RESEARCH

Abstract

This paper explores the use of e-commerce in the distribution channel of the wine industry with an emphasis on the North American market. After achieving early attention from e-commerce pioneers, a number of initiatives to sell wine online have failed dramatically – their business models were not commercially viable – and significant investments have been lost in the process. In this paper, we comment on some of these initiatives and propose a set of general principles to guide online business entry and evolution. The exposition and discussion of our principles provides general lessons regarding the success potentials of the various business models across domains.

Keywords: e-commerce, success factors of business models, wine industry

The US Wine Industry and the Internet: An Analysis of Success factors for Online Business models

JUDITH GEBAUER AND MARK GINSBURG

INTRODUCTION

There is a broad range of Internet-based Electronic Commerce (e-commerce) applications that firms may utilize to develop business strategies in the digital age. Such initiatives can bring about significant changes of business processes or even industry structures, as early examples have demonstrated. Initial enthusiasm and optimism have given way to doubt and uncertainty, as some early online business models proved not to be viable. Although they defined basic architectures for products and services, modelled information flows and described possible sources of revenue (Timmers 1998), the early dot.com ‘gold rush’ was marked by a failure to link the abstract business model description to its commercial viability. As Timmers points out (Timmers 1998) it is essential to link the business model to a marketing model – the nature of the competitive advantage, the positioning of this advantage, the marketing mix and the product–market strategy.

One area that has received attention from the beginning of the commercial use of the Internet was the online retailing of wine. Together with online book retailer Amazon and online auctioneer Onsale, Virtual Vineyards emerged early on as an example of innovative, Internet-only business models (Ware et al. 1998). Several years later, however, expectations still have not been met with online sales making up only a tiny fraction of overall sales. In 2000, online wine retailing accounted for $100M, or approximately 0.5% of the total US retail sales, only half of the one-percent average share of online commerce (census.gov). Early estimations of growing the share of online retailers to 5% to 10% (or $1.4bn to $2.9bn) in 2005 (Swartzberg et al. 2000) proved to be wildly optimistic – a failure in the business model/marketing model linkage. Since the market was overestimated, the revenue was also overestimated and the viability of a basic wine-on-the-Internet model was greatly weakened. In mid 2001, after having lost a total of $240M, and shortly after an unsuccessful merger with WineShopper.com, Virtual Vineyards, which had renamed itself to Wine.com, went bankrupt. It had to sell off its state-of-the-art technology and office equipment at auction. Some of Wine.com’s assets, including the name and customer list, were bought by rival eVineyard, which...
continues to operate the site. Other wine ventures, such as Sendwine.com, suffered a similar fate.

In this paper, we take a closer look at the opportunities and challenges for e-commerce in the US wine industry. Our analysis is based on two exemplary cases, interviews with industry representatives and available industry data, which reveal interesting insights in the online manoeuvring of the players as the wine industry tentatively embraces the Digital Age under the restrictions of a complex regulatory environment. The strategies, good and bad, that have been seen in this highly dynamic product area advance our general knowledge of success factors for online businesses. Thus, helping to develop a better understanding of what it takes to instantiate commercially viable e-businesses.

ONLINE INITIATIVES IN THE WINE INDUSTRY – TWO CASE STUDIES

Wine was one of the products that received early attention by Internet-only retailers. The e-business pioneers envisioned the Internet as a platform to reach new outlets, markets of global dimensions, virtually infinite product selections, intimate customer relationships, low cost and streamlined distribution chains (Mougayar 1998). These expectations were well grounded in the properties of the Internet, such as providing new distribution channels, allowing universal customer access, one-on-one marketing opportunities, no need for physical presence and direct producer-to-customer relationships (Afiauah and Tucci 2000). In addition, the wine market itself showed strong growth in particular in the lucrative high-end segments (Swartzberg et al. 2000).

We will describe two typical examples of initiatives to market wine online: Wine.com and Winetasting.com. Our insights are based on a number of interviews that we conducted in the second half of 2001 with representatives of the companies, as well as with industry experts. In addition, we utilized information on industry practices and e-commerce developments available in trade press publications and newspaper articles. The examples will serve as a background to derive a set of principles for e-business models.

Wine.com

Founded in 1995, the online-only wine retailer Wine.com (formerly VirtualVineyards) has received attention in the literature (Gerace and Klein 1996; Ware et al. 1998) for its early Internet launch.

Wine.com (with a primary consumer focus) merged with competitor WineShopper.com (with a primary logistics focus and a highly automated warehouse infrastructure, reminiscent of another spectacular failure, WebVan) in 2000, followed by a 25% reduction of the combined staff in early 2001. The combined company reported $30 million in sales in 2000. As the two companies traditionally had different foci and models of how to place themselves within the regulatory distribution framework, and in addition faced a difficult business environment with shrinking investment funds, the merger was fraught with difficulties and eventually failed.

The initial Wine.com had a strong merchandising, personal and educational focus and a loyal online customer base, using the knowledge and reputation of its founder, Peter Granoff, to support the higher-priced brands. In contrast, WineShopper strived to include a larger part of the downstream value chain into its business model (in particular the distributor tier) and provided for an industry-wide solution. The differences of dealing with the distribution system were interesting: Wine.com had been bypassing the traditional channels of the wine industry, and taken the effort to negotiate individual licensing agreements to distribute a wine. As a result, the site featured only a few thousand bottles, many from abroad. Wine.com offered good prices on its limited selection. WineShopper made a conscious decision to include the established channels into its business model and acted as ‘another form of distributor’, as one of our interview partners put it. Its online catalogue essentially provided a single access point to the inventory of a network of wholesalers, retailers and individual wine producers across the country. As WineShopper was not a retailer and typically did not take ownership of its products, it was not able to set the prices for its wares but listed the prices of its individual wine partners who were also responsible for the fulfilment. The results were possible price differences between different states due to various state and local laws. The plus to the consumer was a very large selection (up to 20,000 different wines) on the site.

As mentioned above, parts of Wine.com’s assets, in particular its name and customer list, are now owned by the Portland, Oregon based eVineyard (www.evineyard.com). This online retailer offers more than 5,000 domestic and imported brands through its online catalogue. eVineyard’s business model is based on a set of retail licenses, currently including 27 states. Compared to Wine.com’s operations in 40 states, this means a reduction in geographical scope, but it allows the company to circumvent buyer agents or brokers.

WineTasting

Winetasting.com is the online venture of an established catalogue retailer (Ambrosia). It uses a kiosk model to provide an umbrella and single entry point to the individual websites of about 50 high-end wineries that enter into a subscription arrangement under the stewardship of Winetasting’s CEO, Leslie Berglund. The site helps wineries to establish an online presence,
and to reach out to consumers directly over the Internet. The site also offers community-creating features, such as a digital tasting tool. Participating wineries tend to value the site as a marketing instrument, allowing them to deepen brand awareness in the market and to support customer relationships. In general wineries, especially smaller ones, tend to be cautious not to compromise existing relationships of their distribution system. Winetasting, backed by investment banker Bill Hambrecht, has a sound strategy of making available hard-to-find, extremely high quality Napa and Sonoma wines on their site, for example Stag’s Leap, Saintsbury, Chateau Montelena, and Whitehall Lane. Berglund states ‘many of the wineries are posting their most exclusive vintages on the site. We want it to be a place known for wines you can’t get anywhere else’ (Peterson 2000). Each high-quality vineyard benefits from its cohorts being included under the kiosk’s umbrella, which results in a synergy in marketing and a reduction in advertising and logistics expense – the kiosk model, as a vineyard subscription model, demonstrates economies of scale.

LESSONS FROM EARLY ONLINE INITIATIVES

As mentioned before, most of the early online initiatives have not lived up to their expectations. Based on our knowledge of the US Wine industry and its e-commerce developments, we will now point out some lessons in three areas: customer reach, product marketability and market characteristics.

Customer reach

One of the key mistakes of the early online wine ventures might have been to overestimate the raw numbers present in the online-buying category; the other was to think that the raw numbers could be grown by straightforward ‘build-it, they-will-come’ dot.com appeal.

Despite its phenomenal growth, the Internet has not yet reached the same rate of penetration as print-media or TV. For 2001, industry analysts estimated that less than 60% of all adults in the US had access to the Internet (Rainie and Packel 2001), leaving four citizens out of ten unreachable for online initiatives.

In principle, the Internet can help reach new consumer segments or it can be used to reach existing consumers. In the first case, an expansion of the market would occur, while in the second case, a shift from existing distribution channels and buying patterns to the Internet would be required (substitution).

In particular, in the earlier days of the commercial use of the Internet, the online user tended to be younger, more affluent, better educated, male and more computer-literate than the average of the population (Kehoe and Pitkow 1996). Since the beginning, the demographic profile of the online community has slowly been converging towards the profile of the general population. This means, the gap is closing, although differences remain, in particular, regarding income and age (Rainie and Packel 2001). Until today, older age groups tend to be under-represented online, while younger age groups tend to be over-represented. The picture is reversed for the typical wine consumer, leaving a significant gap, especially in the age group of consumers over 55 years of age, incidentally also the most affluent group of consumers representing the most lucrative market segment (see Figure 1).

In addition, it is important to keep in mind that only approximately half of all Internet users actually buy products online; most use the Internet to obtain information. The likelihood of buying online is in general higher among higher income groups and tends to increase with Internet-experience (Rainie and Packel 2001).
Among the items that make up the bulk of US online retail spending are airline tickets, computer hardware and hotel reservations. In October of 2001, food and beverages accounted for 2.4% of the total volume of online spending, or $85.9m (NRF/Forrester).

Consistent with the demographic profile of the online population in the mid 1990s, the early online wine retailers focused on market expansion, in particular of the more profitable segment of high-quality wines. For years, this segment had experienced stronger growth rates than lower-priced jug-wine segments, up to a point where some observers started to speak of a supply shortage (Swartzberg et al. 2000). Early online initiatives often targeted the group of male, computer-literate, well-educated, affluent, young professionals with their offerings. This is understandable as such demographics matched not only with the profile of the typical online users, but also tended to coincide with the profile of the entrepreneurs and developers. Working long hours and typically pressed for time, with a relatively large disposable income at their hand and high familiarity with the online medium, the group tended to embrace online business early. They valued the convenience, online community spirit and speed of transaction (Mougayar 1998). This is precisely the group that adopted, and spoke very highly of, the online grocery store WebVan. Both WebVan, and Wine.Com concluded that, from a business strategy perspective, market expansion (accessing new consumer groups) is also more favourable than a strategy of substitution (winning market share from competitors), in the way that it increases the pie, rather than re-dividing it, thus yielding less potential for conflict within the market. Yet a core group of staunch supporters does not form the marketing linkage that an online venture needs; the revenue source cannot be grown. Both WebVan and Wine.Com made critical mistakes in their operating income commitments; both of them undertook expansions that resulted in high sunk costs. When dot.com mania subsided, and the venture capitalists started to wonder if their backing capital would not recoup any profit, they came under severe pressure to justify their business model vision with more accurate accounting projects. Both companies could not demonstrate transaction growth at any level approaching one that would justify the high sunk costs in the automated warehousing and logistics systems.

It just so happened that the dot.com bubble burst as other sectors of the economy went into decline in the late 1990s. However, the basic overestimation of the market and over-optimism regarding changing the US-consumer wine-buying mindset doomed all the ambitious plans. We can therefore propose the following two basic principles, which are more general than the current state of the economy:

**Principle 1:** In an online business with a limited consumer market, a substitution strategy with the objective of reaching existing customer segments is advised in lieu of an expansion strategy.

**Principle 2:** No online business sector is exempt from the need to tie the abstraction of the business model (architecture, goods, services, information flows) to a marketing model. The tie-in serves as a basic reality check for a nascent e-business.

**Product characteristics**

As a product of nature, the quality of wine depends on many factors, including weather, environmental conditions and the skills applied in the wine making process. Many wines, in particular of higher quality, are made in limited quantities and the ability to source in-demand products is key. After a batch is sold, there is no way of reproducing the same wine. Also, it is 'un-virtual', as it is heavy and requires special handling and storage.

Consumers regard wine as a complex product that requires a significant investment in knowledge and terminology, in particular in the premium categories. In some cases, a lack of sufficient product information may actually deter purchases. Consumer data, confirmed by our interview partners, also shows that in the US most wine is in fact an impulse buy and consumed within an hour of purchase, i.e. in the time horizon of the next meal, even in the medium to higher-quality categories. This ‘horizon’ effect is a serious problem for online wine ventures. There is no persuasive medium inside of the basic web infrastructure, which is a pull technology, to convince the consumers to alter the short-term buying patterns for wine. The consumers in the aisle-ways of supermarkets will not be connected to the web at that moment and hence expert web opinions are targeting a minority consumer segment, those with a longer horizon.

Simply put, marketing research helps us understand how product characteristics can be taken into consideration when developing an online strategy. However, if the consumer market is overestimated and the buying patterns of the consumers are not conductive to web advice, there is no strategy to convert beer-drinkers to wine-drinkers, or to have the supermarket shoppers suddenly start planning ahead. Thus, the business model/marketing model linkage cannot be strengthened after the fact and online ventures must retrench, scale back and act more cautiously. We can sum up with the following principle:

**Principle 3:** The Web, a pull technology, can draw a loyal following to an Information Intermediary (Infomediary) website offering expert opinion. However, a business model should not stake its commercial viability on the Infomediary changing basic consumer buying behaviour.

In retrospect, we can criticize early online wine ventures with an improper evaluation of the market ‘opportunity’ (Applegate 2001) based on the overestimation of the market yet their unjustified optimism was buttressed...
by the ready and ample availability of backing venture capital. We can say:

Principle 4: It’s easy to launch an online venture (low barriers to join Internet e-commerce). It’s harder to justify it with careful opportunity evaluation. If the latter step is not needed, due to plentiful backing capital sources, it will not be performed. Conversely, a tightening of the capital supply means more attention is paid to opportunity evaluation with conventional and conservative revenue projection techniques.

De Figueiredo (2000) distinguishes four groups of products according to the ease with which it is possible to judge the quality of a product online:

1. **Commodity products** are undifferentiated and typically without brand image from the perspective of the consumer. The identity of the seller does not matter and price is the single most important factor of differentiation between competitors. The market is a buyers’ market. Examples include oil and paper clips.

2. **Quasi-commodity products** include books, CDs and videos. They are purchased in a two-step process. During the first step, consumers select product features and functions, according to their individual preferences (novel, artist). In the second step, however, the product becomes a commodity, with price becoming the most distinguishing factor.

3. **Look-and-feel goods** require some hands-on experience by the user in order to assess their quality. Suits or furniture are typically bought only after having been tried on or tested.

4. **Look-and-feel goods with variable quality** include products where each individual item differs from every other item, making their quality most difficult to judge online. De Figueiredo lists produce, such as fruit and vegetables and original works of art as examples.

De Figueiredo (2000) discusses strategies to market each of the four product categories online. Utilizing the proposed schema we consider wine to be part of the two categories of quasi-commodities and look-and-feel goods requiring some quality inspection. Similar to books for example, a consumer chooses a wine according to general descriptions such as grape, vineyard and year. During the subsequent purchase the selected brand then becomes somewhat of a commodity, differentiated mostly by price. In particular, for higher-priced wines, however, this process is not always sufficient, as more subtle differences require some ‘hands-on’ experience, typically in the form of a tasting. The marketing strategy should then contain elements of both groups:

- **Online marketing strategies for quasi-commodity goods** should mirror the two steps of the transaction process. In the first stage, differentiation can be achieved with powerful search engines that help match consumer preferences quickly to products and with a website that is easy to navigate. In the second stage, the company should combine a mixture of a low-cost strategy and a differentiation strategy, including a focus on economies of scale as well as measures to improve the ‘stickiness’ of the site, e.g., with loyalty programmes.

- **Online marketing strategies for look-and-feel goods** should focus on: building brands as a vehicle to convey information; as a mechanism to improve trust; on utilizing technology to convey look-and-feel online as good as possible; and on minimizing the perceived risk for online consumers by implementing lenient return and warranty policies.

Many of these suggestions have in fact been implemented by the online wine retailers: Wine.com featured a website that was renowned for its user friendliness, ample and personalized information (‘Ask the Cork Dork’), a strong customer-orientation, intensive branding efforts (personalized emails sent out by sommelier Peter Granoff) and subscription programmes to improve customer loyalty (Ware et al. 1998). The provision of expert information is an important function of an electronic intermediary (Sarkar et al. 1995) and we see here how Wine.com utilized Granoff as a one-to-many information channel. In the wine industry, expert opinions count more than in other, more commodity domains—good and bad reviews can affect wholesale buying patterns, restaurant menu offerings and consumer behaviour. In addition, expert information is essential in order to perform meaningful collaborative filtering (Kautz et al. 1997; Resnick and Varian 1997) on the raw wine data. In its current incarnation, the eVineyard-sponsored Wine.com website features ratings from five international wine publications as well as from its own internal wine tasting staff. However, no provision has been made as yet to include customer post-purchase feedback as part of its recommendation system, a potentially useful feature of transaction-oriented virtual communities (Schubert and Ginsburg 2000). US consumers typically are not well informed about the wines at their disposal. Expert opinions, coupled with important raw data such as vineyard and price per bottle, are used to drive recommender systems (Resnick and Varian 1997), which aids in the intermediary functions of search and evaluation, product matching and provision of customer information (Sarkar et al. 1997). Another interesting facet of the information flow is Customer Risk Management. For example, Granoff took the time to quell consumer fears regarding crystalline residue around the cork, assuring them this was a harmless build-up of tartrate that was edible. This is a strategy to minimize post-purchase returns, which are difficult to handle.
logistically and pose high expense risk to any online venture. As Choi et al. (1998: 20) point out, ‘Aspects of e-commerce indicate that the quality uncertainty problems will persist or worsen.’ Consumers are already uncertain about wine (relying on third-party reports or prior personal experience) and Granoff’s information column was an attempt to anticipate and quell problems as they arose. We can adapt a principle from prior research (Choi et al. 1998):

**Principle 5:** The Internet can reduce transaction costs. However, online initiatives must solve the fundamental economic problem of information asymmetry – the Internet lacks many of the conventional ways to assess the quality of the product.

Principle 5 tells us that information flow (either from an expert, or in a moderated post-purchase consumer experience group) is vital to reduce the information asymmetry.

Other websites have mimicked the above strategy mix, but the basic overestimation of the market is a severe hindrance to their efforts.

**Market characteristics**

A complex body of legal regulations characterizes the distribution system for wine in the US. These regulations are rooted in historic developments, dating back to the Prohibition era during which the production and sales of alcohol were illegal. In 1933, when Prohibition was repealed, the states became empowered to regulate the commerce in alcoholic products in the US, as well as interstate commerce in alcoholic beverages.

Today, most states feature a tightly regulated, three-tier system that requires a licensed wholesaler between the producer of alcoholic beverages, the retailer and the consumer. It means that producers cannot sell directly to consumers, but have to go through wholesaler distributors and/or retailers. In some states, the system has led to strong, sometimes monopoly-like positions for the distributors (Swartzberg et al. 2000).

When comparing the two different cases we note another principle:

**Principle 6:** A kiosk model is a safe and sound entry model for a set of related high-end vendors who value online marketing exposure and want to test the B2C waters.

Online businesses face certain basic commonalities as defined by the medium. The Internet supports a variety of business activities, including advertising and marketing efforts, display of product and service catalogues, facilitation of direct customer interaction, auctions, ordering activities and customer information capture. The use of these features requires, sometimes significant, up-front investments in technology and is eventually based on system availability, backend integration and, depending on the business model, features such as up-to-date content, engaging layout and access to customer data.

The online wine sector, though, faces definite constraints. The US has a limited consumer buying market and a short-term buying pattern ‘horizon’ effect. This impacts the ability of the electronic wine markets to follow a standard ‘ecological path’ (Scharl and Brandtweiner 1998) of birth, expansion, authority and renewal (or death). Thus, although an e-market for wine can be launched (birth), with technology providing a platform to create value for consumers with efficient information search, settlement and logistics, the next stage (expansion) is exceedingly problematic. This is what led to the demise of Wine.com, WebVan and countless other ventures that assumed unlimited backing capital with unlimited time to grow their markets to bring revenues into position for profitability. As Principle 2 identifies, the online wine entrants must act according to a product/marketing strategy. This strategy dictates caution in view of the limited consumer/buying sector. Thus, instead of expansion, the online wine businesses that succeed base themselves on proven distribution channels using the Internet primarily as a marketing vehicle. In our discussion of Winetasting.com, we saw how brands can colocate in a kiosk model to exploit synergies and reduce operating expenses. This is an important point and it is worth stating it as a principle:

**Principle 7:** Not all e-businesses need to expand after birth.

Continuing with Scharl and Brandtweiner’s (1998) general analysis, the next step in the ‘ecological’ progression is authority. The leadership challenge is to ‘lead coevolution’ and to cooperate by providing a ‘compelling vision for the future’. As is the case with many online domains, authority can stem from first-movers in as mundane an area as standards specification. Up until now, the wine industry has had no consistent codification to cover the product from its beginnings (grapes) through the fermentation process, placement into casks and eventual consignment to wholesalers, intermediaries, restaurants or consumers. We are in the early stages of codification; progress in this area enables the important integration of front-end marketing efforts to consumers and back-end logistics to ship and bill the product more efficiently. B2B integration is also highly dependent on this effort, for example inter-warehouse coordination in the wake of turbulent order flows as market conditions change. The grand vision of an efficient and scalable B2B e-commerce hub, as espoused by Kaplan and Sawhney (2000), is altogether impossible without codification and standardized tracking of product flow. The entity or entities that drive the standards process will have a first-mover advantage in the integration efforts. We can state:
**Principle 8:** Authority, the means to lead evolution in a market, can stem from codification in an uncodified domain.

Principle 8 reaffirms Applegate’s (2001: 5) opinion that ‘the distinction is blurring’ between ‘technical infrastructure’ and the use of ‘technology to support business strategy and design’. Codification will bridge the gap and accelerate both B2B and B2C integration. The resulting expense reduction will benefit all the participants in online efforts.

Scharl and Brandtweiner’s last stage, ‘renewal/death’, points out the need to innovate or perish. Here we need to make an important point: high-end California wineries are not dependent on the Internet or Internet marketing strategies for survival. They routinely sell 100% of their inventory, year-in and year-out. Pure intermediaries, such as Wine.com, were Internet-dependent because their company vision, the strategy they sold to their venture capital backers, overestimated the market. Thus, Principle 6, espousing the simple kiosk model, is sufficiently innovative for the wineries to experience the marketing benefits of the Internet without exposure to the basic assets, the land and the grapes. This can be written as:

**Principle 9:** If the inventory sells without the Internet, a cautious use of the Internet as a marketing vehicle is suitably ‘innovative’.

**CONCLUSION**

In terms of customer reach, online-only retailers are confined to the Internet as a medium to reach potential customers. While the Internet technically provides universal geographical reach, its penetration across the general population is still limited, albeit growing, as is the willingness of consumers to shop online, particularly for the typical wine consumer. Attempts to expand the market to include younger online users have not generated enough traction yet or led to profitable businesses, although the sites have been careful to meet the requirements related to marketing wine online. In fact, we identify the ability to create a comfortable buying environment as the greatest strength of the online retailers. Among the most significant hurdles are significant upfront investments in terms of time and cost that are necessary to establish the business (licensing issues, warehousing and logistics structure). To date, none of the online retailers is licensed to sell in all of the 50 US states (further limiting customer reach), although all make sure they cover the most important markets (California, New York, New Jersey, Florida, Illinois). In addition, and for the start-ups in particular, the necessity to enter into a network of well-established industry-relationships has proved tedious and at times quite difficult.

As we descend into a less glamorous and more rational era that stresses the linkage between online business models and their companion marketing models, we can draw lessons from the numerous failures of the late 1990s. The wine industry gives us a particularly good example of how companies struggle to use the Internet in this uncertain environment, given a limited consumer base, lack of basic codification and B2B integration and a history of halting and incomplete online ventures.

**References**


