
3 H_0 : There is no Fulfilment Gap H_1 : There is an Fulfilment Gap	$r \geq 0.75$ $r < 0.75$	✓ ✓	0.431	L 0.2775 U 0.5629	$\beta_0 = 0$ $\beta_0 \neq 0$	✓ ✓	2.98	L 2.652 U 3.312	$\beta_1 = 1$ $\beta_1 \neq 1$	✓ ✓	0.298	L 0.166 U 0.430	Reject H_0 Accept H_1
H_0 : All of $r \geq 0.75$, $\beta_0 = 0$, and $\beta_1 = 0$					r 95% Confidence Interval for $r - H_0: r \geq 0.75$ true if L or $U \geq 0.75$								
H_1 : At least one of $r < 0.75$, $\beta_0 \neq 0$, or $\beta_1 \neq 1$					β_0 95% Confidence Interval for $\beta_0 - H_0: \beta_0 = 0$ true if $L \leq 0 \leq U$								
t - ✓ if test is true					β_1 95% Confidence Interval for $\beta_1 - H_0: \beta_1 = 1$ true if $L \leq 1 \leq U$								

Table 1: Hypotheses Test Results

4 Summary

4.1 Limitation of the Study

The customer and manager survey questions were derived from a B2C website design framework that had been developed for Australian wineries specifically for this study. A limitation is that customers and managers were not given an opportunity to report requirements that were not on the survey. It is possible that customers have requirements that have inadvertently been omitted from the framework and therefore from the survey.

The Web is a medium that reaches all corners of the world and it must be recognised that the customer respondents to the survey were either already on a winery customer list or were invited to take part by those customers. Since the wineries were all Australian wineries it is likely that most of the respondents were Australian residents and were already familiar with winery information and sales procedures. Therefore, this research is restricted to how winery websites meet the needs of Australian customers only, even though the websites are available to a global audience.

Winery managers were asked to rate how important they thought it would be to a customer to find the listed characteristics on a winery website. It is possible that they did not think in terms of customer importance but instead rated the characteristics on how important they felt the items were themselves. Thus giving a false indication of the differences between customer requirements and management's beliefs about customer requirements.

4.2 Conclusion and Contribution

This study has proven that e-SQ gaps do exist in the Australian wine industry. The research question has been answered and it was found that *there is a discrepancy between what customers require from Australian winery websites, what winery managers believe customers require, and what is generally being provided.*

This means that customer requirements are not always known by winery managers and implemented on the websites resulting in customer dissatisfaction. According to Zeithaml et al. (2002) this dissatisfaction will lessen the customers' perceived e-SQ, value and ultimately result in less purchases and repeat purchases.

From a theoretical perspective the following contributions have been made:

- e-SQ gaps have been defined mathematically; and
- A method of statistically testing for the existence of e-SQ gaps has been developed.

Determining the existence of e-SQ gaps highlights to winery managers and their website developers the need to give more thought to customer requirements in order to make websites that are an effective business tool. However, for this research to be more useful an indication of the size and cause of the identified e-SQ gaps would be an important addition. The above contributions are significant but have the potential to be more so when combined with an innovative method for measuring the size of e-SQ gaps. To measure the extent of the e-SQ gap a formula is being devised that takes into consideration the variables of the slope that determine the existence of the gap (r^2 , β_0 , and β_1). This will give a gap measurement in the range of zero to 100 that will allow easy comparison and visualisation of the problem areas.

The design framework that was developed for the Australian wine industry, and which formed the criteria upon which the evaluations and surveys took place in this study, is being further refined after taking into consideration the survey results. This framework should provide a useful guide to winery managers and website developers. Both the measurement scale and refined framework will be the subject of further papers.

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Appendix A: Website Evaluations

The items listed below were evaluated as either being present or not present on the winery websites.

Company Information	Previous Orders	Value-Added Features
<ul style="list-style-type: none"> ◆ Company Details <ul style="list-style-type: none"> • Name • Address • Phone • Fax • E-mail • Contact name 	<ul style="list-style-type: none"> • Previous orders remembered • Customer details remembered 	<ul style="list-style-type: none"> ◆ News / Information <ul style="list-style-type: none"> • Press releases • Employment opportunities • Special offers • New product announcements • Best buys
<ul style="list-style-type: none"> ◆ Geographical Location* <ul style="list-style-type: none"> • Geographical Zone* 	<ul style="list-style-type: none"> ◆ Cross Selling / Up Selling <ul style="list-style-type: none"> • Similar products • Complementary products 	<ul style="list-style-type: none"> ◆ General Information & Features
<ul style="list-style-type: none"> ◆ Investor Information <ul style="list-style-type: none"> • Annual financial reports • Quarterly financials • Aust. Security & Investment Commission filings • Analyst reports • Stock quotes 	<ul style="list-style-type: none"> ◆ Customer Service <ul style="list-style-type: none"> • Accessories • Gift boxes • Personalised labels* • Food and wine packs* • Corporate gift service • Trade section • Flexible purchasing* <ul style="list-style-type: none"> - mixed dozen - dozen lots • On-line customer service • Delivery/order status on-line • Customer wish list • Surprise bonus/discounts on ordering • Loyalty discounts • Choice of delivery 	<ul style="list-style-type: none"> • Wine making information* • Wine storage information* • Wine ageing information* • Complementary food* • Wine show awards* • Virtual tour of winery* <ul style="list-style-type: none"> - video clips - 360 degree images • Tourism promoted* • Accommodation promoted* • Restaurant promoted* • Foreign languages • Contact facility <ul style="list-style-type: none"> - browser based email - Web form • FAQs • Members / wine club* • Electronic newsletter • Chat room / bulletin board • Contests / give-aways
Product Information	<ul style="list-style-type: none"> ◆ Wines* <ul style="list-style-type: none"> • Description* • Tasting notes* • Price • Technical notes* • Tasting chart* • Best seller list • Reviews* <ul style="list-style-type: none"> - by consumer - by winemaker - by professional 	Navigation
Sales and Ordering	<ul style="list-style-type: none"> ◆ Off-Line Orders <ul style="list-style-type: none"> • Method of ordering <ul style="list-style-type: none"> - phone - post / fax • Fill in form before printing • Prices and freight calculated before printing 	<ul style="list-style-type: none"> ◆ Navigation
<ul style="list-style-type: none"> ◆ On-Site Tasting and Sales* <ul style="list-style-type: none"> • On-site tasting and sales promoted* • Opening hours* • Cellar address* • Location map 	Content, Organisation, and Timeliness	<ul style="list-style-type: none"> • Breath-emphasising design • Depth-emphasising design • Breath and depth-emphasising navigation • Primary and secondary menus • Site structure • Site map • Search facility <ul style="list-style-type: none"> - local to site - external - advanced • Broken links • Error statements • Links to home page on every page • Links to external Web sites <ul style="list-style-type: none"> - relevant - irrelevant • Link descriptions meaningful • Standard link colours • Link titles • Use of frames
<ul style="list-style-type: none"> ◆ External Distributors <ul style="list-style-type: none"> • Name • Location • Address • Phone • Fax • E-mail • Contact name • Web site link 	<ul style="list-style-type: none"> ◆ Content <ul style="list-style-type: none"> • Home page <ul style="list-style-type: none"> - name - navigation - summary - search facility • Company name in title • Page description in title • Contact on each page • URL on each page • Clarity • Short pages 	Aesthetics
<ul style="list-style-type: none"> ◆ On-Line Orders <ul style="list-style-type: none"> • Availability • Clear procedure • Easy to edit/view order • Order retained while within site • Order retained between sessions • Price & freight calculated • Export freight prices • Currency converter • Order confirmation • Payment options <ul style="list-style-type: none"> - post - phone - credit card on-line • Secure transaction • Form validation 	<ul style="list-style-type: none"> ◆ Organisation <ul style="list-style-type: none"> • Good use of screen space • Supports different browsers • Supports different monitor sizes • Printer friendly • Readily located by search engines 	<ul style="list-style-type: none"> ◆ Aesthetics <ul style="list-style-type: none"> • Interesting • Aesthetically pleasing • Same branding/logos used across site • Font sizes not fixed • Goals / objectives of website met • Text only option • Sensational effects / multi media
<ul style="list-style-type: none"> ◆ On-Line Orders <ul style="list-style-type: none"> • Availability • Clear procedure • Easy to edit/view order • Order retained while within site • Order retained between sessions • Price & freight calculated • Export freight prices • Currency converter • Order confirmation • Payment options <ul style="list-style-type: none"> - post - phone - credit card on-line • Secure transaction • Form validation 	<ul style="list-style-type: none"> ◆ Timeliness <ul style="list-style-type: none"> • Last updated date on each page • Download time (< 10 seconds) 	
<ul style="list-style-type: none"> ◆ On-Line Orders <ul style="list-style-type: none"> • Availability • Clear procedure • Easy to edit/view order • Order retained while within site • Order retained between sessions • Price & freight calculated • Export freight prices • Currency converter • Order confirmation • Payment options <ul style="list-style-type: none"> - post - phone - credit card on-line • Secure transaction • Form validation 	<ul style="list-style-type: none"> ◆ Security and Privacy <ul style="list-style-type: none"> • Security statement • Privacy statement 	
<ul style="list-style-type: none"> ◆ On-Line Orders <ul style="list-style-type: none"> • Availability • Clear procedure • Easy to edit/view order • Order retained while within site • Order retained between sessions • Price & freight calculated • Export freight prices • Currency converter • Order confirmation • Payment options <ul style="list-style-type: none"> - post - phone - credit card on-line • Secure transaction • Form validation 		
<ul style="list-style-type: none"> ◆ On-Line Orders <ul style="list-style-type: none"> • Availability • Clear procedure • Easy to edit/view order • Order retained while within site • Order retained between sessions • Price & freight calculated • Export freight prices • Currency converter • Order confirmation • Payment options <ul style="list-style-type: none"> - post - phone - credit card on-line • Secure transaction • Form validation 		
<ul style="list-style-type: none"> ◆ On-Line Orders <ul style="list-style-type: none"> • Availability • Clear procedure • Easy to edit/view order • Order retained while within site • Order retained between sessions • Price & freight calculated • Export freight prices • Currency converter • Order confirmation • Payment options <ul style="list-style-type: none"> - post - phone - credit card on-line • Secure transaction • Form validation 		

* denotes an element that is specific to the wine industry

Appendix B: Customer and Winery Manager Surveys

Customers and winery managers were asked to rate the importance of the following items on a scale of 1-not important to 5-very important. The questions in parenthesis were asked to winery managers. They are slightly changed from the customer questions to reflect asking the manager their beliefs about customers.

General and product information presented on the website

If you were visiting a winery website, how important is it that the following information is available on the site? [How important would it be to a customer visiting a winery website to find the following information?]

1. The winery name, address, phone, fax and email
2. Names of people to contact at the winery
3. Winery region (e.g. Barossa, Hunter Valley etc.)
4. Investor information (e.g. financial reports, stock quotes etc.)
5. Detailed description of the wine available
6. Price of the wine by the bottle
7. Price of the wine by the case
8. Technical notes for each wine: (e.g. Analysis: Alc/Vol: 13.5%, pH: 3.54, Acidity: 6.0g/L)
9. Tasting chart (e.g. a chart that clearly shows the intensity, dryness, body, acidity, tannin, oak, and complexity of the wine)
10. Bestseller list (e.g. a list that shows what other customers have been purchasing)
11. Reviews of the wines by:
 - a. the wine maker
 - b. professionals (show judges, newspaper columnist, etc.)
 - c. other consumers
12. Cellar door tasting and sales opening hours
13. Address and map to the cellar door
14. External distributors' details
15. The ability to place orders over the Internet

On-line orders

If orders can be placed over the Internet, how important is it that: [If orders can be placed over the Internet, how important is it to the customer that:]

16. A partially completed order is retained while viewing other pages in the site or another site
17. Price and freight is automatically calculated
18. Export freight prices are provided
19. A currency converter is provided
20. A detailed confirmation of the order is returned immediately upon placing the order
21. Several payment options are made available (i.e. you are not restricted to only paying by credit card over the Internet)
22. Any exchange of information is secure to prevent another party viewing it
23. Forms can not be submitted unless all the required information is present
24. Your details and previous orders are remembered and recalled to facilitate placing subsequent orders
25. Similar products are suggested when placing an order

Additional products and services

How important is it that these products and services are offered: [How important is it to the customer that these products and services are offered:]

26. Accessories such as glassware, bottle openers, and wine-related books
27. Wine in gift boxes
28. Wine with personalised labels (e.g. to celebrate an anniversary)
29. Wine and food packs (e.g. specialised regional foods such as nuts or cheeses)
30. A gift service (e.g. you give the winery a list of recipients' names and addresses and choose a wine, and the winery sends it to them on your behalf)
31. The ability to purchase wine by single bottles, not dozen lots
32. The ability to purchase wine by mixed cases, not a case of all the same variety
33. To be able to check on your order status on-line (i.e. to see when your order was packed and shipped)
34. The provision of a customer wish list (so that you can click on items that interest you and review this list at a later time)
35. To be given a choice of delivery methods
36. To receive bonuses or discounts when ordering

Other ordering methods

How important is it to have other ordering methods such as:

[How important is it to the customer to have other ordering methods such as:]

37. The provision of an order form that can be printed and posted/faxed
38. To be able to fill such a form in before printing it
39. For this form to automatically calculate prices and freight

- 40. The facility to email orders
- 41. The facility to take phone orders

Content, Organisation & Timeliness

How important is it to have the following: [How important is it to the customer to have the following:]

- 42. The company name and description in the title bar (the title bar is the blue bar across the top of your browser window, when you bookmark a page this is what appears in your favourites list)
- 43. Contact details for the winery on every page of the site
- 44. The Web address on every page of the site (written on the page itself, not just appearing in the address box)
- 45. To know when the page you are viewing was last updated
- 46. To have pages that take no longer than 10 seconds to download
- 47. A security and privacy policy that clearly states how your personal information will be used and kept confidential (e.g. if you were placing an order, your name, address and credit card information)

Extra features

How important is it to have the following features on a winery website:

[How important is it to the customer to have the following features on a winery website:]

- 48. Press releases
- 49. Details of employment opportunities
- 50. Special offers
- 51. New products
- 52. Best buys
- 53. Wine making information
- 54. Information on how to store wine
- 55. Information on which wines will age best
- 56. Information on complementary foods to eat with different wines
- 57. Details of awards won at wine shows
- 58. Video clips of the winery
- 59. 360 degree images of the winery
- 60. Photographs of the winery
- 61. Promotion of local tourism (sights, accommodation, restaurants etc.)
- 62. Web pages available in foreign languages
- 63. The facility to contact the winery on-line by email
- 64. The facility to contact the winery on-line by filling in a form
- 65. A Frequently Asked Questions (FAQs) section
- 66. A wine club that provides special offers for members
- 67. An electronic newsletter
- 68. A chat room / bulletin board
- 69. Contests and give-aways

Navigation

How important to you are the following navigational aids:

[How important to the customer are the following navigational aids:]

- 70. A site map (a page with links to all pages of the website) that shows the pages that you have already visited and the page that you just came from
- 71. To be able to search the winery site for key words
- 72. Relevant links to external sites (e.g. links to other wine industry and local tourism/accommodation sites)
- 73. Use of standard colours for links (i.e. blue for unused links and red for used links)
- 74. Use of frames (i.e. the division of the screen into areas which can keep the main items in view at all times but also limit what can be seen)

Aesthetics

The following relate to the general look and feel of a web page. Please tell me what you like and do not like about a web page? [The following relate to the general look and feel of a web page. Please tell me what you think the customer likes and does not like about a web page?]

These questions were rated on a scale of 1-Do not like to 5-Really like.

- 75. Colourful web pages
- 76. High contrast between the text and the background colour
- 77. Text size that is not too small (easy to read)
- 78. Animated or moving objects
- 79. Cluttered web pages
- 80. Lots of images
- 81. Long pages
- 82. Every page on a site to have the same menu and structure
- 83. To be able to alter the writing size
- 84. Sensational effects – (e.g. video clips, multi media presentations, animated images)
- 85. Short paragraphs
- 86. No headings
- 87. Bulleted lists
- 88. Multiple linked pages