The Role of “Information” in Wine Consumers’ Online Purchasing Intent

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Abstract

Australian domestic sales of wine totalled AS$1.435 billion in 1999 but few purchase wine online. The role of information during decision making when purchasing online is more important than when purchasing at a Bricks and Mortar outlet. The study collected 80 questionnaires; 40 from two cellar door businesses and 40 from two liquor stores. Potential online wine consumers appear to place significantly more importance on fulfillment than on brand and business information. Four fulfillment information items occupied the highest rankings of importance; they were for privacy, financial transaction security, return of goods policy and delivery of items. Purchase location, outlet types, gender, income and age had limited effects on information importance.

Keywords

Online purchasing, Information management, Web design, Wine industry

INTRODUCTION

Australian household wine consumers purchase of wine contributes significantly to the Australian economy. Australian domestic sales of wine totalled AS$1.435 billion in 1999 (Trewin 1999) and makes up AS$4.40 of the AS$20.43 spend on alcoholic beverages by Australian households in 1999 (Skinner, 1999). The potential to increase the percentage of wine in spending on alcoholic beverages is increasing with the emergence of the World Wide Web (Web) on the Internet, a media which enables convenient online purchasing. Skinner (2001) estimates 66% of Australian adults use a computer in the household and 47% of adult computer users access the Internet.

The Internet’s potential for shopping is due to the weakness inherent of Bricks and Mortar (BM) outlets. Theirs is the limited shelf space they have to display and stock products (Gladstones, 2000); in contrast a Web site can display as much stock as desired. BM outlets therefore tend to only stock well-known brands, ones that will sell. This leaves lesser-known brands struggling to enter the retail market and the consumers household (Gladstones, 2000) and consumers disadvantaged because they can’t choose from a larger variety of wines.

Not much is known about the current usage of the Web for the sale of wine. While about 50% of wine companies now have a Web site (Anonymous, 2002a), the success of these web sites is unclear and figures are not available to ascertain the amount of dollars spent online for wine. Skinner, (2001) found 4% of Australian adult Internet users have purchased alcohol online but could not provide a break down of alcohol categories included in this figure. The potential to increase the percentage of the Australian population, estimated to be around 6.4 million (Skinner, 2001), above 4% would open significant opportunities for wine firms to market their products without having to rely on traditional BM outlets.

THE ROLE OF INFORMATION

Solomon (2002) describes the consumer decision making model as consisting of five parts: problem recognition (a perceived need for the product); information search (finding information about the product); evaluation of alternatives (going to the store, comparing information and choosing among products); product choice (choosing a product) and outcomes (taking receipt of product). The role of information during decision making is particularly important since “it assumes that the consumers will gather as much data as needed to make an informed decision. Consumers form expectations of the value of additional information and continue to search to the extent that the rewards of doing so exceed the costs. This utilitarian assumption also implies that the most valuable units of information will be collected first.” (Soloman, 2002, p.261).
Soloman (2002) encapsulation of the importance of information in the purchasing intent of consumers was developed for the BM environment. The question arises what role does information play in influencing purchasing intent in the online environment of the Web. Information required for the Web environment is different to information available at BM outlets. For example, in BM outlets the payment of goods is at the shop counter and goods are received immediately while for the Web payment and product delivery are part of complex order fulfilment processes. The latter requires information such as how payment of goods can be made, how delivery will take place, and the security and privacy of online transactions.

In deciding which types of information to include into our research into the role of information during online purchasing intent we took the following into account.

- **Brand information.** Berlin (2000) asserts brand information is important to developing the buyer-seller relationship and that if a pre Web retailing reputation of the brand doesn’t exist then the business faces a struggle trying to establish themselves in the virtual environment. This may favour established or known wine labels. In contrast, however, Archetype/Sapient (1999) found “7 of the 12 most trusted sites originated on the Web and have no presence outside of it”, indicating that a pre e-retailing reputation need not exist.

- **Business information.** Berlin (2000) points to a substantial problem with Web retailing in that there is no interaction with a physical entity, unlike the BM environment where the consumers decision making process is linked with physical interaction between consumer and sales outlet. For example, in the latter case, the salesperson can provide information about the wine, the wine maker etc, while for the former this needs to be displayed explicitly on the Web site. Research is needed of how much information should be displayed to ameliorate the absence of physical proximity.

- **Fulfilment information.** The fulfilment process includes the ordering, paying and delivery of a purchase order. Fulfilment involves many issues in the online environment, for example ordering and paying involves the consumer sending personal and financial information over the web. Furthermore, the consumer must wait for the product to be delivered rather than taking possession of it on purchase and may therefore want access to information enabling order tracking and assurance on goods return.

**Brand Information**

Archetype/Sapient (1999) define brand as “the corporations promise to deliver specific attributes and its credibility based on reputation and the visitors possible previous experience”. Deliver specific attributes are considered by Archetype/Sapient (1999) as characteristics of the product that ‘consumers are aware of’. In the wine industry Clarke (1999) supports grape variety as an attribute of the wine product that consumers look to when considering wine. The origin of the grape, traditionally, has indicated the quality of grape and subsequently the wine produce (Forrestral, 2000) but this may be changing and quality wines may no longer be dependent on particular origins (Clarke, 1999). However, origin may be important since Hoffman (1999) found that Web user were concerned about Web site authenticity.

The credibility a business is established in part by its size (Doney, 1997) and popularity within the market (Soloman, 2002). Credibility is further established through what Archetype/Sapient (1999) define as ‘reputation’ and ‘previous experience’. In the wine industry a credible reputation is established through its company name eg. Evans and Tate and further under this name is the actual wine variety itself ie. Margaret River Shiraz, Margaret River Merlot etc. The second component of credibility, ‘previous experience’, requires a consumers repetitive experience with a brand brought about mainly by having tasted the wine before. For the online environment this is not possible but can be affected by what others say about the product (Doney, 1997). Specifically, Clarke (1999) identified two ways wine can be reported on, namely industry awards and reviews written about the wine.

**Business Information**

Lohse (1997) highlighted the significance of physical proximity between buyer and seller and its importance in the online environment by suggesting that Web site design had to take this into account. In the wine industry, the consumer would encounter the outlet itself and a number of people such as the vineyard owner and winemaker. To replicated their physicality, photos and information about them could be displayed on the Web site. The information provided by the seller would also have to be provided on the Web site and would include the organisation’s mission statement and other like documents.

A potential major difficulty facing online consumers is dealing with unknown businesses (Hoffman, 1999). Online purchasers are geographically dispersed who may question the legitimacy of online businesses because it would be difficult to verify physical existence especially if they are located outside national borders. Not knowing much about the business and not being able to see it physically makes determining the size of the
business difficult for the online consumer. Jarvenpaa (2000) asserted “a store’s size assists consumer’s in forming their impressions regarding the store” (p. 48). In the wine industry size is measured by the amount of grapes crushed (Anonymous, 2002) but by itself wouldn’t mean much to the consumer. However, crushing large quantities of grapes should equate to large sales volumes and product lines which the consumer understands. This gives the perception of ‘big and successful’ rather than the stores actual physical size (Jarvenpaa, 2000).

**Fulfilment Information**

Consumer issues with fulfilment relate to the perceived risks of placing orders and making payments over the Web. Jarvenpaa (2000) argued that “The most significant long-term barrier for realising the potential of Internet marketing to consumers will be the lack of consumer trust, both in the merchant’s honesty and in the merchants competence to fill Internet orders.” (p. 45) Berlin (2000) also found consumers consider not being able to touch a product before purchase and not being able to take it away as fundamental problems in purchasing online. Furthermore, Hoffman (1999) found the majority of Web users did not feel safe in giving credit card information over the Internet. To overcome this concern, Archetype/Sapient (1999) found “security brand seals of approval like VeriSign, when recognised, do communicate trustworthiness” and hence provide financial transaction security.

Hoffman (1999) found that nearly 20% of users from the 1997 CommerceNet/Nielson Internet Demographic Survey would not get what they ordered. Archetype/Sapient (1999) found that order tracking ability and information about return policy and recourse in combination with delivery established good customer rapport. Information should also be provided about privacy practices. Wang (1998) defines privacy as “unauthorised collection, disclosure, or other use of personal information as a direct result of electronic commerce transactions”. The inclusion of a privacy statement is a significant attempt to counteract privacy concerns.

![Figure 1: The Information Framework](image-url)

**RESEARCH METHODOLOGY**

**Study Design and Conduct**

The research was conducted through a questionnaire-based survey. The questionnaire items were divided into four sections, brand, fulfilment, business and demographic information. Opinions were captured on a Likert scale; consumers were asked to respond on a scale of 1-5 with ‘5’ representing very important to ‘1’, which represented not important at all. Pre-testing was conducted using six academics who had in common their demonstrated ability to design, develop and conduct questionnaires.

Known BM liquor outlets were chosen to collect data. Specifically two vineyards (cellar door) and two liquor stores, one of each, were chosen from two different regions (i.e. a metropolitan and a regional area). The wine consumer population sample was chosen by soliciting participation of the consumer when they exited a visitation from a retail liquor business or a vineyards cellar door. The questionnaire was completed face-to-face. Participants were approached after making a purchase. The consumer’s participation in the study was free and voluntary. A brief explanation introducing the questionnaire was provided and consumers were then asked to participate in the research at which time they were given the questionnaire. The introduction on the questionnaire provided a broader purpose. Consumers took less than 10 minutes to complete the questionnaire.
including the reading of the introduction. Altogether 80 questionnaires were collected; 40 from two cellar door businesses (1 regional, 1 metropolitan) and 40 from two liquor stores (1 regional, 1 metropolitan).

**Data Reliability and Validity**

The reliability of each item was tested individually in its own section (brand, fulfilment, business information) and collectively as a whole using Cronbach’s alpha technique. Collectively reliability testing using Cronbach’s alpha technique is .83 indicating an acceptable score and medium to strong reliability. This means the 23 items making up brand, fulfilment and business information are a good measure of a consumer’s online wine purchasing intent (StatSoft, 2001).

Cronbach’s alpha calculated on the 8 item brand information was .6548; the deletion of items increased the score but only marginally. Cronbach’s alpha for the 5 item fulfilment information was .79, an acceptable score (StatSoft, 2001; Williamson, 2000) and the deletion of items did not increase the score. Cronbach’s alpha, calculated on a 10 item business information was .84, an acceptable score. Again the deletion of items would increase the score but only marginally.

Content validity has to be considered in terms of measuring the range of meanings included within the consumer purchasing intent concept (Burns, 2000; Williamson, 2000). The questionnaire had been designed to measure the consumer purchasing intent through attitude scales and the grouping of questions has been based on the theoretical framework, developed in this paper, which addresses the three area’s brand, fulfilment, business information thought to form the purchasing intent of consumers online.

**DATA ANALYSIS**

**Demographics**

Table three shows demographic information collected from 80 received responses.

<table>
<thead>
<tr>
<th>Demographics</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>40</td>
<td>50</td>
</tr>
<tr>
<td>Female</td>
<td>40</td>
<td>50</td>
</tr>
<tr>
<td><strong>Age Groups</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-24 years</td>
<td>11</td>
<td>13.8</td>
</tr>
<tr>
<td>25-39 years</td>
<td>31</td>
<td>38.8</td>
</tr>
<tr>
<td>40-54 years</td>
<td>31</td>
<td>38.8</td>
</tr>
<tr>
<td>55-64 years</td>
<td>6</td>
<td>7.5</td>
</tr>
<tr>
<td>65+ years</td>
<td>1</td>
<td>1.3</td>
</tr>
<tr>
<td><strong>Gross income of household</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$0-$24,999</td>
<td>9</td>
<td>11.3</td>
</tr>
<tr>
<td>$25,000-$49,999</td>
<td>18</td>
<td>22.5</td>
</tr>
<tr>
<td>$50,000-$74,999</td>
<td>24</td>
<td>30.0</td>
</tr>
<tr>
<td>$75,000-$99,999</td>
<td>17</td>
<td>21.3</td>
</tr>
<tr>
<td>$100,000+</td>
<td>11</td>
<td>13.8</td>
</tr>
</tbody>
</table>

There is equal representation of males and females although 25-39 year olds or 40-54 year olds mainly represent age groups. A majority of respondents (85%) use the Internet; however only 27% have purchased online and only 3.8% have purchased wine online supporting the need for research in this area and specifically the need to develop a model for e-retailers and online wine consumers.

**Importance of Information**

Mean and standard deviations for fulfilment, brand and business information items are shown in Table 2. Each sections item is ranked according to its mean.

<table>
<thead>
<tr>
<th>Table 2: Means and Standard Deviations of Information Importance</th>
</tr>
</thead>
<tbody>
<tr>
<td>(“1 = not important  5 = very important”)</td>
</tr>
</tbody>
</table>
Based on group means online wine consumers appear to place importance on fulfilment (mean 4.46), followed by brand (mean 3.35) and business information (mean 2.86) respectively when considering an online wine purchase. The differences in mean ratings was statistically significant at p<.000 according to t-tests. Individual items above the average mean for each group were as follows:

Fulfilment information (mean 4.46)
- Privacy statement (4.76)
- Financial transaction security (4.60)
- Return of goods policy (4.56)

Brand information (mean 3.35)
- Region/origin of wine (3.93)
- Location of seller of wine (3.80)
- Brand name recognition (3.74)
- Company name recognition (3.44)
- Industry awards (3.40)

Business information (mean 2.86)
- Company contact information (4.22)
- Location of outlet (3.89)
- Winemaker information (3.28)
- Length of business existence (3.19)
• Information about owner (2.86)

The importance of fulfilment information is further indicated by the finding that four of the items are ranked highest of all the items and the fifth item (order tracking) is ranked sixth highest behind one business information item (company contact information) which is ranked fifth highest of all twenty-three items.

Differences in Ratings

Difference testing was performed to determine whether a wine consumer’s purchasing intent is dependent on the location where the data was captured, namely regional (Bunbury) and metropolitan (Perth). The Mann-Whitney U test revealed four variables where statistically significant differences existed at p<.05. Regional respondents regarded ‘financial transaction security’, ‘return of goods policy’ and ‘geographic location of outlet’ more important than metropolitan respondents while the opposite was found for ‘volume of wine produced’.

When the Mann-Whitney U test was applied to outlet type (retail liquor store or winery) two variables showed statistical significance (at p<.05): ‘recognising brand name’ and ‘company name is recognisable’. The first indicated retail liquor shop patrons give greater importance to recognising a brand name than their winery counterparts. In support ‘company name is recognisable’ liquor shop patrons gave greater importance to this than winery counterparts. Although ‘information about the wine maker’ was marginally short of reaching statistical significance at p<.05, it is worth indicating winery patrons considered this more favourably in their online wine purchasing intent than retail liquor shop patrons.

The Mann-Whitney U test was applied to gender and the only statistically significant difference (at p<.05) was ‘privacy statement’. Females regarded ‘privacy statement’ more important to purchasing intent than males. On closer inspection regional females consider ‘privacy statement’ more important than metropolitan females.

To evaluate the differences in responses between the five income groups, the Kruskal-Wallis test was used. Two variables indicated significant difference at p<.05, namely ‘seller of wine is located in country I am living’ and ‘privacy statement’. Post hoc comparisons using the Mann-Whitney test demonstrated a significant difference (p<.05) as follows: participants with income of $0-$24,999 rated ‘privacy statement’ lower than other income groups up to $99,999, and those earning $75,000-$99,999 considered privacy more important than the $100,000+ income groups. For ‘seller of wine is located in country I am living’, at p<.05, the $75,000-$99,999 group considered the variable more important than the $0-$24,999 and $50,000-$74,999 groups.

A Kruskal–Wallis test was conducted to evaluate the differences between five age groups. Two variables indicated significant difference at p<.05 – ‘privacy statement’ and ‘photos of winemaker’. Post hoc comparisons using Mann-Whitney showed that the 25-39 and 40-54 year old groups considered ‘privacy statement’ more important than other age groups. The 18-24 year old age group considered ‘photos of winemaker’ more important than 55-64 year old age group and so did the 25-39 group compared to the 40-54 and 55-64 groups. This indicates older age groups are less inclined to put emphasis on photos of the winemaker.

To summarise the findings above where particular information items were rated statistically significantly more important for one variable than another the following summary is provided:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Fulfilment information</th>
<th>Brand information</th>
<th>Business information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional location</td>
<td>Financial transaction security</td>
<td>Recognising brand name</td>
<td>Location of outlet in same country</td>
</tr>
<tr>
<td>Metropolitan location</td>
<td>Return of goods policy</td>
<td>Recognising company name</td>
<td>Volume of wine produced</td>
</tr>
<tr>
<td>Retail outlet</td>
<td></td>
<td>Recognising brand name</td>
<td></td>
</tr>
<tr>
<td>Females</td>
<td>Privacy statement</td>
<td>Recognising company name</td>
<td></td>
</tr>
<tr>
<td>Income $75,000-$99,000</td>
<td>Privacy statement</td>
<td>Location of wine seller in same country</td>
<td></td>
</tr>
<tr>
<td>Age 18-24</td>
<td></td>
<td></td>
<td>Photo of wine maker</td>
</tr>
<tr>
<td>Age 25-39</td>
<td>Privacy statement</td>
<td></td>
<td>Photo of wine maker</td>
</tr>
<tr>
<td>Age 40-54</td>
<td>Privacy statement</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
DISCUSSION OF FINDINGS

The group mean for fulfillment information was 4.46 suggesting wine consumers consider this information most important to their online wine purchasing intent. The rating was statistically more important than the other two types of information. The highest rated item in this section, with a mean of 4.76 and the low standard deviation of .64, was for the privacy statements. These findings support the research conducted by Wang (1998), Archetype/Sapient (1999) and Berlin (2000) who found online consumer fears relating to the disclosure of personal information to businesses over the Internet is of great concern to consumers. This research has found that this perceived risk flows onto the online wine consumers purchasing intent.

Further analysis revealed the following findings in respect of privacy. Females considered privacy more important than males and specifically regional females consider privacy more important than metropolitan females. Furthermore, the low income group (up to $24,000) considered privacy less important than other income groups and it appears that the income range of $75,000-$99,000 rated privacy most important. There were also differences between age groups. Those aged 25-39 and 40-54 years considered 'privacy statement' more important than other age groups. These findings cannot be interpreted without further research.

Other items that were important for fulfillment were the financial security associated with paying for the items ordered, policy regarding return of products, the delivery of items and being able to track orders. In an online environment these are all significant since they differ from BM outlets where there is a physical contact between the purchaser and the seller. First, payments made over the Internet need to take place over a secure communications channel and the information about the means of payment such as a credit card need to be hidden from potential hackers. Second, if the goods are not of the quality as promised a number of new issues arise; for example can products be returned, where and how can they be returned, who pays for the costs of the return, etc. In respect of the delivery of goods the concern exists, reinforced by news stories, that goods do not arrive, do not arrive on time such as for a festive season or of a quality different to the one promised. This concern can be overcome by enabling the buyer to track the status of the order and provide clear and comprehensive information about order fulfillment.

Second most important was brand information with a mean of 3.35. The lesser importance of this type of information is in contrast to the findings of (Archetype/Sapient, 1999) and Berlin (1999) who found brand information was of highest importance to online consumers. The difference in results may be attributable to this research being industry specific. In other words, wine consumers may consider lesser known brands more favourably than someone shopping for an electrical appliance where brand is more important. Further this may indicate brand, from a WWW site design perspective, needs to be considered on an industry-by-industry basis as to its importance to online wine consumers. In the wine industry however it is clear brand generally is not a primary concern of online wine consumers.

Items within brand information section show a high degree of variability further indicating brand is not generally important. The highest mean is 3.93 for region/origin of wine indicating some degree of importance. In the online environment, wine consumers have shown concern about where wine is coming from but for reasons different from the quality assurance aspects first thought by Clarke (1999) and Forrestal (2000). This has been concluded because grape variety as determined by Forrestal (2000) as an indicator of grape quality was not considered as important by online consumers. Therefore origin of grape must be considered by online consumers for other reasons. These other reasons become apparent when considering other results. Because ‘location of seller’ variable is almost as high as region/origin of wine it can be suggested online wine consumers are more concerned with purchasing a product within their geographical scope indicating physicality is an issue.

Our findings on the linkage of company name (mean 3.44) and brand name (mean 3.74) in consumers’ purchasing intent supports those of Kotler’s (1989). However generally these items are only given marginal importance in the online purchasing intent process. Similarly, industry awards and reviews written about wine are given little importance by online wine consumers in their purchasing intent indicating that previous experience with the wine may not be an issue. This is an interesting result because Doney(1997) determined consumers are influenced by what others say about a product. This may indicate online consumers are more information sensitive and self-reliant.

The group mean for business information was 2.86, significantly lower than the other types of information. Findings suggest interaction with other people is not an issue for online wine consumers purchasing intent. Therefore the display of photos or information about key personnel on the web site is not important to online consumers. However company contact information did feature as medium to strong in a online wine consumers purchasing intent (mean of 4.22), indicating that physicality between consumers and salespeople isn’t as much an issue as the physicality between consumer and the actual business. These findings conflict with those of Lohse(1997) who asserts the importance of site design taking the place of the salesperson. Our research shows online wine consumers are more concerned with knowing about the business they are dealing with rather than...
the any person working for the business which in part is supported by Hoffman (1999) who determined consumers don’t like dealing with unknown businesses. The number of products for sale has shown medium strength importance for online consumers supporting to some extent Jarvenpaa’s (2000) claims that online consumers perception of the store is determined by its size which leads to a positive effect on purchasing intent.

We established a number of significant differences when establishing the effects that location, outlet type, gender, income and age had on the ratings of information items (see Table 3). It is quite noticeable that for fulfillment information, a privacy statement is considered very significant by females, those in a high income group ($75,000-$99,000) and those in the early and middle stages of their life (25-54 years). For brand information, it was found that those purchasing wine in retail outlets regarded a recognisable brand name and company name significant. In the category of business information, only the wine maker photo was rated significantly high by two groups, namely those aged 18-24 and 25-39. One can only speculate why these differences existed. For example, one could argue that females and those in high income groups are more aware of protecting their privacy because of potential higher vulnerability when it comes to personal and income protection.

CONCLUSIONS AND SUGGESTIONS

The study’s objectives was to identify and evaluate the information that potential wine consumers would take into account and to what extent they would do so when considering purchasing wine over the Internet. We reasoned that information was critical in online purchasing as the physical aspects of purchasing are significantly reduced. In an online environment, purchasing intent is affected in an informational rather than in a physical manner and information search, a part of the consumer decision making model, takes on increased importance. This is reflected in the information send to the consumer by the producer and information received by the consumer.

When wine consumers rated the importance of information for purchasing wine online, we found that fulfilment information was significantly more important than the other two types of information, namely brand and business. Four items occupied the highest rankings of importance; they were for privacy, financial transaction security, return of goods policy and delivery of items. A business information item, namely company contact information occupied the fifth ranking. These five items were also those rated above 4 on a 5-item scale.

As indicated in the introduction the potential for online wine purchasing is very high because Australian domestic sales of wine totalled ASS1.435billion in 1999 and only 4% of Australian adult Internet users have purchased alcohol online. If this percentage is increased and the share of wine purchasing as well, then the online media of selling will become very significant to wine producers and sellers. By giving them an insight into the information regarded by potential online wine purchasers and by managing this information effectively they should be able to maximise their share of this lucrative market in future.

Our study was based on a quantitative survey approach and thus is not able to fully explain reasons behind the findings. We were able to provide some interpretation by comparing our findings to research that had preceded us but we are not able to explain them fully in the context of this study. Further understanding will require qualitative research and should involve interviews with potential wine consumers either individually or in focus groups. This approach is particularly required in order to explain the variations we found in responses when considering the effects of location, outlet, gender, income and age.

REFERENCES


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