# **Online Retailing Industry Analysis: A Case Investigation**

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#### Abstract

There is a substantial literature concerning online retailing. This paper argues that much of it is confusing to the manager of a retail business who is trying to work out an online strategy. This paper briefly surveys the existing literature in three categories: that focussed on specific industries; that attempting to generalise broadly; and general theories that may be applicable or not. We argue that the appropriate approach for the curious manager is to study the nature of the industry and assess which of the general theories apply. From this bottom-up approach, a more rigorous, specific decision framework can be established. We use a single case study in the garden centre industry to frame the decisions for a manager in this industry. We argue that this approach can be readily adopted to other industry segments

# 1. Introduction – heterogeneity of e-tailing

The introduction of the Internet as a channel for the marketing and sales of retail products has seen a wide variety of results. Some existing industries and products are eminently suited to Internet sales, others much less so. Some new industries and products have emerged and others dramatically threatened for their continued existence. This section will look at the diversity of e-tailing, as well as some of the attempts to generalise concepts across industry sectors.

## **1.1 Industry-specific studies**

We examine a selection of industries that demonstrate particular attributes that are significant in their specific cases. While this list could be very extensive, we restrict it to several major categories to highlight differences, rather than similarities.

#### 1.1.1 Banking

On-line banking has been a great success. Existing banks have taken to the Internet, becoming classic 'click and mortar' enterprises [2]. New 'virtual' banks have appeared around the world (such as Egg, ING Direct, AMP Direct) that eschew the mundane branch and offer their services through websites and call centres. The takeup of online banking has been phenomenal with the majority of customers now accessing their bank accounts through the Internet at least some of the time. Online stockbroking offered by banks has been similarly successful. The information richness of the banking products and services lends them to online delivery. Ernest Jordan Macquarie Graduate School of Management Macquarie University, Sydney, Australia <u>Ernest.Jordan@mgsm.edu.au</u>

Given that there is no physical product to deliver in most banking services, customers can receive the completed service very quickly and efficiently [56]. Furthermore, the established relationship between the bank and the customer is ongoing and not determined uniquely at each service instant. For the banks such services work well to reduce customers' bargaining power and enhance retention.

#### 1.1.2 Wine

Online sale of wine was an early entrant that has largely failed. While dedicated wine buffs may want to search for particular wines, they may not want to deal with multiple suppliers [31]. Similarly websites that rely on the supply of detailed information about wine may only attract those with a thirst for detailed knowledge, whereas most customers only have a thirst for a 'nice drop' when about to have a special meal. The online sale of wine is akin to the mail order market for wine. It appeals to those who wish to order in bulk – so that the cost of delivery as a proportion of the total cost is reduced - and with time in hand. There are many other segments with similar characteristics: the majority of sales (online and offline) is to under-informed clients and is just-intime. Further, the physical product has a significant delivery cost.

#### 1.1.3 Groceries

One of the killers of online wine sales also apply to groceries – distribution costs are significant. Search costs for groceries are negligible but for some people the repetitive, mundane nature of the replenishment visit to the local supermarket makes almost anything else seem exciting (even grading exam scripts). E-tailing in this area in effect applies some basic automation to the task. A standard shopping list can be delivered routinely with minimum fuss. Supermarkets' efficient supply chains are barely damaged by junior staff running the aisles with shopping carts for customers. Even scheduled delivery routes can be made to be efficient. Customers trade off reduced discretion in purchasing and additional delivery charges against the value of their own time and convenience [41]. Thus some success is achieved but it is of limited interest both to supermarkets and their customers [16].

## 1.1.4 Books

Many book purchasers are looking for a specific book or for a book on a specific topic – thus their search has many of the characteristics of the mail order channel. However there are some books where there is a significant after-sales service component, namely student textbooks. The complementary websites, for both students and instructors, offer benefits that extend beyond the physical product [10]. Online sites such as Amazon dramatically reduce search costs, but the publisher's website in many cases closes the sale. There are substantial economic benefits from this significant transition in the book industry [7].

#### 1.1.5 Auctions

Online auctions are an example of an industrial shakeup [30]. The emergence of e-Bay has aggregated the previously totally disperse marketplaces for second hand goods, and at the same time scaled up the marketplace for collectibles. Regular 'shop-fronts' for specialty items are now widely used. Auctions are also used effectively for airline tickets and many commercial products and services. The ability to deliver synchronous distribution of information about products and current bids is a unique feature of the Internet. Auctions can take place anywhere in the world without any significant impediment. The auction itself is an 'information service' and needs only be connected to the physical goods, vendor and purchaser by information links. The auction organisation does not need to get involved in the supply chain.

#### 1.1.6 Others

Other information services feature digitised products and services, such as music [28], movies, gambling and pornography) that can be distributed electronically. If there is a physical product, it can be searched for, supported or simply ordered – the traditional mail order business moves to the Internet. Supply chain issues vary with product categories.

## 1.2 Attempts to generalise

While much of the literature deals only with specific industries, there have been widespread attempts to generalise the issues for e-tailing. Many academic disciplines have a contribution to make in the successful prosecution of business activities, so it is natural that this extends to the e-business domain.

## 1.2.1 Economic

The economic impact of online retail models in some industries (travel, books, music, videos, software, computers, electronics and apparel are highlighted by Bakos[3]) is so large that the wider economy feels the change. Economic models are then used [3] [44] [49] to explain how other industries will be impacted. While these generalisations have some value, they need to be reinterpreted for each specific industry or product segment. The reinterpretation can range from negligible to substantial, with the general theory unhelpful in certain cases.

#### 1.2.2 Technological

One of the overriding characteristics of the dot com bubble has been the technology drive – solutions proposed by technologists to business situations with which they were unfamiliar (such as retailing). New technologies are typically presented and assessed in scenarios that are *prima facie* compelling. The realities of working out how to adapt the technology to a situation and to find those characteristics that must be modified seldom get the same attention. Agents [20], 'process architectures' [36] and web-site characteristics [35] are examples of the typical technology view. The huge variety of applicable environments cannot be so readily addressed.

#### 1.2.3 Decision sciences

Abstract thinking to develop models that can be explored in a quantitative manner is characteristic of the decision sciences approach. A wider readership is gained when the subject material has relevance to a greater number. Research on deriving business value from internet initiatives may turn out to be of great relevance in certain industries and segments, but the hazard is determining the applicability. Similarly the work of [12] on delivery strategies and consumer behaviour.

## 1.2.4 Strategy

One issue in the strategy literature relating to e-tailing concerns whether to be a trailblazer or follower [25] – is there a first-mover advantage? While significant success has come to many at the leading edge (Amazon, Yahoo, etc) there have been many failures too [64]. Even Porter cannot resist the temptation to generalise and asserts that there in no first-mover advantage [44]. Other issues have been the strategic decision to establish independent online businesses or to go for a clicks-and-mortar mixed model [9]. There are many other strategic decisions but the recommendations are potentially out-of-touch with a specific industry or product line.

## 1.2.5 Marketing and others

While the importance of 'customer data' may be unquestioned in many retail industry segments, it is nevertheless not a universal truth. Some retail segments never collect customer data, either directly or through research (such as the ice-cream van in the park). Thus analyses of what sort of data to collect, to determine how good a retailer you are (such as [55] do not have the generalisation power that it presented.

## 1.3 Approach

Many disciplines bring theories and knowledge to online retailing but much of the literature, examples cited above, attempt to generalise too broadly. If all of the lessons, advice, research and advocacy that are found in the literature were to be accepted totally by senior management of an organisation, they would find themselves confused by contradictory claims and 'analysis paralysis'. General theories are of course valuable, but in each organisation senior management needs to work out whether the theory applies to them or not. Porter [44] in fact recommends that each industry should be taken separately – the fundamental industry level analysis (such as Porter's 'Five Forces') must be done before anything else. Specific models and solutions can then be developed for that one industry.

This paper proceeds by first identifying a core body of general theory and then the test of its applicability in a specific industry. This test is accomplished through a single case study that highlights which of the general theories can be immediately adopted, which must be modified and which are irrelevant. We argue that this approach is effective for studying online retail in any industry and that the hubbub of published research must be carefully processed before being adopted. The specific industry being considered in the garden centre retail segment, one that is very significant in temperate climates with substantial domestic land ownership.

# 2. Theoretical perspectives for e-tailing

This paper will use marketing mix, logistic applications, and consumer behaviour research as a framework to analyse the e-tailing literature. This multifaceted approach will provide researchers and practitioners alike an insight into the complex dynamics of the Internet retailing phenomenon. Space does not permit detailed consideration of the other literature bases that need to be included, such as strategy and website design architecture.

## 2.1 Marketing mix

## 2.1.1 Product

Paterson [40] proposes a three dimension classification system for products suited to the Internet retailing: cost and purchase frequency, value proposition and degree of differentiation. The lower the cost, the greater the frequency of purchase and purchases requiring physical fulfilment the less suited the Internet is for retailing such as milk. The value proposition refers to tangible versus intangible goods such as digital information. The third dimension of differentiation impacts through commodities being highly price competitive and differentiated products being able to create an advantage.

Product classification based on tangibility [45] provides theoretical support Internet commerce is well suited to digital products due to the low cost of distribution. In contrast, a study [43] finds insignificant difference between benefits of online distribution and tradition forms for digitalised products. An explanation suggested is that the digital form does not match the form desired by the customer. However, as long as the same product benefits are gained, customers would be willing to pay full-price for the online digitalised version.

Perceptions about the physical nature of goods and their suitability for Internet shopping raises serious issues about the potential of the Internet for retailing [15]. There is strong theoretical support for the proposition that moderating effects of product characteristics needs to be assessed when assessing suitability for retail channel distribution [66].

Intangible search goods are inherently suited to the Internet, however all products have varying degrees of the ratio of tangible/intangible and experience/search requirements. This facilitates the opportunity for retailers to stimulate demand based upon benefits other than product characteristics such as 'lifestyle' or 'status' [43]. Vijayasarathy [66] also had similar finding where a product's tangibility had effects on consumers' perception, intangible goods seemed more suited to the Internet.

## 2.1.2 Price

Enabled by technology, new pricing models will be developed when selling over the Internet [46] to a value based approach. New pricing strategies and structures will need to be developed to cope with cost transparency; resellers will find it difficult to justify different prices for different market segments for the same product. Resellers risk alienating consumers [54]. In a study on trade-offs in Internet purchasing [61], minor price differences were not seen to have a insignificant effect on customers evaluation, and thus it is argued that Internet retailers must offer books at significant price differences to traditional stores as price is only one issue in student purchasing textbooks.

The effect of the Internet phenomenon is not clear. An analysis of the literature [15] identifies diverging opinions in the relationships between price and Internet shopping behaviour. The literature is supportive that the Internet will enable product price and feature comparisons much easier. The threat to retailers may be that this phenomenon will make seller's costs more transparent and thereby reduce the ability of retails to command a premium for their products. Both manufacturers and retailers have an interest in keeping price structures opaque to the consumer. Brand management is enabling firms to maintain premium prices however increased competition puts pressure on higher-priced brands. Cost transparency transforms many products and services into commodities through informing buyers and thus reduce the risks involved in the buying decision [54].

## 2.1.3 Promotion

Koch and Cebula [27] argue that there is no fundamental difference between the economic principles of traditional promotional techniques. Incumbent firms will have the advantage when promoting goods online through the use of tradition source of information being supplemented by the collection of online consumer behaviour. Others [9] suggest online retailers offer more on-demand information compared to traditional retailers. The richness and reach trade-off [13] will be minimised as the Internet provides a low cost of forming a dialectic link between suppliers and customers.

Use of the Internet to engage dialogue with customers to overcome the problems associated with brands having the perception of undifferentiated products in the consumer mind. It aids long term cost effective relationship marketing through data mining [5]. The advent of permission marketing as opposed to interruption marketing is more effective to develop relationships with interested customers. Information can be customised according to their needs and as a result they are more likely to become loyal and profitable customers. The Internet can facilitate 'intravenous' marketing in which companies resupply their products after getting initial permission [53].

Personal selling is difficult over the Internet through the lack ability of traditional retailers to leverage their staffs' knowledge in the sales process [51]. Porter [44] proposes the role of personal selling is diminished through knowledge transfer is limited to codified responses where expert judgement is limited by face-toface contact, the lack of face-to-face interaction limits market scanning potential of retailers, and the lack of face-to-face limits personal selling opportunities [44].

#### 2.1.4 Place

Channels of distribution change continuously to best serve their markets [59] and therefore retailers will choose a multi-channel strategy to attract as many customers as possible. As the distribution channels will be evaluated upon its ability to serve the needs of the customer and therefore retailers will choses the channel or combination of channels to best meet the needs of their target segment [32]. Likewise consumers will choose the channel based upon its perceived benefits [24] and thus it can be argued that consumers will drive distribution channel decisions.

The Internet is an alternate distribution channel for retailers [27] [52]. However, channel conflict has been identified as an potential area of conflict between distributors and retailers [52]. However, [44] states that channel conflict, cannibalisation, and disintermediation are overstated. The Internet will replace certain elements of the value chain however in general, it will serve as a complementary channel as many of the traditional activities of the value chain will be remain unchanged. This new channel will present opportunities [44].

The type of delivery mode affects cost structures. The traditional retail selling in retail stores adopted the 'pull' strategy where suppliers advertised to the consumer who went to the retail store to make their purchases. This strategy is in contrast to the 'push' strategy of personal selling which after the 1940s made significant incursion into the US market. Internet retailing has strengthened this opportunity to bypasses the retailer from the supplier direct to the end consumer through its inherent convenience advantage [48].

## **2.2 Logistics**

Information technology is the catalyst for the traditional linear supply chain to evolve into an amorphous supply chain relationship model. The chains are described as amorphous because the network may be difficult to map and in a constant state of change. There is like to be a change in relationships with stakeholders and other organisations, partnerships are transformed [47].

The terms 'marketplace' and 'marketspace' [46] are used to describe the differences between the traditional markets and the cyberspace environment characterised by digitally networked information and communication channels. The division between the marketplace and marketspace phenomena can structured along three lines. First, performance improvements in the marketplace facilitated through supporting information to increase product offerings. Second, information within the marketspace can be used as a competitive advantage. Third, additional information provided within the marketspace can add utility above what is being offered in the marketplace [68].

## 2.2.1 Digital distribution

Using value chain analysis, [45] highlighted the virtual value creation activities in 'marketspace'. [68] agrees with the virtual value creation and propose an additional source of value creation, that is, the importance of information as a source of competitive advantage in the 'marketspace' and independent from the marketplace.

Information plays a strategic role in the physical value chain and may become as important as the product itself [5]. [45] propose information can be separated from product. Proponents of Austrian market process theory have already shown that it is information that becomes the controlling power in competition. The 'marketspace' phenomenon [45] offers two potential improvements. First, the collection of customer data to allow management to better target the needs of consumers. Second, increase in efficiency for the transfer of information. Coined this 'one-to-one marketing [42], these improvements have facilitated 'information-based marketing' where interactive customised dialogue engages the business and customer in novel ways at low cost [39] [68].

[5] supports the integration of the physical value chains and 'virtual' value chains to provide a critical role for ecommerce's success. Grounded in [45] work, advantages of the integration include developing alliances between customers and producers, advertising products and services, and order transactional processing [5].

## 2.3 Consumer behaviour

The consumer decision making process is influence by the complexity and familiarity, cost, and significance of the decision. Consumers become highly involved in decisions when they are expensive, are bought infrequently, risky, and are highly expressive of their personality and values. Consumers will search for information and make comparisons for these goods [1] which uses this argument to support that low involvement goods with high search qualities are most suited to the Internet.

The Internet has reduced consumer search costs through information technology coordinating effect. [3] proposes that this reduction in search costs which are directly or indirectly paid by the consumer, will result in direct efficiency gains from reduced intermediation costs and indirectly through gains in allocation efficiency from better informed buyers. Rowley's [50] review of the literature, finds support that consumers use the Internet at the search for information search stage of the buyer decision process [26]. Other potential sources are their own experience, recommendations and exposure to promotions.

Some researchers argue socio-demographic factors are not sufficient to predict online buying behaviour [4] [6] [18] [22] [33]. [4] and [33] intimate past behaviour is the best predictor of future online and off-line buying intentions, demographics have some effect if a person is connected to the Internet. [4] study of predictors of online behaviour finds demographic data (income, education, and age) only shows a slight influence on the likelihood that a person will buy online. A 'wired' lifestyle and time starvation are better predictors of personal characteristics of online buyers.

#### **2.3.1 Shopping motivations**

Shopping orientations can be broadly classed as utilitarian and hedonic scope, economic or recreational. Early research on the motivations for individual shoppers classifies shopping motivations into task, social and pleasure orientation [63]. Pleasure motivations include role-playing, diversion, self-gratification, physical activity, sensory stimulation. Social motives include meeting with others, peer group influence, status and bargaining.

Brown et al. [8] literature review identifies 6 consumer segments based upon shopping orientation. First, the economic shopper [60] who seeks the lowest price or best value for their money. Second, the recreational shopper [58] who values the act of shopping regardless if purchases are made. Third, the apathetic shopper is an inactive shopper [29]. Fourth, the convenience shopper [17] who value their time, effort, space dimensions or a combination of these. Fifth, the ethical shopper who is store loyal, brand loyal or both. Sixth, the personalising shopper who values the relationship with store personal. Brown et al. [8] study proposes that these orientations will affect the behaviour when shopping online. Web shoppers seem to be less motivated by shopping as a leisure activity [23] however they are very concerned with time efficiency, 24 hour shopping and avoiding long queues, these are the convenience shoppers. Webshoppers are more likely to be browsers. The study recommends making sites interactive to increase length of time on the site and the possibility of selling something. [15] suggest the impact of price sensitivity and convenience in Internet retailing has not bee fully explored or understood.

Other researchers have identified three non-functional motivations significant to online shoppers [40] as diversion, self-gratification and learning about new trends. There were several disadvantages identified as stimulation, real-time communications, sensory bargaining limitations, and lowered the status of the customers within the on-to-one relationship with a sales person. Diversion was important as it allowed consumers to 'escape into a world of shopping' without leaving home and the removal of geographical and time constraints. Self-gratification for 54% was purchasing and taking possession of the product instantly, the Internet did not perform due to the inherent delivery time lag. However, smaller but significant group 14% perceived the selection and payment was enough for 'instant' gratification. Learning about new trends was seen as important for two reasons. First, 74% of consumers reported it was due to the need to cater to their peer group. Second, 54% reported that visiting recommended site was important for online shopping.

# 3. The garden centre industry in Australia

The Nursery & Garden Industry Australia (NGIA) estimates there are 8,000 businesses involved in the gardening industry in Australia [37]. The market share based on the retail distribution channel of garden products in Australia comprises of landscapers (25%), retail nurseries (18.1%), garden suppliers (16.5%), hardware stores (16.4%), garden services (8.4%), discount department stores (5.1%), supermarkets (2.3%), wholesale direct (0.7%), mail order and e-commerce (0.5%), with the remaining outlets being government, revegetation works, plant hire services, markets and propagators. The total for garden products is A\$5.7 billion in 2003 financial year with the retail nursery channel estimated at A\$1 billion of 'greenlife', a 2.8% reduction from the previous year [38]. Changes in consumer underlying purchase motivations (shifting from the 'do-it-yourself' to the 'do-it-for-me') have been identified by the industry to the decline in retail sales and increase in the landscape and garden services channels.

Sydney accounts for 34% of the Australian 'greenlife' market [38]. In 2002 in Sydney, 253 retail nurseries were identified of which there was an approximate even split between traditional nurseries and specialist suppliers. Independently owned and operated firms dominated the retail outlets (75%) of which 14% belong to one of two marketing and buying groups. The largest retailer in the Sydney market has seven outlets with anecdotal evidence suggesting a combined turnover of \$70 million per annum. However in general, the retail market could be described as fragmented with the majority of independent stand-alone retailers with annual revenues of \$1 million or less.

Growth drivers within the industry have been identified as media exposure and changing housing trends resulting in changes in design and décor for smaller garden spaces. The NGIA cites water restrictions, gardening skill proficiency and weather conditions in Sydney as having a negative effect on demand in 2004.

#### 3.1 Opportunities for e-business

This literature review has identified numerous studies in the effects of the Internet on retail organizations, however in general it could be argued that there are several problematic issues associated with the research. These include:

- the use of heterogeneous groups of retailers to ground studies [14] [34] reduces the ability to generalise findings to specific industries [44].
- the inspection and assessment of web sites' functionality and 'look and feel' [19] [27] [34] is unable to evaluate the strategic intent or future intentions of the firms under investigation,
- using college and university students as the research sample [21] [57] [64] [67] may not provide valid results that can be generalised to the population as a whole,
- the use of on-line surveys techniques [11] [15] may also not provide valid results that can be generalised to the population.

This study will use a case-study approach in order to overcome some of these limitations.

#### **3.2 General level of e-retailing adoption**

An initial broad survey found that the garden centre industry in New South Wales, Australia has generally low levels of adoption of online retailing. Few retailers pursued strategic initiatives in their online retailing approaches. Information and awareness websites were common, with few opportunities to place orders or check inventory. These retailers had also not followed businessto-business initiatives. This will be reported later.

#### 3.3 Challenge for business manager in the industry

The challenge to the business manager in the garden centre industry is similar to that faced by managers elsewhere – what should be the organisation's response to online retailing opportunities? We study the industry in detail to identify the significant decision parameters.

## 4. Case report on e-plants

In 1999 eplants.com.au was set-up to replicate the shopping process in a digital environment to minimise the costs of traditional retail nurseries and take advantage of the Internet's e-tailing properties. It was the first virtual garden centre in the Sydney metropolitan area. Several similar virtual retail competitors (such as PlantsExpress and GardensOnLine) have not been successful and have closed over the past 4 years. Eplants remains the only fully virtual plant retailing website in Sydney.

Eplants' conception was motivated by a desire to create a unique competitive position against traditional retailers. Its strategic vision was to become a fully functional on-line service offering a wider range of products than available in any traditional nursery.

Eplants targets Sydney suburbs with high home owner/occupier, professional, tertiary qualified households, who value their time and are prepared to shop on-line. From an analysis of Eplant's records, consumers are located in the relatively affluent north shore, eastern suburbs and inner city areas of Sydney. Women make up the majority of clients and anecdotal evidence suggests they buy plants as an expression of their lifestyle and to improve their home's value. The wide variation of customer demographic, psychographic and behavioural characteristics makes cost effective identification of individual prospective clients difficult for Eplants.

The functionality of Eplants website allows customers to search for information and products, select plants, use a shopping cart to hold purchases, and allows for secure online transactions. There are over 2,500 products on offer (traditional nurseries may offer only 1,000 products); categories include plants, landscape supplies, pots and planters, chemicals and fertilizers and turf. Information categories include a description and picture of the product, product recommendations, generic horticultural information, and generic business information such as guarantees, delivery arrangements, payment options and contact details. Much of the product information intellectual property was created from scratch by the owners.

Search functionality allows consumers to search based upon a product's name, characteristics, or description. A loyalty program is provided by 'Garden Club' membership which invites consumer to register their details to facilitate permission marketing and a special member's price for plant purchases.

Customers are invited to submit email or telephone queries. Where a quotation is requested for a large order, prices are discounted to attract the business whilst maintaining a minimum 30-40% gross margin.

The architecture of the website is custom written software using database driven cascading style sheets to allow for variable pricing and ease of global changes to information. The back-end systems allows for in-house updating of website information, compilation of individual orders, order tracking, and a facility to monitor and contact garden club members.

The 'look and feel' of the site has been purposely developed to facilitate sales where at the homepage; the customer is only 3 clicks away from ordering product. Payment is not usually processed until the requisite products are ready for despatch. Products are supplied to order and no inventory is held. The order-to-delivery cycle is usually 72 hours. Plants are sourced directly from wholesalers and growers, and delivered directly to the consumer using an in-house delivery service. A \$10.00 delivery fee is charged to all plants, bagged goods, pots and planters, and sundry goods. Bulk landscape goods are delivered by sub-contractors where a \$50.00 delivery fee is charged.

In 2003 the business began to generate a positive cash flow, attributed to the growth in sales over the past 3 to 4 years and the reduction in investment in software development and integration. The major cost drivers are advertising and logistics in picking and delivery. Administration, website maintenance, and overhead costs are low.

The management envisages the future of Eplants to continue their retail activities within the Sydney market with the potential to franchise operations to other states and regional centres throughout Australia.

# 5. Analysis – industry-specific segmentation factors

Eplants uses a combined strategy of differentiating itself from the competitors on its distribution channel, focus on a niche market and low cost production systems, that is, the reliance on its Internet e-commerce facility to allow customers to search for information, self-select plants, place and pay for orders online within a specific geographic area. As a pre-emptive strategy, Eplants has benefited from the experience curve. However, competitors can easily copy the functionality and 'look and feel' of the site due to the decreasing costs and increasing availability of e-tailing software. Lower barriers to entry means Eplants constantly faces the threat of start-up rivals. On balance, the case study provides evidence against the Internet facilitating a sustainable competitive advantage; ongoing investment and low entry barriers provides evidence that adoption of the Internet is an evolutionary process in the industry.

The marketing mix for Eplants is different from traditional retailers. Virtual retailing allows Eplants to significantly increase its depth and breadth of products offered for sale as there are few constraints to holding capacity. Some products are 'commoditised' when the customer has some existing knowledge of their price and size but management believe that only a few of Eplants' customers are expert gardeners; thus many customers are unaware of the market prices of plants. Eplants' retail prices are comparable to similar traditional nurseries as the pricing strategy is based upon industry norms. The distribution channel enables visitors to inspect the website and order self-selected plants, the plants being delivered some 72 hours later. The major operation costs are in the selection and delivery of the orders.

Eplants relies on traditional advertising and direct marketing activities to generate new customers. In the absence of a fixed store location, the 'passing traffic' promotional benefits are limited. Promotion of the site relies upon customer aggregators (such as the Yellow Pages and NurseriesOnLine.com.au) and direct marketing techniques. The estimated cost to acquire a new Eplants' customer is A\$87.50 (approximately US\$50), a relatively high figure.

Sales promotion of plants is difficult due to the Internet's inability to replicate point-of-sale displays and personal selling associated with traditional nurseries. The Internet lacks the ability to take advantage of plants' intrinsic merchandising potential and the ambience of the 'total shopping experience', resulting in a reduction of impulse sales. For many 'recreational' customers Internet shopping for plants is of limited value.

Initial start-up costs were extremely low as no fixed store set-up costs (land, buildings or inventory) were required, however the lack of a physical store limits purchasing to clients who are confident to purchase over the Internet. Eplants has achieved a low cost strategy through significantly reducing overheads expenses such as the elimination of inventory, reduced staff requirements and the costs associated with a fixed store location. However, order selection and delivery logistics remain a significant operational cost driver. Plants are supplied to order, facilitating a 'pull' demand from consumers, thus there is complete reliance on suppliers to hold requisite stock.

A value chain analysis for both products and information highlighted where value was added for both Eplants and their clients. The value chain for Eplants reveals a significant benefit for the elimination of inventory holding costs and staff requirements. The Eplants website enables information to be replicated for virtually no cost and empowers customers to select and pay for their orders online. Clients benefit from access to the site from any location (providing Internet access is available) at a time of their convenience. The information access is enhanced through self-service, search functionality and connectivity within the site. However, these savings have to be compared to the costs associated with the additional costs of order selection, preparation and delivery, and the client inconvenience of waiting for their order.

An analysis based upon the functions of retailers reveals Eplants is able to supply a wider range of plants compared to traditional nurseries, as they do not have physical and financial constraints associated with inventory holding requirements. Inventory holding is pushed back onto the suppliers resulting in 21% of orders have some items missing; considerable company resources are used to source specific stock items. For most clients, this situation can be resolved through the substitution of plants that fulfil the client's needs.

Transactional functionality on the Eplants website enables efficiencies through clients' self-service and payment. The size of individual transactions is important as deliveries below \$50 are uneconomic for Eplants due to selection and delivery costs at an average of \$30 per order. It is also not cost effective for Eplants to pick-up returned goods for verification where the value is less than \$100 due to logistic costs. Thus, Eplants have adopted a policy of replacement or refund of failed products 'sight-unseen' for orders of \$100 or less.

Without physical premises to display products and facilitate transactions, Eplants gains significant cost advantages. However, there are some significant disadvantages identified in the case study, such as passing traffic promotions associated with tradition fixed-store locations. This reduces the potential pool of clients where some buyers feel comfortable in the 'shopping experience', in the literature called 'recreational shoppers' or 'social shoppers'.

Eplants' demonstrates that providing customer service is critical to encourage customers to purchase. Some services provided on the Internet are enhanced such as 365x24 access from home or work, a wider selection than traditional nurseries, and the availability of information. To minimise the lack of inter-personal service delivery, Eplants uses relationship building strategies such as search, evaluation and response facilities, email and telephone enquiries, site visits, garden club membership discounts, and permission marketing newsletters. Examples of this relationship marketing are the use of permission marketing through their gardening club to allow for the targeting of individual customers with relevant and timely information and offers through email, and the use of expert staff to deliver plants to provide planting advice. Customer retention levels are high (management estimated 30% of customer return to purchase) suggesting that low-cost CRM is effective, this supports proposition 4.

#### **5.1 Discussion**

The case study of eplants.com.au provides evidence to support or refute the issues raised in the literature review. The sustainability of Eplants over the past 4 years demonstrates an evolution of retailing services, the findings recognise the long term advantage is not guaranteed as competitors and new entrants may copy or even 'leap frog' their position. On balance, the greatest anticipated threat is from established traditional retailers who will integrate e-commerce functionality into their operations. These integrated firms will benefit from the efficiencies of Internet opportunities whilst meeting the bulk of consumers who require the 'total shopping experience'.

Plants are difficult goods to sell over the Internet as many consumers rely on a visual presentation (nurseries have good opportunities for merchandising due to their inherent sensory appeal). The traditional 'keen gardener' is not well suited to shopping on the Internet, and there is a delay in purchase and consumption of these tangible goods. Despite these difficulties, Eplants has developed a defined niche market.

Individuals who have a limited range of goods that they purchase, want a wide range to select from [65]. When this demand from all consumers is aggregated, the e-tailer needs to be seen to offer a wide range of products to satisfy the differing individual requirements. Eplants has a significantly larger range of products available than traditional nurseries due to the removal of inventory holding constraints. This has resulted in increased sales of highly priced items and an increased average order size.

Price is often cited in the literature as a major consideration in the consumer purchase decision and various researchers support that the Internet will enhance comparative shopping. The Eplants case study supports these propositions; it uses the loss leader principle to enhance the consumer's perception of cost competitiveness. Eplants' experience suggests that most of their consumers have a limited knowledge of the prices of horticultural products. Evidence suggests price sensitivity is particularly important to recreational gardeners who have an interest and depth of gardening knowledge, whereas economic gardeners are less pricesensitive and value the added features and benefits associated with the total sale.

Low levels of supplier adoption of e-commerce functionality provide little opportunity for value chain efficiencies within the industry. Significant reductions of overhead costs have been achieved in Eplants' internal operations. These efficiencies support the literature where the major cost driver is operational efficiency which requires an efficient picking system, concentration of drops and the way the delivery is received [8] [51] [62].

This case study also provides support with the literature's distinction between economic and recreational shoppers, based upon their motivations. Economic shoppers value their time and are more likely be prepared to wait to an agreed time for their goods, in contrast to the recreational shoppers, who do not consciously value their shopping time, want all the items they purchased instantly, and the shopping experience is regarded as a leisure activity [8] [11] [50]. [24] describes recreational shoppers using the Internet for learning, social, or diversion related purposes, recreational shoppers may use the Internet to gather information before visiting the store. Saving time may not be a consideration for recreational shoppers as it becomes a social activity and they do not consciously account for the time taken to select and transport the plant to their home. Traditional self-service supermarkets rely on this principle, that is, push the costs of selection and transport onto the consumer.

#### **5.2 Conclusion**

Eplants provides a case study to illustrate the application of many of the theoretical propositions supported by the literature in a specific industry. Examining the characteristics of the case shows how certain theories and propositions have relevance to the industry and others are irrelevant. This approach is endorsed for other segments of e-tailing.

The operation of Eplants over the past four years provides support for e-commerce providing a positive return on investment. The first mover's advantage provides limited advantage as competitors can copy and improve both the functionality and 'look and feel' of the site. However, some advantage has been gained through the experience curve.

This research has identified key issues which would provide addition valuable information to explore the Internet phenomenon effect on retailers. Do the requirements of the target market match the service and products offered by the e-tailer? Are customers the same who shop on the Internet versus traditional retail outlets? Further research is being conducted in a series of case studies.

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