ELECTRONIC COMMERCE IN THE FOOD RETAIL INDUSTRY

A Case Study Comparison of Virtual Grocers' and Virtual Meal Retailers' Strategies and Business Processes.

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ABSTRACT

Title: ELECTRONIC COMMERCE IN THE FOOD RETAIL INDUSTRY: A Case Study Comparison of Virtual Grocers' and Virtual Meal Retailers' Strategies and Business Processes.

Keywords: E-Commerce, Business Processes, Marketing Mix, 7Ps, Virtual Grocers, Virtual Meal Retailers, Virtual Retailing, Food Retail Industry, Local E-Commerce

This research focused on an emerging area of virtual retailing in the food retail industry. There is a paradigm shift in the way consumers are interacting with retailers within fundamental business processes due to the exploitation of new virtual retail channels. It reports on the results of an investigation of strategies and business processes of virtual food retailers. The research was based on intensive case study interviews.

An objective of this research was to provide a deeper understanding of the key issues for successful implementation of business-to-consumer e-commerce. An additional focus was to examine what changes are needed to the traditional concepts of service marketing to address e-commerce.

The cases' were analyzed within the context of the marketing mix 7Ps. There were differences in the approach of *brick food retailers* who added a virtual retail channel and *virtual only food retailers* as described in the analysis. There were also differences in the business process strategies between *intermediaries* and *in-house implementation* virtual retailers.

This research found that the e-food retailers must address the fundamental business aspects presented by the 7Ps. These business fundamentals are not "thrown out the door" in the virtual world; however, to utilize the virtual tools effectively the 7Ps need to be viewed through a new lens.

Two original contributions from this research are the *Virtual Order Cycle* and the discovery of a new sub-segment of E-commerce called *Local E-commerce*.

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ACKNOWLEDGEMENTS

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1 INTRODUCTION

1 INTRODUCTION

Peter Drucker (1993a, p. 1) states "Every few hundred years in Western history there occurs a sharp transformation. Within a few short decades, society rearranges itself - its world views; its basic values; its social and political structure; its arts; its key institutions. Fifty years later, there is a new world. And the people born cannot even imagine the world in which their grandparents lived and into which their own parents were born. We are currently living through just such a transformation."

The Internet is an example of a fundamental transformation. In the 1990s, the Internet has become a strategic technology with the potential to change the way that business and their consumers interact (Rayport and Sviokla, 1995). This rapidly evolving technology is an enabler for innovation in retailing.

The objective of this research was to provide a deeper understanding of Business to Consumer e-commerce. The virtual segment of the food retail industry, referred to as e-food provided the context of this research. The timeframe for this study was the early days of e-food, July 1998 to February 1999.

This chapter consists of a discussion of the need for research in the area of business to consumer e-commerce (Section 1.1), the research context (Section 1.2), the research questions (Section 1.3) and the structure of the thesis (Section 1.4).

1.1 WHY RESEARCH E-COMMERCE

Business to consumer e-commerce is just emerging. The business to consumer segment of E-commerce can be defined as the goods and services that are ordered on-line via an electronic exchange between retailers and consumers. Strader and Shaw (1997, p. 187) argue that "the revolutionary nature of electronic commerce provides adequate incentive to study electronic markets to increase our understanding of their impact on the market's participants, traditional and newly created industries, as well as the economy as a whole."

Peterson et al (1997) claim that it is difficult to predict the total impact of the Internet in virtual retailing since the Internet is changing the rules. They expect that new market structures will evolve. "E-commerce research and field implementation is in it early stages.

Many aspects of e-commerce are not well understood and need to be further examined" (Strader and Shaw, 1997, p. 187). Since there is so much to be discovered in this field, research is needed to contribute to the base body of knowledge.

The shift toward electronic commerce involves linking consumers to marketplaces and is dramatically changing business to consumer interactions (Strader and Shaw, 1997; Rayport and Sviokla, 1995). For example, e-commerce provides a vehicle for retailers to improve customer relationships by understanding their preferences, anticipating their needs, and providing tailored offerings (Bloch and Segev, 1997).

Due to the fast pace of Internet adoption by consumers, it has become increasingly important to have a systematic analysis of how electronic commerce works from a business process perspective. This potential impact on business processes is another reason to study e-commerce. Bloch and Segev (1997, p. 50) state electronic commerce can redefine "the products, processes and business models used today, leveraging technology to fundamentally change the ways products are conceived, marketed, delivered and supported." Therefore research in business to consumer business processes is of value.

The potential growth of this market is another reason to study it. A report from *eCommerce* predicts this segment will grow from $1.8 billion in 1997 to $26 billion in 2002 due to the increased worldwide penetration of personal computers, and user-friendly websites (Ramsey, 1998). Socio-demographic drivers include an increase in families with working parent(s), affluent professionals, pressured to create more leisure time, willingness to outsource household chores, and a more computer literate population (Quelch and Klein, 1996; Strader and Shaw, 1997).

"Electronic commerce's time has come. One reason is that widespread electronic commerce has only become feasible within the past few years. It requires that both applications as well as infrastructure be widely available to consumers" (Strader and Shaw, 1997, p. 186). A base of virtually connected consumers is growing based on the availability of Internet attached PCs and consumers' willingness to order products over the Internet. Benjamin and Wigand (1995) have found evidence that consumers will choose

alternative forms of transactions (catalog and electronic shopping networks) over retail store transactions, in favor of price, high quality, selection choice, and time savings.

The great potential of e-commerce makes it a key factor in retailing (Webster, 1996) and an important area of research. In sum, e-commerce is a relevant area of academic importance. However, there is a limited amount of research that has been done in relation to the rapidly expanding field of e-commerce and therefore many open questions exist.

1.2 THE RESEARCH FRAMEWORK: E-FOOD

E-food is defined as the ordering of food products over an Internet enabled device, such as a PC, by a consumer to a food retailer. The food can be delivered to the consumer or picked up. The food retailer may or may not also have a brick retail channel. There were two focus segments for this investigation of the emergence of e-food: 1) virtual grocers and 2) ready-to-eat virtual meal retailers.

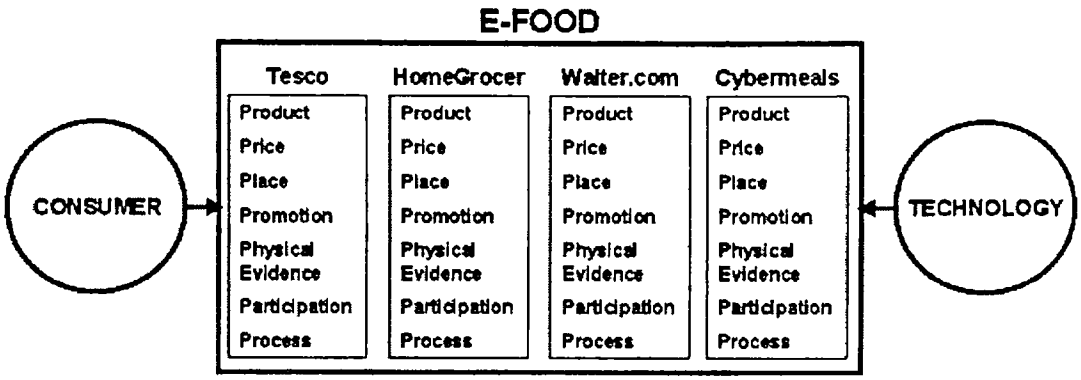
This case study examined virtual food retailers with and without brick stores. The research questions were:

1. What are the key issues for successful implementation of e-commerce and what new business processes emerge?
2. What changes are needed to the traditional concepts of service marketing to address e-commerce?

(The focus of the research was in e-food.)

A rich case study methodology using grounded theory was the approach for this research. Cases were analyzed in the context of the classic marketing mix, the 7Ps (product, price, place, promotion, physical evidence, participation, and processes). Two virtual grocers and two virtual meal retailers comprised the multi-case study. Section 4.2.1 describes the criteria used to select the four cases. Refer to Figure 1.1 for the e-food research framework model.

FIGURE 1.1 E-Food Research Framework Model



This research investigated the impact of two forces shaping e-food; the changing consumer and the availability of emerging Internet technology. Consumers are busy, trying to save time, and therefore receptive to convenience services such as e-food. The Internet is a technology that enables connected consumers to virtually order products and services. Since all Internet transactions are electronic, buying history is automatically captured and can be utilized to ensure repeat transactions are faster and more convenient. Therefore, consumers who have access to an Internet connected PC from home or work have the potential for a more convenient buying experience using this channel.

This research found that the e-food retailers must address the fundamental business aspects presented by the 7Ps. These business fundamentals are not "thrown out the door" in the virtual world; however, to utilize the virtual tools effectively the 7Ps need to be viewed through a new lens.

Based on case study research analysis, two original contributions from this thesis are discussed in Chapters 6: 1) the Virtual Order Cycle and 2) the discovery of a new sub-segment of E-commerce.

Since e-food was just emerging, many of the virtual food retailers were still in pilot phase or in the first year of operation. Virtual food retailers were experimenting with operations and logistics to discover a sustainable profit business model.

RETAIL FOOD INDUSTRY AND E-COMMERCE

A report from *eCommerce* predicts that in the year 2000, the four top industry categories will be financial/ insurance services, travel, entertainment/ sports, and groceries. The number of USA households expected to buy groceries on-line could increase from 10,000 in 1997 to seven million by 2002 (Ramsey, 1998). "Anderson Consulting predicts in the next 7 to 10 years alternative grocery shopping channels will represent from 8% to 12% of the consumer package-goods channel and 20 million households will shop via alternative methods" (Cleland, 1997, p. 40). Explanations of other reasons that support the selection of the food retail industry for study are presented in chapter 3.

E-food is a fulfillment of predictions from 1977 as to where this industry might evolve as prophesied by respected scientist and science fiction writer, Isaac Asimov (1977, p. 53). "The year 2025, will see a 'drive-in market,' a kind of computerized convenience store. The customer will call the store by using his own computer, and make his grocery list. The order will automatically be picked off the shelves of a computerized warehouse, packed, and ready for pickup by car... Indeed, cooking as we know it now, will be a thing of the past. The super market will be part of a food complex: People will be used to convenience foods, ready-to-eat... less cooking will be done at home."

Parker and Gulliford (1996, p. 12) claim that technology will always follow when the market is ready for it. "The customer must choose to either physically squeeze [the tomatoes or not]... The customer must choose whether to sit back and enjoy 24 hours, 365 day queueless shopping or whether to brave the elements and venture back to the supermarket." This research argues that the current convergence of technology and consumer demand will drive the emergence of e-food.

1.3 THE THESIS STRUCTURE

In this introduction chapter, the scope and the relevancy of the research is presented. The chapter is concluded by the following section, which describes the rest of the thesis structure.

Chapter 2 Reviews the relevant prior research from the literature. Sections relate to e-commerce, innovation, and the 7 Ps marketing mix.

Chapter 3 Provides a background on the relevant retail food industry (grocery and meals) demographics, issues, and trends.

Chapter 4 Explains the case study research methodology for the thesis, the research process, and the research tools. It presents the basis for the case selection.

Chapter 5 An analysis of each of the four cases within the framework of the 7Ps is provided.

Chapter 6 Comparative case analysis and key findings are presented. 1) The cross-case analysis discusses key issues between virtual grocers and virtual meal retailers within the 7Ps framework. 2) The model for Virtual Order Cycle is presented in conjunction with associated consumer facilitators and inhibitors. 3) The E-food Local E-commerce model is explained and presented as a distinct sub-set of business to consumer e-commerce.

Chapter 7 Summarizes the thesis by restating the two original key findings of this research. Additionally limitations of the research and suggestions for further research are discussed.

2 LITERATURE REVIEW

2 LITERATURE REVIEW

This chapter reviews literature, which will be used in the analysis of the thesis within the discussion of the cases. This literature supports the thesis area of e-food as defined in Chapter 1. Areas that are relevant to this research which are included are: e-commerce definitions and the associated consumer demographics for this market (Section 2.1), key service marketing literature 7Ps (Section 2.2), pertinent electronic commerce literature related to the 7Ps (Section 2.3), and concludes with a summary (Section 2.4). Chapter 3 contributes additional literature related to food retail demographics, trends, grocers and meal retailers.

2.1 E-COMMERCE

This section on e-commerce includes definitions of electronic markets (2.1.1) and electronic commerce (2.1.2). Additionally, it describes innovation literature (2.1.3) and demographics of Internet adopters (2.1.4).

Literature on electronic markets and electronic commerce provide a reference base for discussion on ordering products via the Internet. Selling groceries and meals through the electronic Internet channel is an innovation in food retailing; therefore, aspects of innovation from the literature that is pertinent for this research will be presented. Innovation literature supports the discussion of the virtual order cycle in section 6.2.

2.1.1 Electronic Markets

Bakos (1991, p. 296) defines an electronic market as "an interorganizational information system that allows the participating buyers and sellers to exchange information about prices and product offerings." Electronic markets are being enabled by new technologies such as the Internet. In contrast to traditional marketplaces, electronic markets have the potential to create new markets and transform existing markets by allowing retailers to innovate with new products and services and rapidly change the ways products are created and delivered (Malone et al, 1987; Shaw et al, 1997; Rayport and Sviokla, 1995). Schubert and Selz (1999) and Schmid and Lindemann (1998) emphasize that a significant aspect of electronic markets is that it removes time and distance restrictions between buyers and sellers.

Electronic markets provide new ways to connect supply with demand more efficiently, handle a larger volume of transactions (Bakos, 1991) and dissolve boundaries between producers and consumers (Bollier, 1996). Arunkundram and Sundararajan (1998) describe the following differentiating characteristics of electronic marketplaces (relative to traditional marketplaces). Electronic marketplaces increase the market size through the ability to bring together geographically dispersed buyers and sellers. Transactions can take place synchronously or asynchronously. They can "facilitate the storage and recall of buying histories of buyers and sellers" (Arunkundram and Sundararajan, 1998, p. 4). More details of the captured buying histories are given in section 2.3.6.

Strader and Shaw (1999) argue that in e-markets, sellers can compete on price or on differentiation as trusted, less risky, better reputation vendors. They suggest that unless a competitor's price is significantly less than a trusted seller then the switching cost will keep the consumer with the trusted seller. Electronic markets can impose switching costs on their consumers as many consumers do not want to take the effort to learn other virtual retailers' interfaces (Bakos, 1991). Refer to section 2.3.7 for further discussion of switching costs.

Strader and Shaw (1997, p. 196) argue that the magnitude of the product price is key. "The higher the product price, the greater the level of risk involved in the market transaction between buyer and sellers who are geographically separated and may have never dealt with each other before". They suggest following Porter (1980) that retailers can compete with a low cost strategy or a product differentiation strategy.

Malone et al (1987) stress how firms and markets will need to make changes in how they organize the flow of their products and services. They also discuss how a consumer will search for and analyze their choices within electronic markets to make the best selection.

The reminder of this section focuses on the search costs in electronic markets since, from a consumer's perspective, search costs are a main difference from traditional markets. In

physical markets searches happen sequentially, whereas on-line searches can be performed sequentially or simultaneously (Whinston et al, 1997).

An important advantage highlighted by Benjamin and Wigand (1995, p. 66) is "electronic market systems (that provide) product and price information may generate substantial allocation efficiencies by enabling customers to locate suppliers that better match their needs".

This information is supported by Bakos (1991, p. 297) who contends that "an electronic market system can reduce customers' cost of obtaining information about the prices and product offerings of alternative suppliers as well as suppliers' cost of communication information about their prices and product characteristics to additional customers". Nevertheless, there are search costs involved for consumers. "The challenge is to design search and retrieval processes that maximize an individual's value in terms of time, cost, and information needs" (Kalakota and Whinston, 1996, p. 514). Further arguments in this area will be presented in section 2.3.2 on Price.

2.1.2 Electronic Commerce

Electronic commerce can be defined as "the buying and selling of information, products, and services via computer networks" (Kalakota and Whinston, 1996, p. 1) including the "support of any kind of business transaction over a digital infrastructure" (Bloch and Segev, 1997, p. 49). Thachenkary et al (1997) suggests that electronic commerce consists of Internet transactions, with or without an intermediary, which include electronic invoicing, and electronic payment. The definition that will be used in this thesis, which is built from the previous ones, is that *electronic commerce is ordering products or services electronically via a networked device*. Electronic commerce will be referred to as an electronic channel. This is in contrast to the traditional retailing or "brick world" which uses a storefront channel. Electronic commerce is also referred to as virtual retailing and virtual commerce.

Rayport and Sviokla (1995) add to the thinking on Internet transactions and refer to these transactions that occur in the virtual world as *marketspace* transactions. Marketspace refers to the market that has emerged from e-commerce that contains an information

dimension, separate from product, where information has its own value and can be exploited. In the marketspace, consumers learn about products differently than in traditional markets. Consumers purchase products differently in the virtual world and potentially acquire products differently, in ways such as home delivery or electronic ordering. These differences will be discussed in section 2.3.

2.1.3 Innovation

This section presents selected literature on innovation that is related to consumers using technology to obtain food in a new way. Brown (1992, p. 62) argues that "the power of innovation to create new markets and competitive advantages underlies its significance in strategic marketing management."

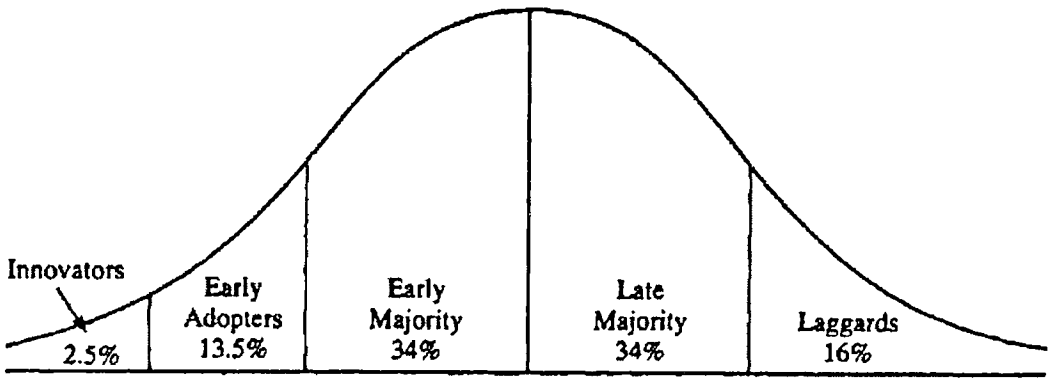
Robertson (1967, p. 19) defines innovation as "a process whereby a new thought, behavior, or thing is conceived of and brought into reality." Brown, (1992, p. 61) extending the definition of innovation to marketing, states that an "innovation can be defined as a new product, process or system which has the potential to create an entirely new market or change an existing one in a way which creates new patterns of competitive or customer behavior."

Robertson (1967) classified innovations in three categories: continuous, dynamically continuous, and discontinuous. The alteration of an existing product rather than the creation of a new one (e.g. new car model) represents a continuous innovation, least disruptive to consumers. A *dynamically continuous* innovation, more disruptive than a continuous innovation, could involve the creation of a new product or a more major alteration of an existing product (e.g. an electric toothbrush). A *discontinuous* innovation is related to the creation of a new product or establishing new consumer behavior patterns (e.g. the Internet). This research views virtual food retailing as a discontinuous innovation.

The diffusion of an innovation is "the process by which the innovation spreads from its source of invention to its ultimate users or adopters" (Robertson, 1967, p. 14). It occurs over a period of time. Rogers (1995) developed five categories of adopters, which correspond to the relative time at which they would adopt an innovation: innovators, early adopters, early majority, late majority, and laggards. Innovators are greater risk takers and

will be the first group to try an innovation. The innovation diffusion starts slowly and then grows quickly when the majority embraces it. Refer to Figure 2.1, for Rogers' (1995, p. 262) adoption categories.

FIGURE 2.1 Adopter Categories of Innovation Over Time



Rogers (1995) has defined five steps in the innovation decision process. Potential innovator adopters seek more information in each of these five stages so they can decrease their uncertainty and apprehensions about adopting the innovation. The five stages are 1) knowledge (consumer is aware of innovation's existence and functions), 2) persuasion (consumer's attitude is formed about the innovation), 3) decision (consumer chooses to accept or reject the innovation), 4) implementation (consumer puts innovation to use), and 5) confirmation (consumer seeks reinforcement of innovation decision or decides to reject previously accepted innovation). The innovation decision process of consumers is reflected in area of Promotions in section 2.3.4. and Process in section 2.3.7.

"Innovation resistance is the resistance offered by consumers to changes imposed by innovations. To the extent that consumers can suffer changes in the way they acquire information about, purchase, use or dispose of new products, innovation resistance is but a special case of resistance to change" (Ram, 1987, p. 208). Consumers will only adopt the innovation if they perceive a relative advantage such as economic gain or cost saving (financial, social, time) (Ram, 1987). Ram (1987) states that consumers' willingness to

innovate is based on demographic variables such as education, income, mobility, and age which will be described in the next section.

However, there are ways for retailers to reduce innovation resistance. Ram and Seth (1989) offer some suggestions for overcoming barriers to resistance to innovation which relates to Rogers' categorization of adopters in the earlier stages: elicit endorsements and testimonials from opinion leaders, offer a trial to reduce consumer risk, package the innovation under a well known name, and educate consumers.

2.1.4 Demographics of Internet Adoption

Understanding the demographics of Internet users is as critical to the success of virtual retailers as it has been with retailers utilizing other channels. In chapter 5, discussion of the case's target segment will reference literature in this section. Demographics are a factor in a consumer's decision to purchase from a brick store, by mail order, or on-line (White and Manning, 1998). Cunningham (1998) states that the starting point for an e-commerce strategy is to understand what consumers want and how they want it delivered. He emphasizes the importance of understanding the target consumers' demographics.

Support for the importance of demographics to business decisions is given by Peter Drucker (1985, p. 90) who argues, " Demographics... are the first environmental factor that a decision maker... analyzes and thinks through." The following statements further reinforce this view. "The location of the population becomes an important ingredient in the determination of the basis of a given [physical] retail site. The task of management is to select those demographics characteristics that are relevant in the determination of the market" (Rachman, 1975, p. 108).

A key concept is that of market segmentation which identifies the different and distinct group of consumers (e.g. education, income, age, attitude) who might require different products, services and marketing mixes (Pol, 1991; Kotler, 1997b). Segmentation by education or income is useful as they are the strongest predictors of consumer buying behavior (Miller, 1996). "The most crucial non-controllable environmental factors are customer demographics such as age and income, which influence the customer's desire for products and ability to pay for them" (Kauffman and Lally, 1994, p. 771). Age as related to

life cycle (single, married with family, empty nest, retired) impacts consumers purchasing behavior for product and services (Wells and Gubar, 1966).

A Forrester report (McQuivey et al, 1998a, p. 6) states "the affluent will form the core of the Web-shopping universe. The purchasing power of upscale households makes them disproportionately important to Net shopping. Households earning more that $50,000 a year make up 36% of the total U.S population today yet account for 47% of total consumer spending and 74% of spending on-line."

The same Forrester report (McQuivey et al, 1998a, p. 6) suggests that the high-income segment is more important for the e-commerce market today, "low-income shopping households will also adopt on-line shopping. Today, households earning less than $25,000 make up 34% of the population but generate only 6% of the Web dollars." However, developments in areas like low cost Internet connection devices means that this market will extend to the lower income population. Indeed, Forrester points out, "by 2003, this overlooked segment of households will use sub-$500 PCs and shop on-line to save money, nearly doubling their share of on-line spending to 11%" (McQuivey et al, 1998a, p. 6).

One demographic factor of importance is lifestyles. This is an important attribute to the target consumers for this research. Lifestyle discussion in included here and also related specifically to obtaining food in Chapter 3.

Lifestyle research goes beyond demographics and focuses on how consumers spend their time and what their interests are (Plummer, 1974; Alpert and Gatty, 1969; Zablocki and Kanter, 1976). Plummer (1974) argues that the more a firm understands about their consumers, the more effectively they can communicate and market to them.

There is one aspect of lifestyle, which characterizes the purchase of goods and services in terms of a set of consumer decisions relating to allocation of time (Feldman and Hornik, 1981). They state that saving time means reallocation of time from one activity to another activity to attain a perceived benefit. It is a *timestyle* choice, due to the finite nature of time. They divide time allocation into four areas- work, necessities (sleeping, childcare,

travelling to shop), housework, and leisure. They discuss the tradeoff of time and money, where consumers are willing to spend more money for services or products to save time.

An important trend related to the desire to save time that impacts consumers lifestyle and family time management decisions is the emergence of women into the labor force (Zablocki and Kanter, 1976). Two career families have more income but more time constraints (Bellante and Foster, 1984).

Virtual consumers share busy lifestyles and therefore want to save time. "The socio-demographic drivers include an increase in families with two working parents, single parent homes, pressure to free up limited leisure time, a more computer-literate population, crime, and cutbacks in store personnel" (Strader and Shaw, 1997, p. 186). "The shoppers of the nineties, invariably time poor professionals, are creatures with little patience. We live in a McDonalds' fast food society where slow service is no service and speed is paramount" (Parker and Gulliford, 1996, p. 10).

Convenience is related to saving time. One study found that Internet shoppers were convenience seekers who were innovative and sought more variety than non-Internet shoppers (Donthu and Garcia, 1999). Examples of convenience attributes valued for in-home shoppers include: reduction of time spent shopping, flexibility in timing for shopping, and savings in physical effort to travel to stores (Darian, 1987). Section 3.1.1 contributes additional literature about the convenience oriented consumer who is time constrained, as it relates to the food retail industry.

Two other factors that web buyers have in common are: 1) they have access to an Internet based PC and 2) they have had to overcome any technical learning inhibitors to place an on-line order. Ram and Sheth (1989) state that some new technologies that are innovative require consumers to learn new skills, e.g. when videotext in-home shopping services were offered in France. They discuss how some consumers will resist learning how to do something in a new way when it disrupts their current routine or status quo.

Studies have shown that there are two variables that impact peoples' willingness to learn and their attitude to new technologies. They are *perceived usefulness* and *perceived ease of use* (Davis, 1989). Teo et al (1999) discovered that this also applied to the Internet. Perceived ease of use is most important in the early adopter stage of adoption of using a new technology system (Adams et al, 1992).

Ease of use is related to consumers' skills in using the technology. If the level of the consumers' on-line skills is low then it is a barrier to their ability to purchase on the Internet (Strader and Shaw, 1997; Hoffman et al, 1999). Virtual retailers need to provide assistance with on-line ordering until consumers gain ordering skills (Charlton et al, 1998). As consumers become more educated and skilled, the barriers to purchase using new technology will be reduced. Refer to section 2.3.6 for further training discussion.

The initial Internet users were a small group of innovators. The early adopter had high income and this income group is continuing to embrace the Internet (Hoffman et al, 1996; Thachenkary et al, 1997).

The pace of adoption is growing quickly. As of 1998, late adopters were beginning to view the Internet as a tool to solve problems. Eldridge (1998) projected that a majority of these late adopters would be women with children which would open up a much larger group of consumers to virtual retailers (and to e-food retailers). In 1996, Hoffman et al (1996) predicted that the Internet user population would become more representative of the general population. "As Internet popularity spreads to less technical audiences... they will need a totally different set of information. A totally different look and feel" (Carter, 1996, p. 157). This difference in information needs between the more experienced early adopters and the emerging less technical audiences has ramifications for the retailer's website.

Historically, the elderly market have been the last age group to adopt innovations e.g. ATMs and calculators (Lundsford, 1992). However, Lundsford states while many younger consumer adopt innovation to *save time*, the elderly are seeking to *fill time*. Lundsford's comment on seeking to fill time links with Miller (1996) statement that older users will use the Internet as a tool for leisure, social activities and for health-care information (Miller, 1996).

People who buy on-line advance through stages: from first time buyers to experienced Net shoppers and then to veterans according to a Forrester report (McQuivey et al, 1998a, p.

12). "First time buyers go for convenience items [software, books, apparel]. Experienced Net shoppers diversify into researched purchases. In 1998, second-year shoppers spent 2.5 times more than average first-year shoppers did... Third-year shoppers were 60% more likely than first-year shoppers to buy groceries on-line. Nearly two-thirds of these buyers use the Web every day."

Internet dropouts differ from the previously discussed innovator resisters in that they have tried the Internet and then rejected it. Katz and Aspden's (1997, 1998) studies have found reasons why former users stopped using the Internet were: lost access to a computer, not enough time, high costs, too hard to learn, and lost interest. When respondents were asked what would be the most desirable improvement on the Internet the highest response was *make it easier to use*. Other surveys validate the existence of a community of Internet dropouts (Motorola, 1996; Kingsley and Anderson, 1998).

This discussion on innovation and Internet adoption is very relevant to the discussion on the diffusion of ordering e-food among consumers and the associated impact of facilitators and inhibitors to the ordering process.

2.2 MARKETING MIX STRATEGY LITERATURE

The marketing mix framework, which is utilized for this research, has the advantage that it has been used and tested by researchers over time and it is a simple model. As will be described, the 7Ps in the Marketspace build upon the traditional elements. The concept of the marketing mix is part of the central core or basics of marketing. McCarthy and Perreault (1987) define the marketing mix as the *controllable variables* that a firm can influence to meet the needs of the target market.

The concept of the *Marketing Mix* was introduced by Neil Borden in the early 1950s (Borden, 1964). The term "marketing mix" refers to the mixture of elements that make up a marketing program to a specific consumer target (e.g. product planning, pricing,

branding, channels of distribution, personal selling, advertising, promotion, packaging, servicing, physical handling, and analysis.) These tasks comprise the unique set of marketing tasks and strategies that each firm must design and implement.

2.2.1 The Differences of Service Marketing

The service marketing literature is an extension of the original product marketing mix theory since there are distinct differences between products and services. Shostack's (1977a) classic article on service marketing describes key differences between products and services. Services are intangibles, e.g. experience (snow skiing), time (attorney), or process (house cleaning). Services can be defined as market transactions where the end result is the exchange of something other than a tangible commodity (George and Barksdale, 1974; Judd, 1964).

Shostack (1977a) states that a market entity (air travel) can include both tangible elements (product- serve food on plane) and intangible elements (service- transportation). Therefore, there are ranges of services from "pure" services to services that are part of a total product offering. Shostack (1977a, p. 75) states, "the greater the weight of intangible elements in a market entity, the greater will be the divergence from product marketing in priorities and approach." In product marketing the product is the tangible evidence. In service marketing, an *image* of the service with tangible clues must be presented to the potential consumer (e.g. on-time airline arrivals with friendly service). Shostack states that since services are closely linked to their human representatives and the consumer often cannot distinguish between the two, this aspect must be closely managed. Bitner (1990) agrees that consumers evaluate service encounters with the firm's personnel *as the service,* therefore management needs to monitor the service encounters.

2.2.2 Service Marketing

Booms and Bitner (1981) extended Shostack's (1977a) work on differentiating service marketing from product marketing. Their contribution of an additional 3Ps has been accepted in the marketing literature as a way of extending the 7Ps of the services marketing mix (Kotler, 1997b). In Figure 2.3 Booms and Bitner (1981, p. 50) present elements of the new 3Ps, participants, physical evidence, and process of service assembly, along with a service perspective of the 4Ps elements listed by Kotler (1976, p. 60). This

section explains Booms and Bitner's arguments and offers extensions on their ideas by Kotler (1997b) and Murdick et al (1990).

FIGURE 2.2 Booms and Bitner Perspective of the Marketing Mix

TRADITIONAL (Kotler 1976, p.60)

Product	Price	Place	Promotion
Quality	Level	Distribution channels	Advertising
Features & Options	Discounts & allowances	Distribution coverage	Personal selling
Style	Payment terms	Outlet locations	Sales promotion
Brand name		Sales territories	Publicity
Packaging		Inventory levels and locations	
Product line		Transportation carriers	
Warranty			
Service level			
Other services			

MODIFIED AND EXPANDED FOR SERVICES

Product	Price	Place	Promotion	Participants	Phys. Evidence	Process
Quality	Level	Location	Advertising	Personnel:	Environment:	Policies
Brand name	Discounts & allowances	Accessibility	Personal selling	Training	Furnishings	Procedures
Service line	Payment terms	Distribution channels	Sales promotion	Discretion	Color	Mechanization
Warranty	Customer's perceived value	Distribution coverage	Publicity	Commitment	Layout	Employee discretion
Capabilities	Quality/price interaction		Personnel	Incentives	Noise level	Customer involvement
Facilitating Goods	Differentiation		Physical environment	Appearance	Facilitating goods	Customer direction
Tangible clues			Facilitating goods	Interpersonal behavior	Tangible clues	Flow of activities
Price			Tangible clues	Attitudes		
Personnel			Process of service delivery	Other Customers:		
Physical Environment				Behavior		
Process of Service delivery				Degree of involvement		
				Customer/ customer contact		

Booms and Bitner (1981) argue that service marketers face different challenges from product marketers. The *Customer Interface* is important owing to the large number of encounters between the consumer and the firm's personnel. From a consumer's perspective the firm and the firm's personnel (at the interface) are interchangeable. There could be a variance in the delivery of the service or the attitude of the personnel delivering the service that could impact the encounter. This is an aspect of participation.

Services associated with products are becoming increasingly important in differentiating products (Kotler, 1997b). Regan (1963) describes a type of service/ product combination, stating that new consumer services are offered to and requested by higher socio-economic groups in the beginning of the service life cycle and over time sought by lower socio-economic groups. He suggests that most consumers would prefer personalized services if cost were not an issue. However, personalized services are viewed more as a status symbol when rendered to only a small percentage of consumers. Regan's comments have interesting implications in the virtual world where personalized services are easier to offer and demanded by the masses. Regan's discussion presents an example of Roger's innovation diffusion.

The service focus of *Price* is on the consumer's perception of the service value (Booms and Bitner, 1981). Murdick et al (1990) claim that pricing is more complicated for services than products. To manage demand, prices can be varied vary by time of day or day of week (e.g. discount for off peak time delivery). Price can be scaled by scope of service (first class or coach). They state that the price of the service can create a different expectation of value by the consumer. Thomas (1978) explains that both the consumer (what they think it is worth) and the competition (what the market will bear) determine service value based pricing.

The service perspective of *Place* refers to the location of the service and its distribution channels (Murdick et al, 1990). Services can be bound to a specific location or be transportable (e.g. delivery as part of service).

The difference between the *promotion* of services and the promotion of products is the aspect of service intangibility (Booms and Bitner, 1981) which can affect how the promotion is implemented. Tangible clues relating to the service quality from a consumer's perspective need to be incorporated into the promotion message (Murdick et al, 1990). Relationship marketing activities, such as consumer purchase reward programs, are important since many services are contingent on repeat business (Murdick et al, 1990).

An interesting aspect of promotion that ties back to Roger's (1995) innovation discussion (section 2.1.3) is that promotion plans should be focused differently if an innovation is

involved (Robertson, 1967). Robertson states that in introducing an innovation the promotion should focus on the opinion leaders and not the masses. Additionally, specialized media should be used to reach this influential group. On the other hand, Mahajan et al (1990) state that early adopters have a higher inclination to use a great amount of publications as input to their decisions to adopt. Therefore promotion plans should select different channels based on the stage of the innovation adoption.

Participation occurs as a result of a consumer interaction as the following definitions present. Solomon et al (1985, pp. 99-100) define a service encounter as a "face-to-face interaction between a buyer and seller in a service setting." Shostack (1985, p. 244) expands the definition: "a period of time during which the consumer directly interacts with a service." This expanded definition extends beyond face-to-face service interactions, such as delivery of groceries and includes customer service support over the telephone. More of this aspect of participation will be described in section 2.3.6.

Physical Evidence relates to the environment where the service is prepared and the consumer interaction occurs (Booms and Bitner, 1981). The consumer interfaces with some aspect of the service provider's facility, equipment or personnel, which are all part of physical evidence of the service (Murdick et al, 1990). Consumers often use physical evidence to evaluate service quality; the other elements of service are more intangible and this makes them difficult to evaluate (Kotler, 1997b; Murdick et al, 1990). Shostack (1977a) argues that the greater the degree that a service is intangible then the greater is the need for physical evidence. Shostack (1977b) states that since the employees providing services are tangible, they are in fact *evidence* of the service in the mind of the consumer. Therefore, Shostack argues *human evidence* should be envisioned as part of the marketing mix.

Process of Service Assembly encompasses the procedures and process of activities that the service organization selects to create and deliver the service (Booms and Bitner, 1981). Murdick et al (1990, p. 537) state that the overall service process reflects how "all the marketing mix elements are coordinated to provide consistent, quality service for the customer." Quality control needs to be incorporated into the service process (Parasuraman et al, 1985; Chenet et al, 1999).

2.2.3 Growth Strategies

Ansoff's growth strategies will be used in the discussion of e-food business expansion options in section 6.3. Ansoff (1957, p. 114) proposed a Product/Market Expansion Model as displayed in Table 2.1. This model will have an important role in analyzing the case studies later.

TABLE 2.1 Ansoff Growth Strategies

	Current Products	**New Products**
Current Markets	Market Penetration Strategy	Product Development Strategy
New Markets	Market Development Strategy	Diversification strategy

These four growth strategies described in this section are market penetration, market development, product development, and diversification.

2.2.3.1 Market Penetration Strategy

This strategy focuses on gaining more market share within the firm's current markets with their current product lines (Ansoff, 1957). The major approaches are: 1) motivate current consumer to buy more though larger or more frequent orders, 2) market to competitor's consumers, and 3) encourage non-user of the product or service to start using it (Kotler, 1997b).

2.2.3.2 Market Development Strategy

In contrast, this strategy focuses on developing new markets; however, while using its current product base (Ansoff, 1957). Approaches for exploiting this strategy include: 1) identify and target new types of consumers or other potential segments within the current geography, (e.g. if currently sold to consumers it should be analyzed if could be sold directly to businesses), 2) seek additional distribution channels in the firms' current geographic base, and 3) sell in new locations within the current country or internationally (Kotler, 1997b).

2.2.3.3 Product Development Strategy

On the other hand, the product development strategy, concentrates on the firm's current markets but is differentiated from the previous two approaches by focusing on developing new products that are of potential interest to the firm's current consumers (Ansoff, 1957). Examples of product development strategy include: 1) developing new product features for existing products, 2) developing higher and lower quality products to expand the current product line and reach different market segments, and 3) researching and developing alternative technologies which could improve on or replace the existing product (Kotler, 1997b).

2.2.3.4 Diversification Strategy

Diversification is unique in that both products and markets are areas of focus for the firm (Ansoff, 1965). Kotler (1997b, p. 79) explains Ansoffs' diversification strategy as follows "Diversification growth makes sense when good opportunities can be found outside the preset businesses. A good opportunity is one in which the industry is highly attractive and the company has the mix of business strengths to be successful. Three types of diversification are possible. The company could seek new products that have technological and/or marketing synergies with existing product lines, even though the new products themselves may appeal to a different group of customers (concentric diversification strategy)... The company might search for new products that could appeal to its current customers even though the new products are technologically unrelated to its current product line (horizontal diversification strategy)... The company might seek new businesses that have no relationship to the company's current technology, product, or market (conglomerate diversification strategy)."

2.3 E-COMMERCE AND THE MARKETING MIX

This section presents aspects of e-commerce within a framework of the 7Ps showing how e-commerce, although a new form of business and marketing, relates and extends existing theory. This section is organized into a subsection for each *P* which will contain 1) a brief overview of the traditional elements for that P, 2) two tables displaying the traditional and e-commerce *P* elements, and 3) a discussion of the e-commerce *P* elements that are relevant to this research.

Chapter 5 presents an analysis of the cases within the context of the 7Ps elements presented in this section. The virtual elements are the focus of the analysis.

2.3.1 Product

Product retailing in the virtual world can borrow from the wisdom of traditional retailing. Drucker (1985, p. 68) explains, "the purpose of a product or a service is to satisfy the customer." Goldratt (1997, p. 118) claims, "the only way to make money is not through the products but through the benefits that those products bring to the customer." Doyle (1990, p. 6) defines a successful brand as a "name, symbol, design or some combination which identifies the 'product' of a particular organization as having a sustainable differential advantage." Doyle also states that service is the most sustainable differential advantage.

Booms and Bitner's (1981) list of Product (service focused) elements includes: product features or service capabilities, brand name, elements of quality, warranty, product or service line, and tangible clues. Brand and brand extensions are important to the concept of product (Kotler, 1997b). Brand encompasses values of trust that can apply to the retailer or to the firm. Brand extensions, when used appropriately can assist the firm moving to new marketplaces (Kotler, 1997b).

Electronic retailing adds to the list of elements. Some aspects of Product or service that contribute electronic commerce elements are: special product characteristics, larger product line, and creation of more services offered around the product. Refer to Figure 2.4

FIGURE 2.3 Product Elements

TRADITIONAL ELEMENTS	E-COMMERCE ELEMENTS
Product feature/ service capabilities	Product Attributes: e.g. physical goods, search goods, time specificity
Brand name	Larger product line offering
Product or service line	Services added to products
Quality aspects	Information aspect of product
Warranty or satisfaction guarantees	Product customization and personalized services
Tangible clues	

Kotler (1999) states that products can be differentiated on physical differences, availability differences, service differences, price differences and image differences. In marketing within the virtual world, consumers will continue making product decisions based on traditional elements in the marketing mix including firm and brand image, product quality, service, and value (Angelides, 1997). Retailers can exploit the new direct marketing channel to consumers to create a different business or service (Drucker, 1985). Bloch et al (1996) propose that a virtual company can differentiate itself though new product innovation, faster time to market, lower price, and improved customer service.

2.3.1.1 Product Attributes

One of the key factors that influences consumer shopping preferences is product characteristics (Sheth, 1983). Peterson et al (1997, p. 334) state, "The suitability of the Internet for marketing to consumers depends to a large extent on the characteristics of the products and services being marketed." Shi and Salesky (1994) offer product characteristics that should be successful for virtual purchases: where product information is a factor in the purchase decision, e.g. availability of on-line demonstrations, items that can be delivered electronically, unique items, and items purchased regularly where convenience is valued. Three product attributes that will be described below are physical and digital products, search and experience goods, and time specificity.

The usual e-commerce product categorization is into physical products and digital (virtual) products. Physical products are tangible with physical form. Digital products are "all intangible goods whose value does not rely on physical form" (Department of Commerce, 1998, p. 24). Examples of digital products are software, financial information, music, reports, on-line newspapers and magazines. Digital and informational products can be sent electronically to consumers via the Internet thereby reducing distribution costs and distribution time (Peterson et al, 1997). The focus of this thesis is on physical products ordered by e-commerce, therefore there will be no further explicit discussion of digital (virtual) products.

Consumers who purchase through electronic markets must be willing to buy products without going to a retail store (Benjamin and Wigand, 1995). Consumers have shown a preference to buy certain products through traditional stores so that they can feel and touch

the product before buying, e.g. when purchasing clothes (Rhodes and Carter, 1998); such products are known as *experience goods* (Peterson et al, 1997). Experience goods do not always lend themselves to e-commerce. However, after experience goods are purchased many times, they can make the transition from physical to virtual commerce. Peterson et al (1997) also presents a classification of products or services as *search goods*. Search products can be evaluated from externally provided information. Search products fit well within electronic commerce.

Products that can be *described easily* and thus closely related to search goods, fit very well in virtual retailing (Benjamin and Wigand, 1995). Alba et al (1997) describe how virtual retailers are able to provide more information about their products than brick retailers. They state that product information is always available and consistently accurate, in contrast to employees with varying degrees of product knowledge. On-line product information allows consumers the flexibility to just seek the information and related depth that they desire. Alba et al claim this information can be 1) a competitive differentiator between virtual retailers and 2) a competitive advantage over traditional retailers based on the large volume of information that can be stored and searched in a virtual format. Additionally, they maintain that it should cost less to provide this information virtually than to train employees to provide it.

Another product aspect that is particularly important to this research, is time specificity. Malone et al (1987, p. 486) define an asset, such as a purchased physical product, as *time specific* "if its value is highly dependent on its reaching the user within a specified period of time." They present the example of a perishable product, such as food, that must reach its destination within a limited time frame or could spoil. Another aspect of time is related to product acquisition.

Feldman and Hornik (1981) also discuss how products can be differentiated based on their time characteristics. They describe sub-segments of shopping transactions that contribute to the overall time to acquire the product. Examples presented include: product search time and product check-out time which are different in self service and full service shopping encounters. Both of these aspects of time impact business processes for both traditional and virtual retailers. Refer to virtual business processes in section 2.3.7.

2.3.1.2 Wider Selection Of Products and Services

In contrast to traditional brick retail markets, electronic markets consumers have access to a wider range of goods and services. Retailers are able to offer a larger product line since they are not confined to a physical floor and shelf space limitations (Alba et al, 1997). Some consumers will be motivated to purchase from electronic retailers because of the wider on-line product selection (Benjamin and Wigand, 1995; Green and Browder, 1998).

In virtual retailing, comparison shopping is facilitated even on a global basis (Palumbo and Herbig, 1998; Quelch and Klein, 1996); product selections are based on the attributes that best match consumer needs (Malone et al, 1987). However, some consumers use the Internet for the search but then go into a store to make the actual purchase (Westland and Clark, forthcoming 1999).

2.3.1.3 Services Added To Product Offering

Services typically have a wider range of customization than products purchased off the shelf (Lovelock, 1983). There has been a move within many industries for greater customization of products and services (Lampel and Mintzberg, 1996). E-commerce provides opportunities to create new and additional products or services for consumers. As discussed in section 2.2.3, Kotler (1997a) predicts that services will become an important competitive tool to assist in product differentiation, as products become more similar. Anderson (1998, pp. 81- 82) has a similar perspective, "on the Internet the product itself means far less that the service around it." The services of delivery, product recommendations, and customization are described below.

Consumers can travel to a retailer to obtain a product or service or the service/product can be delivered or performed at the consumer's premises. Consumers receive the highest level of service and convenience in the second case (Lovelock, 1983). *Delivery is an example of a service* that adds to a physical product's total value. For purchases of physical products, delivery can be an optional service within the brick world in contrast to mail order or virtual purchases where it is usually part of the product/service offering.

Gupta et al (1997) state that a difference between physical and virtual products is the consumer acquisition channel. Physical product requires physical shipment of the product (Strader and Shaw, 1997; Gupta et al, 1997; Bright, 1997) with logistics based on distance and on whether international borders are crossed (Bakos, 1998). An important attribute of delivery is the length of time it takes for the product to be delivered after ordered, which impacts the order fulfillment process discussed in section 2.3.7. Products can be drop shipped from distributors or held in the virtual retailer's inventory, which could enable faster delivery (Green and Browder, 1998). Gould (1998) predicts that delivery, as a service, will become more important and strategic with the growth of e-commerce.

Some virtual retailers allow pick up. Benjamin and Wigand (1995) argue that when consumers require faster delivery than is offered, then pick up at a retailer location will emerge as an option.

There is a wide range of articles which discuss how information, when combined with a product, can become a strategic asset and also a basis for differentiation from competitors (Porter and Millar, 1985). An application of this concept in the virtual world can be found in the work of Glazer (1991) and Sampler (1998). Information gained as a result of a transaction, e.g. consumer buying history data, is an asset than can be used to sell additional products or services to the consumer (and also an asset to sell to other firms) (Glazer, 1991). Sampler (1998) states that virtual companies have a competitive advantage over brick retailers because of their ability to digitally capture all information and therefore enable precise consumer recommendations for future purchases.

Products sold via e-commerce allow a retailer to capture a consumer's detailed buying history (Hoffman et al, 1997). In contrast to brick stores, where consumers have the option of paying cash and thereby retaining their privacy, virtual retailers will always have an electronic record of their consumers' purchases and therefore gain an advantage in understanding their consumers preferences (Whinston et al, 1997). This information allows a retailer to then offer *customized products*. Malone et al (1989) claim that when products are personalized to a buyer they are less motivated to perform electronic comparison-shopping searches for alternatives.

Products and services need to be created focused on consumer needs. Different segments will have different requirements. Kotler (1997a) points out that high-income consumers are much more likely to demand high-quality products and personalized services, whereas low-income consumers are more likely to want basic products at low prices. The demand for personalized services from affluent consumers is characteristic of the early adopters of the Internet who typically share a higher income level (Kotler, 1997a). Consumers' desire for personalized services was discussed in section 2.2.3.

There are regional differences for products and services. Knoppers (1998) suggests that within global e-commerce there is a need to tailor products to the consumer within a local market. To be successful locally requires knowledge of the consumer and the ability to communicate with consumer in their own language. Quelch and Klein (1996, p. 68) assert that virtual retailers are finding it "easier to adapt their products extensively to local or national preferences due to factory and marketing customization." Henderson and Venkatraman (1993) claim that retailers marketing over the Internet will be able to respond more rapidly to local market conditions and requirements.

Products will increasingly be customized with consumers participating in the product design; such customization is a great differentiating factor (Kotler, 1997a; Bloch et al, 1996). For example, a consumer could be asked to select valued features that a retailer or manufacturer would then provide in a customized product (Bloch et al, 1996). Lampel and Mitzberg (1996) state that competition is forcing retailers not just to view consumers as groups with common characteristics but to develop a relationship that provides products based on customer specifications. This is a major shift to providing more specialized products and services (Rhodes and Carter, 1998). However, this extent of customization is more a future possibility with few virtual firms actually implementing it today (Dutta and Segev, 1999).

An additional aspect of customization is for a virtual retailer to use a consumer's captured buying history of items to created a *customized re-ordering list* (Alba et al, 1997). The ability to reorder quickly provides greater convenience for items ordered frequently.

2.3.2 Price

Within the marketing mix, traditional Price elements include product/service cost, delivery cost, payment terms, and consumer perceived value (Booms and Bitner, 1982; Kotler, 1997b; Murdick et al, 1990). Traditional Price elements are also applicable in the virtual world. For example, discounts such as coupons are also relevant in the virtual world as well as their brick counterparts (Jarvenpaa and Todd, 1996-1997). Refer to Figure 2.5 for traditional and virtual pricing elements. The remainder of this section focuses on the virtual Price elements.

FIGURE 2.4 Price Elements

TRADITIONAL ELEMENTS
Product or service cost
Discounts- coupons, rewards for loyalty
Payment term- cash or credit
Shipping and handling
Consumer perceived value

E-COMMERCE ELEMENTS
Dynamic and customized pricing
Facilitated price searches
On-line price negotiations
Lower distribution cost
Delivery charge for physical product
Channel fee (to bias either virtual or brick transactions)
Credit card is the predominant payment medium

Anderson (1998) found that on-line consumers are more interested in making quick, but well-informed product decisions rather that getting the lowest price. Elements of virtual pricing that are described in this section include: 1) dynamic pricing, 2) customized pricing, 3) facilitated price searches, 4) on-line negotiated prices, 5) lower distribution costs, 6) delivery charge for physical product, 7) channel fee to bias consumers to use either a brick or virtual channel, and 8) payment media. Payment security is discussed in section 2.3.6.

Schmid and Lindemann (1998) state retailers can offer fixed priced (e.g. pre set price catalogs) or auctions (variable pricing). Lincke (1998) states that while initially e-commerce pricing will be fixed (same price for all); prices can be based upon specific customer profiles. Quelch and Klein (1996) state that e-commerce facilitates flexible

pricing. Therefore prices could change more frequently than brick stores since it is easy to make frequent price changes. Additionally, pricing can be tailored on a location (country basis) or even on an individual consumer level (Quelch and Klein, 1996; Palumbo and Herbig, 1998).

For Strader and Shaw (1997) electronic markets lead to lower prices because they improve the availability of price information. E-commerce provides on-line pricing information, which is dynamically updated. This allows consumers to quickly compare the prices from multiple vendors therefore putting them in a stronger bargaining position (Strader and Shaw, 1997). "An electronic market provides a mechanism for reducing the search costs (money, time and effort expended to gather product price, quality, and feature information) for consumers. This also reduces the likelihood that sellers can charge significantly higher prices than their competitors because the consumer is unaware of the other prices (a form of regional oligopoly or monopoly)" (Strader and Shaw, 1997, p.189).

Benjamin and Wigand (1995) suggest that the virtual value chain reduces transaction costs and lowers product pricing. (Refer to 2.3.7 for definition of value chain.) They claim that the consumer will seek and be able to have the lowest price within a large number of choices. Palmer (1997a) disagrees. He was surprised by results of a study that showed price was not significantly different for products offered via four different methods: in-store, catalog, cable TV, and through the World Wide Web. The expectation was that non-store offering would be less expensive. Wilder (1998) states that while consumers may be initially attracted by low prices, these low prices alone will not be enough to retain them.

There are implications for a wide variety of price structures in the virtual world. The price of the products or services can be fixed by the retailer, e.g. supermarket food, or can be negotiated at order entry time by means such as an auction. In an auction, potential buyers submit a bid. The retailer compares the bids and the product is sold once the retailer accepts one of the bids. On-line auctions are typically used for high volume, low priced items (Jutla et al, 1999).

Dutta et al (1998, p. 546) provide a good summary of the status of e-commerce pricing. "Pricing is an area where most organizations have done very little beside displaying prices

on-line. As a customer engages in real-time interactions with organizations, it is conceivable for customers to negotiate prices directly with organizations. As organizations learn more about specific customers, these prices can be set uniquely for individual customers... The Marketspace increases the transparency of prices to customers and will require organizations to rethink their pricing strategies"

Costello and Tuchen (1998) argue that electronic commerce will become the dominant form of interchange between business and consumers because it can significantly reduce that element of product cost that is related to distribution, thereby providing a potential cost advantage over brick retailers. These costs range from 40-90% of the total cost of a typical consumer product. Bollier (1996) found distribution costs in a narrower range of 50 to 80% of consumer product costs.

Strategic alliances in logistics with third party service providers, such as delivery services, can minimize costs and consolidate market position (Zinn and Parasuraman, 1997). Companies like UPS and FedEx fulfill a function as delivery intermediaries in the virtual chain due to their expertise in logistics and their distribution economies of scale (Bakos, 1998). Intermediaries are discussed in section 2.3.7.

These shipping or delivery costs can increase the price of the product to the consumer (Sager and Green, 1998). Some virtual retailers send physical products overnight at no charge and refund the shipping charge if the item is returned (Department of Commerce, 1998). A virtual retailer needs to include the cost of delivery and also potentially the cost of returns into the cost of the product (Alba et al, 1997).

Strader and Shaw (1997, p. 196) recommend that "market participants should not be charged anything to subscribe to a new electronic market until a large number of product/ service providers and consumers are participating, and both sides see the value of the e-market." An interesting aspect to pricing is that in January 1999 Delta Airlines decided to charge a $2.00 fee for all tickets excepts for those purchased at the Internet site (Smith, 1999). A similar example is EasyJet (www.easyjet.com). The goal is to encourage consumers to purchase on-line rather than use channels that interact with a human.

Palmer (1997a) found that the predominant form of payment for purchase over the Internet was via credit card. Most virtual retailers accept payment by credit card. There are advantages for retailers of accepting credit card payments over the telephone or Internet. They include: sales are potentially larger than non-credit card sales, the credit card is an nearly universal form of payment, and the handling time for credit cards is reduced over handling checks (Loucks, 1997).

2.3.3 Place

Traditional elements of *Place* include location, location accessibility, channels of distribution, and distribution coverage (Booms and Bitner, 1980; Kotler, 1976; Murdick et al, 1990). Place encompasses the activities a retailer must consider to make their products assessable and available to their consumers. Kotler (1997b) references Lauterborn (1990) who suggests a correlation between the retailers' perspective of *Place* being equivalent to the consumers' perspective of *convenience*. Place is a P of great relevance to this thesis.

This section is focused on the virtual elements of Place: 1) removal of time and place limitations, 2) potential channel conflict, 3) Internet geographic access, 4) Internet device availability, and 5) delivery considerations.

FIGURE 2.5 Place Elements

TRADITIONAL ELEMENTS
Location
Location accessibility
Channels of distribution
Distribution coverage

E-COMMERCE ELEMENTS
On-line ordering available
Eliminates place limitations
Removes time limitations
Potential channel conflict
Internet geographically available
Internet access device
Delivery implications

2.3.3.1 *Virtual* Place- Removes Time and Place Limitations

In the brick retail world, factors for Place and its associated trading area include: the proportion of consumers that shop according to the distance they travel, the proportion of patrons in a shopping area compared with the breadth and depth of merchandise offered,

and the influence of competing shopping areas (Huff, 1964). Whereas in the virtual world, Place has new meanings. Geographic distance has little meaning in the marketspace as discussed below.

The section on Product discussed that virtual retailers could more easily carry a larger product line and how traditional retailers were tied to the limitations of shelf space within a physical store. In the virtual world, *the Place is the marketspace*, the virtual place, where a consumer places an order in contrast to a brick storefront. Dutta and Segev (1999) equate *marketspace Place* with the ability to order products on-line, make secure payments on-line, and distribute virtual products on-line. In the marketspace there is value in both the products and the information associated with the products (Rayport and Sviokla, 1994).

From the consumers' perspective there is no reference to physical distance in this virtual space (Pritchard, 1999). However, Pritchard states the website can position a company within a *physical place*, by focusing on the companies geographic roots, and within the *virtual space* by focusing on a global orientation. Angelides (1997) argues that companies on the web will be identified by their image and not their geographic location.

Advantages of a *virtual Place* over a brick place include: provides a direct connection between buyers and sellers, ability to keep product information current, the removal of time and place limitation, and interactivity which allows retailers to dynamically adapt to customer behavior (Bloch et al, 1996; Peterson et al, 1997). The virtual retailer can provide a higher level of service since the Web page can be up twenty-four hours a day, seven days a week (Costello and Tuchen, 1998; Griffith and Krampf, 1998). A potential disadvantage for a traditional retailer in adding a virtual channel is cannibalism, which is discussed in section 2.3.3.2.

Kotler (1999) expands on these attributes by emphasizing the convenience a consumer attains by being able to order twenty-four hours a day, seven days a week, elimination of travel time, and time to find a parking space. These consumer desirable benefits equate to a saving of cost and time (Benjamin and Wigand, 1995; Kotler, 1999). Angelides (1997) states that information about products can be found with less search costs than purchasing

from physical places. Women who work outside the home, an aspect of lifestyle and place, may find it more convenient to shop on-line (Angelides, 1997).

However, there are consumer disadvantages to a marketspace Place (Kotler, 1999). The consumer now incurs a delay between ordering to product acquisition, which could be a day, or longer depending on delivery options. Additionally, the consumer cannot touch the items prior to purchase (refer to experience goods discussion in Product section). Even with these disadvantages, virtual channels are growing at double-digit rates compared with store based channels which are growing at 2% (Kotler, 1999).

Electronic commerce firms compete in two worlds, the physical geographic world and the virtual world. One potential competitive advantage for virtual retailers is saving consumers' time (combination of search, order, and acquire times). One aspect of competition between brick retailers is the driving time it takes for a consumer to go to a store (the Place). As the distance increases, the number of available alternatives increases and therefore competition increases (Archabal et al, 1983). Applying this concept to the virtual world, the longer the driving time a consumer has to go to reach a brick retailer (the physical Place), the higher the potential for competitive advantage to acquire the product through a virtual channel (the virtual Place) due to the greater savings in time. Refer to delivery as a product service in section 2.3.1.

Porter (1997, p. 57) claims "anything a company can access from a distance is no longer a competitive advantage, because now everybody can access it." Gibson (1997) agrees that technology will make geographic location irrelevant. Zimmerman (1997, p. 129) claims that "geographic disadvantages are no longer decisive". Bakos (1998, p. 41) asserts that "as geography becomes less important, new sources of product differentiation, such as customized features or service or innovation, will become more important, at least for sellers who do not have the lowest cost of production."

2.3.3.2 Virtual and Physical Place Channel Issues

Consumers will continue to purchase from brick Places as well as embrace virtual Places. Firms that offer both channels for product acquisition will face special challenges and extra costs. Kerin et al (1978) discusses the demand interrelationship between two products to be

independent, complementary, or substitutable. Heskett (1976, p. 581) defines product cannibalization as "the process by which a new product gains a portion of its sales by diverting them from an existing product." These concepts will be expanded to encompass the brick and virtual channel issues discussed in section 5.1.

2.3.3.3 Access to Marketspace

The two key aspects of access to Virtual Place are 1) availability of Internet access within a geographic location and 2) consumer access to Internet enabled device.

Dutta et al (1998) claim that there are regional differences in the penetration of marketspace. North America has the highest presence of Internet penetration over Western Europe and Asia Pacific. Quelch and Klein (1996, p. 60) agree that "the Internet is mainly a U.S. phenomenon, due to the later start and historically slower growth of Internet access in other countries."

A Jupiter Communications 1997 survey revealed that the number of potential users is increasing globally. The number of Internet connected households in the United States is estimated at 38.2 million for 2000. The estimate for Europe is 16.5 million households for 2000 (Thome and Schinzer, 1998). As of 1996, 9% of the UK homes had Internet access for their PCs. Penetration was expected to increase to 30% within the next ten years (Abass, 1996). Since, only a small percentage of the world population has Internet access, this lack of access limits e-commerce engagement. A poor telecommunications infrastructure is a barrier to Internet access in many countries (Strader and Shaw, 1997).

Additionally the price of Internet access to homes could be a barrier to Electronic Commerce in some regions. In Europe an inhibitor to home Internet access is the relatively high cost of communication access. However, some consumers access the Internet from a business location as described below.

To access the physical marketplace, consumers usually must drive to the *Place*. To access the virtual marketspace, consumers must electronically *connect to the virtual place via an electronic device.* This is a critical component of Place in the virtual world since it is the Place where the virtual orders are placed. Additionally, as more virtual ordering Places are

available (see below), they could impact the diffusion of electronic commerce to new cohorts of consumers.

Many users access the Internet and shop from a business location. In a 1997 UK study, 85% of large UK corporations had Internet connections however in 70% of those organizations it was restricted to less that one-tenth of the staff (Foley and Sutton, 1998). A 1997 survey of the UK by Motorola "found that only 45% of [UK] have a PC at home and only 10% of [UK] use a modem... A McKinsey report...says that the 9% of the Britons who use the Internet do so chiefly at work" which is due in part to tariff structures for telephone calls (Chelmsford, 1998, p. 8).

In the USA, the home is the most popular location from which to access the Internet followed by the workplace (Miller, 1996). Georgiou and Stafaneas (1998) estimate that in the United States 50% of the households have a PC. However, a typical advantage of access from business is the speed of access. Long wait times to download websites can be annoying to consumers. There is a migration going on in the United States to 56.6 kb modems which will improve performance to the home (Eldridge, 1998).

2.3.3.4 Delivery Aspect of Place

From an historical perspective, the printed catalog of the 1850's was the first time that a buyer could be geographically remote from retailers (Gould, 1998). For purchases from traditional retailers, the consumer traveled to the store and provided the transportation of the goods. Shopping was impacted by the availability of the car. "Over the past eighty years, home delivery has decreased as consumers used their own vehicles or mass transit, to reach stores" (Gould, 1998, p. 152). With e-commerce involving physical product, delivery becomes important. (Refer to section 2.3.1 for aspects of delivery as a service.)

There is an additional aspect of delivery that is important to Place. Some deliveries *require the consumer to be in a specific place*, e.g. deliveries that require consumers to be home to receive them. This is a problem since consumers that want home shopping are often the busy consumers who are less likely to be at home to receive deliveries (Gould, 1998). Virtual grocery retailers such as Streamline have set up special containers on the

consumer's premise so that deliveries can be made when the consumer is not at home (Buss, 1999).

2.3.4 Promotion

Promotion focuses on the merchandizing of products and services, and on advertising. Traditional elements of *Promotion* include: advertising, sales promotion, selling by salespeople, selling by service providers, personal selling, publicity, and tangible clues (refer to 2.2) (Booms and Bitner, 1981; Kotler, 1976; Murdick et al, 1990). Traditional promotion examples include: advertisements of special sales, money-saving coupons, and loyalty programs (Kotler, 1997b). Traditional promotion concepts apply to the virtual world and in fact, as will be discussed in this section, promotions outside the virtual world are important for many consumers to initially locate the virtual retailers.

Word-of-mouth is promotion of a product or service by other customers. Word-of-mouth is a powerful means of influencing consumers' attitudes about adopting (Rogers, 1995) or using a product or service (Kotler, 1997b, George and Berry, 1981). Word-of-mouth recommendations for goods and services are a means to reduce risk (George and Berry, 1981) and can accelerate adoption (Kingsley and Anderson, 1998). In fact, consumers who have been referred have a higher probability of remaining loyal (Griffin, 1996). In concurrence, Reichheld (1993) has found that consumers who buy because of personal referral tend to be more loyal than those who found the retailer from other means such as advertisements. Word-of-mouth is relevant to the virtual retailers (Griffin, 1996). Word-of-mouth relationship to consumers' loyalty is further discussed in section 2.3.7.

Refer to Figure 2.7 for traditional and virtual promotion elements. This section focuses on the promotion tools that are different in the virtual world.

FIGURE 2.6 Promotion Elements

TRADITIONAL ELEMENTS
Advertising
Sales promotion
Selling by salespeople
Selling by service providers
Personal selling
Publicity
Tangible clues

E-COMMERCE ELEMENTS
Well publicized, easy to locate website
On-line advertising
On-line promotions such as sales and discounts
Customization of on-line promotions

Dutta and Segev (1999) present elements of virtual *Promotion* including on-line advertising and a variety of aspects of on-line promotions: sales, customization, consumer participation, and firm partnering. These concepts will now be discussed in the following subsections on: locating website, online advertising, and on-line promotion (product selling, information content, and personalized promotion).

2.3.4.1 Locating Website

A challenge that virtual retailers face is ensuring that consumers understand that the retailer exists in the virtual space and being able to find the retailer. Gehrke and Turban (1999) advise virtual retailers to create a domain name that is easy to remember and encourage bookmarks to your website. Virtual retailers should promote their site in as many ways as they can (Gehrke and Turban, 1999) using both traditional advertising (newspapers, magazines, television) and electronic advertising (on-line billboard space on commercial services, e-mail mailing lists) (Kotler, 1997b; Griffin, 1996). Griffin (1996) recommends that virtual retailers leverage brand loyalty by putting their Internet site locator on all advertising media.

2.3.4.2 Online Advertising

Internet advertising, (e.g. banner ads, corner ads, links to other services) has reached the point where it is considered a viable medium in its own right (Dreze and Zufryden,1998; Scindel et al, 1999; Wood, 1998). One of the values of on-line advertising is that it can use

a pull model sending ads to consumers who are searching for a particular product type (Whinston et al, 1997).

McCandless (1998) suggests ways in which Web advertising is unique. Since every advertisement goes to an individual, the content can be customized. Owing to the real time and interactive nature of a Web advertisement, it can adapt nearly instantaneously to feedback. If the advertisement is not effective on a specific site, it can be changed within hours and tried again. McCandless' arguments relate to the goal of market segmentation that is to group individuals with similar needs and buying behaviour into segments so they can be reached with targeted marketing messages (Wind, 1978; Kotler, 1997b).

Virtual retailers can place advertisements in a variety of physical and virtual locations to create awareness of their product and services. They advertise the name of their website so consumers can find them in the marketspace. Off-website advertising includes newspapers and television. Internet portals or gateways, such as Netscape, Yahoo, Lycos, and Excite receive a large amount of advertising dollars from the high volume of traffic they receive (McCandless, 1998, Dewan et al, 1999). A firm can place an advertisement on an Internet portal for as low as $30 a month (USA) in contrast to $1000 (USA) for a half page local newspaper advertisement which implies that it offers an efficient use of advertising funds (O'Connor and O'Keefe, 1997).

2.3.4.3 Promotion- Website: Product Selling

Virtual retailers still needs to cover "basics" of retailing while considering implementing these functions differently using an electronic format. For example, a sales clerk is replaced with a help button or frequently asked section and an efficient store layout equates to menus and search features (Lohse and Spiller, 1998a).

Many articles that discuss retailers' website content refer to the *product related content* and also additionally describe consumer valued *information content* that could be included on the website that may or may not be product related, e.g. Lohse and Spiller (1998a). This research, and this section, will discuss website content within these two categories.

PRODUCT SIDE OF THE WEBSITE

Lohse and Spiller (1998a) offer several considerations for inclusion on the product content side of the website: provide extra information about products, add charts or tables that provide assistance with product or size selection, offer multiple types of searches such as by brand or by price, and offer basic product lists with the option of pictures. Also, they advise offering services such as providing access to a salesclerk by e-mail feedback or by telephone and having a frequently asked question (FAQ) section. As mentioned before many of these functions are the electronic equivalent of a sales clerk.

Lohse and Spiller (1998a) found that stores that offered a frequently asked question section had more visits than those did without one. Stores that had a feedback section were able to relate that to more sales. Additionally, they suggest a "what's new" section keeps the website fresh (such as special display counters in stores), assists in retaining consumers, and increases the enjoyment of virtual shopping.

Jarvenpaa and Todd (1996-1997) also provide recommendations for product focused website content. Their advice is to think about site design from the perspective of the consumer. They recommend that the content provides rich and detailed product descriptions, information and assurances about product quality, and customer testimonials. This is similar to Kalakota's and Whinston's (1997) suggestion that, to have meaning to the consumer, information about products should be provided in the context in which the product is consumed.

Jarvenpaa and Todd (1996-1997) suggest a product content strategy that offers value added services to justify prices (and also to differentiate commodity products (Kotler, 1999)). Jarvenpaa and Todd recommend, from a competition and product differentiation perspective, virtual retailers: emphasize brand-name products, focus on products that have a cost advantage due to lower distribution and delivery costs via electronic channels, have equivalent product depth to competitors' websites, offer discounts except for unique or hard to find products or services, and provide cross store buying opportunities of related products to the same consumer.

Anderson (1998) argues that the services connected to a product can be more important than the product to the consumer. His comments are in agreement to the previous discussion on the importance of adding services around product offerings (section 2.2.4). Therefore virtual retailers should add product related services and promote them on the product side of their website.

INFORMATION SIDE OF WEBSITE

Information content that consumers value includes company background, policies, and also other content that draws consumers to the website as described below.

Lohse and Spiller (1998a) state that it is important to provide information on the company's history, policies and background since consumers want to know who they are dealing with especially since they cannot see the store to which they are sending credit card information. They suggest providing information on security of transactions, company returns policy, payment and credit policies, information about shipping and handling cost, guarantees and statements about product quality. Jarvenpaa and Todd (1996-1997) also advise providing information relating to company policy that would be of interest to consumers such as how returns are handled and other corporate guarantees.

As will be described by the information and entertainment examples below, an objective of the information side is to *draw the consumer to the website.* An interesting aspect of these examples is that in some cases the consumer interaction is with the virtual retailer (website or on-line employee or surrogate) and in other instances the interaction is with other consumers that are also on-line at the retailer's website.

Angelides (1997) advises that the content of the web should include interesting information, and useful, current information. Jarvenpaa and Todd (1996-1997) recommend that a retailer look for ways to enhance the on-line shopping experience such as providing links to related stores that will appeal to their consumers. Gehrke and Turban (1999) suggest publishing an e-mail newsletter with information of interest to consumers. Green and Browder (1998) discuss information content that a virtual retailer could offer: a 24 hour live chat room (example of consumer to consumer) on product related topic (e.g. gardening), and virtual interaction with a product expert (e.g. garden expert- retailer

employee or surrogate). Palmer (1997b) suggests informational content such as free education about the product could enabled the consumer to be a better-informed shopper as well as draw a consumer to a website.

Entertainment can be an important intangible benefit on the information side of the website (Angelides, 1997). Eighmey and McCord (1998) argue that the website medium is the intersection of information and entertainment. Additionally, Strader and Shaw (1997) project that consumers may be willing to pay for entertainment on the Internet. Lohse and Spiller (1998a) and Gehrke and Turban (1999) suggest that lotteries, contests or games for consumers will provide activities that draw consumers to the website. Providing a free service of electronic greeting cards for consumers to send to families and friends is another potential form of entertainment (Gehrke and Turban, 1999).

2.3.4.4 Website Promotion - Personalization

E-commerce provides a vehicle for retailers to improve customer relationships by understanding their preferences, anticipating their needs, and providing tailored offerings (Bloch and Segev, 1997). "Customers don't want to be treated equally. They want to be treated individually" (Peppers and Rogers, 1997, p. 133).

An example of the impact of virtual retailing is shared by one of the pioneers, Jeff Bezos, CEO of Amazon.com. "We want Amazon to be the right store for you as an individual. If we have 4.5 million customers, we should have 4.5 million stores" (Hof et al, 1998, p. 110). Virtual retailing offers a rich selection and personalized service while still reaching millions of customers

Klepper (1997) argues that the website should not mimic the content of other media and should develop content that is best suited to its strengths. Customization of the website is an aspect that is unmatched by other media. The ultimate electronic markets are personalized markets, where consumers can use customized aids in making their choices (Benjamin and Wigand, 1995).

Virtual retailers can use technology to track which product consumers have bought but also which products consumers have looked at and not purchased (O'Connor and O'Keefe,

1997). O'Connor and O'Keefe point out that this information allows the retailer to update the product mix and to update the website to better meet the consumers' needs.

2.3.5 Physical Evidence

Traditional elements of *Physical Evidence* include the external and internal appearance of a physical site, appearance of employees, equipment and material, and other tangible clues (Booms and Bitner, 1981; Murdick et al, 1990; Parasuraman et al, 1985). Refer to Figure 2.8.

The physical environment is important because it has the ability to create the firm's image and influence consumers' behaviors (Bitner, 1992; Zeithaml et al, 1985; Shostack, 1977a). Booms and Nyquist (1981, p. 174) expand on the previous concept, "the consumer scans and interprets the physical environment to gain insights into the firm's capabilities and in turn, to use them as inputs in making initial or repeat purchase decisions."

FIGURE 2.7 Physical Evidence Elements

TRADITIONAL ELEMENTS
External appearance of site
Internal appearance of site
Appearance of employees
Equipment
Materials
Tangible Clues

E-COMMERCE ELEMENTS
Appearance of web screens
Website navigation efficiency

In traditional retail markets, the brick store presents a segment of the physical evidence. Kotler (1997b) claims a goal of the retailer's (physical) site is to attract consumers to purchase a product or service. By analogy, this is also clearly relevant to websites. In the virtual market, a website represents the storefront (Strader and Shaw, 1997). Similarly, Gehrke and Turban (1999) argue that the website, which is the user's interface with the virtual retailer, is a major factor that determines the buyers' willingness to buy on the Net. This section is organized into two interrelated sections that contribute to Physical Evidence in the virtual world: *appearance of website* and *navigation efficiency*.

2.3.5.1 Appearance Of Website

Three aspects of web screen appearances are described below: 1) visual impression, 2) uniqueness of web appearance, and 3) the first screen or web home page.

To enhance the appearance of the website, virtual retailers are advised to: use simple background colors, provide contact information on each page, and make regular changes to the website so that the material remains fresh and interesting (Gehrke and Turban, 1999).

Competition impacts the design of website appearance. "Because Web applications are highly visible and can be compared easily, the competition of imitation has intensified. It is a main challenge for an enterprise to find a Web approach [unique look and feel of website] that differs from those of other companies, supports the strategic profile of the enterprise, and facilitates a sustainable advantage" (Teubner and Klein, 1998, p. 87). Furthermore, Teubner and Klein state that due to the volatility of the web medium that retailers will need to continue to monitor other websites and continue to link their core competencies to the value propositions displayed on their website. However, it could be argued that there are also advantages in similarity among websites, e.g. common use of a shopping cart icon, that can provide the consumer operational ease of use and aid in navigation of the retailer's website. Therefore, there will need to be a balance between uniqueness and commonality among websites.

Nielsen (1996) found that many users do not scroll beyond the first screen (home page) of a website. Therefore, it is critical to focus on the website design of this entry screen of the website. Similarly, Teubner and Klein's (1998) advice links the last two points of this section, a unique look and feel needs to be incorporated into the home screen.

2.3.5.2 Website Navigation Efficiency

Website navigation efficiency is part of website design (Kalakota and Whinston, 1996). This is associated with how a user can find the information they are seeking and move from one screen to the next. The parts of this section include: 1) why website design is important, 2) page loading speed, and 3) navigation efficiency.

Kalakota and Whinston (1996) argue that it is important to design websites so that information can be effectively and quickly found by a consumer. "The human-technology interface features... enhance the customer's ability to make decisions and interact with the on-line environment... Customers want information about the products and services they buy: they want to make intelligent choices based on 'complete' information. They want to know as much as they can about these products and services, and they want to be able to access that information quickly and easily when they need it." (Kalakota and Whinston, 1996, p. 515). In concurrence, Hagen et al (1998) found that experienced virtual retailers were seeking ways to make all aspects of the virtual shop faster such as locating the products quickly.

"The interface will have to be very effective at re-creating the experience of browsing an electronic shelf to provide some sort of memory by association" (Kalakota and Whinston, 1996, p. 22). They point out two aspects- on the one hand a retailer wants to mimic the buying items at the store experience and relate it to the experience a consumer has in shopping electronically. However, buying electronically opens new avenues for innovation – so that the retailer needs to be careful not to just restrict themselves to mimicking the brick buying experience but also to take advantage of this new medium that can offer a superior buying experience to the consumer.

While this thesis does not focus on the technical aspects of website design, some mention of this topic is important to address the virtual element side of Physical Evidence. Of the numerous articles in this area, Gehrke and Turban (1999) provide an excellent overview of the determinants of good website design. Two of the areas that they note are important to website design are page loading speed and navigation efficiency. Based on a consumer survey, they discovered that page-loading speed is currently considered a most critical area. It can be argued that page-loading speed is important to physical evidence since a consumer could consider the passage of time as a tangible clue to the site in consumer attractiveness.

Schaffer and Sorflaten (1998) recommend that download times should be short, between five and ten seconds. Several techniques can be used to impact this area. Dutta and Segev (1999) point out that many of the top ranked websites avoid graphics and video, which

impact the time to download. Similarly, Gehrke and Turban, (1999) recommend limiting the use of animation and multimedia, and providing a text only option. Clearly, uses of text versus multimedia are elements of physical evidence that the consumer is aware of. It is perhaps surprising that these recommendations for the design of a technology-based channel should be to minimize the use of technology (multimedia, etc.). However, the apparent contradiction is due to a particular combination of current technological capabilities: software allows very complicated web design, but bandwidth severely limits the potential delivery.

The tangible aspects of web design (consistent screens, menu bars) can affect the intangible aspects (site friendliness) of navigation efficiency that are pertinent to Physical Evidence. If *navigation is consistent* within the site it contributes to the *site user friendliness* (Lohse and Spiller, 1998a). Lohse and Spiller (1998b) suggest the following aids navigation efficiency: minimizing the number of levels of screens between the home page and the shopping page, minimizing the number of lists that must be scrolled, providing consistent menu bars on all pages, and having help screens available They also advise that the consumer should be able to review the contents of their shopping cart from any page in the virtual store. They have found that most websites today have complex checkout functions that could and should be made more efficient.

Similarly, Tilson et al (1998) suggest that a well-designed website should have easy to use product lists with easy scanning and selection of items. They state that a consumer should know when an item has been saved or not saved in the checkout-shopping cart. They advise that effective categories for product organization should be determined with obvious shopping links or buttons, consistent placement of links on a page, and consistent layout of product information. They suggest that the registration process should not interfere with the efficiency of the shopping process.

Paralleling the above recommendations for navigation efficiency, Jarvenpaa and Todd (1996-1997) advise reducing the shopping effort by providing search techniques for comparison shopping and making it easy to locate and purchase products on the website. Lohse and Spiller (1998a) advise that a one-click-to-purchase (saves time) is important since every additional mouse click reduces the possibility of a purchase. Schaffer and

Sorflaten (1998) recommend that scrolling requirements should be reduced, that large targets for mouse clicks should be offered, and that typing complexity should be minimized.

A consistent recommendation in the above discussion on navigation efficiency is the provision of *ease of use*. This idea ties back to recommendations within service marketing. Storey and Easingwood (1998) stress an important attribute for consumers interacting with service organizations is the ease with which the consumers participate in the service process. Ease of use also impacts participation.

2.3.6 Participation

Traditional elements of *Participation* or *Participants* as it is also called, include frequency of customer contacts, duration of customer contacts, skills, attitudes, personnel training, interpersonal behavior, discretion used, and customer to customer contact (Booms and Bitner, 1981; Murdick et al, 1990). Booms and Bitner (1981, p. 48) define Participants as "all human actors who play a part in service *delivery* and thus influence the buyer's perceptions". Murdick et al (1990, p. 536) expand the definition to include "any and all people who play a role in the service *encounters*". Both of their definitions include employees and other customers as part of the interactions. The following definition will be used for *Participation in Electronic commerce* in this thesis, which builds on their definitions –all human and electronic interactions that play a role in the service encounter and thus influence the buyer's perceptions.

A core concept of marketing is the transaction or exchange of values (e.g. products, services, time, energy) between two parties such as retailer to consumer or consumer to consumer (Kotler, 1972). In the context of the Internet, transactions are generated when *consumers and retailers* and *consumers and consumers* virtually participate with each other. Kotler (1972, p. 49) states "marketing is specifically concerned with how transactions are created, stimulated, facilitated and valued."

FIGURE 2.8 Participation Elements

TRADITIONAL ELEMENTS		E-COMMERCE ELEMENTS
Frequency of customer contacts		On-line capturing and tracking of customers transaction data to provide customized services
Duration of customer contacts		Privacy issues
Skills		Provision of on-line communications to customers
Attitudes		Solicitation of on-line feedback from customers
Personnel training		Creation of on-line communities for customers
Discretion used		Training on the interface
Customer to customer contact		Security issues

Dutta and Segev (1999, p. 178) proposed adding a "C" for *Customer Relationship* to the 4Ps to reflect how real-time interactivity between firms and their consumers was being transformed in the Marketspace. The elements of their "C" included: "provision of on-line customer service, the on-line identification and tracking of customers to provide customized services, the provision of on-line communications to customers, the creation of on-line communities for customers and the solicitation of on-line feedback from customers." Because these C elements arguably involve participation activities they will be incorporated into the e-commerce Participation elements in the rest of the thesis. Refer to Figure 2.9.

New consumer relationships are available via the Internet since retailers are able to communicate in real time with their consumers (Angelides, 1997). There is value in these evolving virtual relationships with consumers. "Companies... create value... by establishing space-base relationships with customers" by identifying and fulfilling consumers' needs (Rayport and Sviokla, 1995, p. 80).

This section covers four aspects of Participation: 1) on-line tracking of consumer data and related privacy issues, 2) utilization of on-line communications to customers, 3) training consumers on the virtual interface, and 4) security issues.

2.3.6.1 On-line Tracking Of Customer Transaction Data

One type of consumer participation with virtual retailers is via a website that automatically generates electronic transactions. A characteristic of electronic transactions is that they leave a trail of information that contains the buying history as well as the non-buying history (browsing) of the consumer. This information is collected unobtrusively and often without the knowledge or consent of the consumer. As this data is analyzed ("mined") for patterns it can be used to create profiles of the consumer that can be used for target advertising or other target marketing (Whinston et al, 1997).

When retailers collect information about consumers, it allows them to tailor their offerings on an individual basis, which can improve customer retention and provide higher satisfaction (Bloch and Segev, 1997). Additionally, it provides the retailer opportunities to create new products or services (Hagel and Rayport, 1997). Overall, the more a retailer can continue to learn about a consumer's wants and needs and address those through their service the more likely they are to ensure a "happy captive" and loyal consumer (Pine et al, 1995).

The data that a virtual retailer accumulates about each of their consumers corresponds to a competitive advantage as per these related perspectives. "If you can convince a customer to spend some time or energy teaching your firm how to cater better to his or her individual tastes, then you can keep this customer loyal for a longer period, out of the customer's own self-interest. The more time and energy the customer expends in teaching the enterprise how to customize to his own tastes, the more trouble it will be for the customer to obtain the same level of customized service from a competitor" (Peppers and Rogers, 1997, pp. 120- 121). "Through the accumulation of information on customers, their switching costs are increased, therefore raising entry barriers for potential new entrants" (Bloch and Segev, 1997, p. 50). This links to another traditional aspect of participation that provides a barrier to switching. Keaveney (1995) suggests that the consumers may remain in a relationship with a supplier, even if not receiving excellent service provided they are still receiving important relational benefits. Therefore, Keaveney argues that the relational benefits (e.g. of participating with the retailer) are a barrier to switching.

To summarize, the success of a virtual retailer begins and ends with the relationship with the consumer. "More and more, the exact knowledge of customers' profiles, the details of their buying processes and the linked products they buy is key to successful marketing" (Bloch and Segev, 1997, p. 57).

2.3.6.2 Privacy

Consumers are worried about the amount of information that virtual retailers have acquired and many consumers have privacy concerns (Bloch and Segev, 1997). The concerns about privacy on the Internet are related to what information is being collected and what will be done with that information especially when it is collected without the knowledge or consent of the consumer (Wang et al, 1998). Information can be gathered *with their knowledge* based on their transactions such as purchases. Additionally, information can be collected *without their knowledge* by mechanisms such as cookies. "Cookies" collect pieces of information, store them in a user's computer without their knowledge or consent, and later transfer that information onto the Web server (Mayer-Schonberger, 1998; Clark, 1999).

"The interactive age could easily become the Age of Privacy Invasion...Customers whose privacy is violated or customers who simply don't feel they have control over their information, are not likely to become willing participants in any dialog interactions" (Peppers and Rogers, 1997, p. 279).

Many consumers realize and appreciate that they will be able to receive better service as a result of this information exchange (Hagel and Rayport, 1997). Other consumers are willing to provide this information if they can receive some type of compensation (Hagel and Rayport, 1997; Kannan et al, 1998). Examples of goodies or tangible benefits the consumers could receive in exchange for their information include free e-mail services, reward points, cash, rebates, discounts, and free but valued information (Chang et al, 1998). As will be discussed in Chapter 3, loyalty cards represent a brick retailer's exchange of consumer purchase data for "rewards", which is analogous to these virtual examples.

Vedder et al (1997) argue that virtual retailers should establish policies for collecting and maintaining consumer data. The data should only be used for those purposes unless the

consumer provides permission. A key to balancing privacy with personalized marketing is to give consumers more control in the process.

As a consequence of these concerns, consumers could drop out of the virtual marketspace if privacy concerns are not met (Chang et al, 1998). A Business Week/ Harris poll discovered that privacy concerns were the main reason that many consumers did not use the Internet (Green et al, 1998). More than three-quarters of current USA users said they would use the Internet more if privacy were guaranteed (Green et al, 1998; Ferraro, 1998). Their viewpoint is reflected in Lane (1998, p. 257) "privacy of communications and personal information must be protected at all costs... Preventing abuses will require a combination of software safeguards and ethical business practice. Ultimately, consumers should control their own information online, giving out their personal profile to whom they want... There are no technical obstacles to this, only political and commercial ones".

2.3.6.3 On-line Communications

An aspect of participation is to solicit information from consumers through surveys. Paralleling surveys mailed by brick stores, the virtual world uses on-line surveys. Gehrke and Turban (1999) recommend finding out about your consumers' wants and needs through on-line surveys. The Internet is a new but efficient medium for collecting survey information to improve customer service. "Forms are easy to fill out and can be responded to any hour of the day, on any day of week, and at the total convenience of the user" (Pettit, 1999, p. 67). Others agree that the web's flexibility with respect to time constraints adds to the value of on-line solicitation of information (Pitkow and Recker, 1995).

2.3.6.4 On-line Communities

On-line communities are an aspect of customer to customer virtual participation. Virtual communities are an innovation within Internet retailing. Schubert and Selz (1999) and Armstrong and Hagel (1996) share similar perspectives on this topic. Virtual communities allow consumers to join an online group with similar viewpoints or tastes. They provide a sense of place on the web for its participants. Consumers can use the community to gain information and also to develop relationships with other members. Communities can be associated with areas of interests such as hobbies or vocations, life stages or experiences such as parenting or geographic location, which is a form of self-segmentation.

"People will put themselves in affinity groups – they will sort themselves, segment themselves, find other people who share their interests, and initiate conversations- based on their own preferences. The trick for marketers will be to find the groups that fit their target customer profiles and to ride the wave" (Hundt, 1996, p. 160).

Virtual retailers benefit from setting up virtual communities. These communities can enhance loyalty to the site (Armstrong and Hagel, 1996). Also, on-line communities can create an additional source of revenue for a retailer. Virtual retailers can charge for content such as interesting articles that the consumer might download or charge for advertising on the site (Armstrong and Hagel, 1996). These links lend themselves to strategic alliances.

2.3.6.5 Training On The Virtual Interface

Kalakota and Whinston (1996) state that a goal of electronic commerce is to make information accessible. Consumers must first learn how to locate where the products are located on the retailer's website (Angelides, 1997). Consumers need to be trained to shop effectively, to be trained to find the product. This is in contrast to shopping in a brick store where consumers are already "trained" in the shopping participation activities.

Many consumers do not have a technical background or experience with virtual commerce and therefore have difficulty in locating products. A failed product search could be interpreted by the consumer as meaning that the retailer does not carry the product but it might only be that the consumer does not know how to locate it (Lohse and Spiller, 1998a).

2.3.6.6 Security Issues

As will be described below, the issues of security are different than privacy issues discussed earlier. Security issues have arisen as a result of the payment aspect of the virtual participation process.

The majority of virtual purchases are made by entering credit card information as part of the order entry transaction. Many consumers are reluctant to provide this information on-line due to concerns that it will be misused or stolen. Other forms of payments for virtual

purchases, but minimally used today are checks, digital cash, smart cards, and stored value cards. Some virtual retailers allow consumer to use the telephone to provide credit card information after the order has been on-line since that is a familiar way of providing that information and address security concerns (Department of Commerce, 1998; Griffith and Krampf, 1998; Palmer, 1997a).

Concerns about the security of credit card information sent over the Internet have been a major inhibitor to many potential virtual consumers (Jones and Vijayasarathy, 1998). This is expected to decrease as consumers have more experience in shopping on-line and gain a better understanding about the security safeguards in the system (Department of Commerce, 1998).

2.3.7 Process

Booms and Bitner (1981) define *Process* as the procedures, mechanisms and activity flows that are designed to deliver the service. Murdick et al (1990) add that the service process must be designed to fulfill the needs of the marketplace and involves coordination of all the marketing mix elements. Elements of Process include flow of activities, policies and procedures, customer needs and wants, customer follow-up, and quality control (Booms and Bitner, 1981; Murdick et al, 1990). Refer to Figure 2.10.

FIGURE 2.9 Process Elements

TRADITIONAL ELEMENTS	E-COMMERCE ELEMENTS
Flow of activities	Virtual business process models
Policies and procedures	Procedures to create and retain virtual customers
Customer needs and wants	Logistics to fulfill on-line orders
Customer follow-up	Customer Service
Quality control	Virtual Intermediaries

2.3.7.1 Business Process Models

"E-commerce... is a business strategy supported by technology and carefully selected business processes" (Cunningham, 1998, p. 11). There are numerous business process models that the virtual world can build upon. Table 2.2 summarizes various authors' concepts of business processes activities *of market transactions* in traditional and virtual enterprises. Market transactions encompass interaction processes between market participants, which focus on efficient exchange of goods and services (Schmid and Lindemann, 1998).

Some of these models list activities relating to a firm's support or fulfillment of activities such as logistics and delivery. Other models discuss activities from a consumer's perspective: product search, place order, and receive product. Salient terms relating to virtual market transaction activities, from each author, were extracted and subsequently grouped based upon Kalakota and Whinston (1997) and Strader and Shaw's (1997) nomenclature of *electronic market transaction phases.* This approach allows segregation of all activities into a ternary structure: pre-purchase, purchase, and post-purchase. This thesis will build upon this structure.

Following the table is a discussion on traditional and e-commerce business processes.

TABLE 2.2 Business Process Activities Within Market Transaction Phases

AUTHOR(S)	PRE-PURCHASE	PURCHASE	POST PURCHASE
Traditional Business Processes			
Davenport (1993)	Proposal, configuration	Commitment, credit checking	Delivery, billing, and collection
Porter (1985)*	Marketing	Sales	Service, inbound logistics, operations, outbound logistics
Desai and Mahajan (1998)	Need recognition, pre-purchase information search, pre-purchase alternative evaluation	Purchase	Consumption, post-purchase alternative evaluation
Kotler (1977b)	Problem recognition, information search, evaluation of alternative	Purchase decision	Post-purchase behavior
E-commerce Business Processes			
Strader and Shaw (1997)	Pre-purchase determination	Purchase consummation	Post-purchase interaction
Thome and Schinzer (1998)	Information process (information plus selection), sales process (offer)	Sales process (order), logistic process (payment and acceptance)	
Froehlich et al (1999)	Account opening, product configuration, delivery advice	Order entry, order change, invoicing protocol, payment protocol	Customer support, order status inquiry, Acknowledgement and feedback
Lincke (1998)	Information	Agreement, settlement (payment)	Settlement (logistics), after-sales
Schubert and Selz (1999), Schmid and Lindemann (1998)	Information phase	Agreement phase, settlement phase (payment)	Settlement phase (logistics, delivery and after sale service)
Kambil (1997)	Search, validation	Payment and settlement, authentication	Logistics
O'Keefe and McEachern (1998)	Need recognition, information search, evaluation	Purchase	After purchase evaluation
Kalakota and Whinston (1997)	Pre-purchase preparation (product search and discovery, comparison shopping, negotiation of terms)	Purchase consummation (placement of order, authorization of payment)	Purchase consummation (receipt of product), post-purchase interaction (customer service)

* Porter refers to these as *activities*. From a 1990 perspective these are *processes*.

2.3.7.2 Traditional Business Processes

Davenport (1993) recommended innovation within the business processes: identifying processes for innovation, identifying change levers, developing process vision, understanding existing processes, designing and prototyping the new process. He proposed a seven step order management process, which is important to customer satisfaction,

consisting of proposal, commitment, configuration, credit checking, delivery, billing, and collections.

Porter (1985, p. 36) explains that "every firm is a collection of activities that are performed to design, produce, market, deliver and support its product." He describes the primary activities of this "value chain" as consisting of inbound logistics, operations, outbound logistics, marketing and sales, and service. An important aspect that Porter discusses is the concept of differentiation and the value chain. "A firm differentiates itself from its competitors when it provides something unique that is valuable to buyers beyond simply offering a low price... Virtually any value activity is a potential source of uniqueness" (p. 120). Services added to a product offering, as discussed previously, is an example of differentiation that will also have relevance in the virtual world.

Desai and Mahajan (1998) argue that consumer decision making requires careful evaluation of product attributes in the pre-purchase stage. During this stage, consumers analyze product attributes, brand performance, and pricing.

Kotler (1997b) presents a five stage model of the consumer buying process, which consists of problem recognition, information search, evaluation of alternative, purchase decision, and post-purchase behavior. Consumers move from unmet needs, to evaluation of alternatives, to a purchase decision, and then to an evaluation of their purchase decision.

All of these traditional models have activities in all three categories. However, Kotler (1997b) and Desai and Mahajan (1998) focus on the processes from a consumer's point of view, the buying process, in contrast to Davenport (1993) and Porter (1985) who focus on the firm's perspective.

2.3.7.3 E-commerce Business Processes

There are a number of e-commerce models or virtual process steps that build upon traditional models while reflecting changes, unique or emphasis areas needed for the marketspace within their implementation. Jutla et al (1999) argue that virtual retailers need to be cognizant of the multifaceted nature of e-commerce and set strategies and procedures for applications in marketing, order collection, and procurement.

Strader and Shaw (1997) state the phases of pre-purchase determination, purchase consummation, and post-purchase interaction provides support for all of the activities in the entire order fulfillment process. Kalakota and Whinston (1997) use similar terminology to Strader and Shaw with further clarification. They describe the consumer mercantile activities as pre-purchase preparation (product search and discovery, comparison-shopping, and negotiation of terms), purchase consummation (placement of order, authorization of payment, and receipt of product) and post-purchase interaction (customer service). The rest of this section further defines these phases from a consumer and retailer perspective with an emphasis on the retailer business process activities.

Pre-purchase Phase- *Consumer Aspect*: Buyers and sellers must find each other before a transaction can occur. Buyers must understand that the retailer has an offer, locate the retailer on-line, and understand the price of the product or service prior to placing an order (Bakos, 1998). In this phase consumers gather information in the marketspace on the available products and services (and supplier sources) that meet their requirements, comparison shop, and negotiate terms (price and delivery) (Kalakota and Whinston, 1996). They state the magnitude of the consumer's search effort is a key aspect of this phase. Schubert and Selz (1999) and Schmid and Lindemann (1998) describe similar activities but call this the *information phase* which begins with consumer searches for information or products and evolves to the purchase phase if it ends with an offer or customer order.

As described earlier in section 2.1.1, electronic markets assist in the selection and evaluation of available offerings which can reduce the customer's search costs in this phase (Schmid and Lindemann, 1998) e.g. search by product attribute (Lincke, 1998). Since websites are available for access twenty-four hours every day, they enable the consumer to search for products at a time convenient to them (Thome and Schinzer, 1998). This aspect of convenience provides an advantage over shopping in brick buildings as previously discussed in *Place*.

Pre-Purchase Phase- *Supplier/Retailer Aspect*: There is a set of corresponding processes that a retailer must develop to enable and support the pre-purchase phase (Kalakota and

Whinston, 1996). In this phase, consumer activities of information seeking and selecting correspond to retailer activities of marketing and sales (Thome and Schinzer, 1998).

Product Content: Schubert and Selz (1999) argue that a key attractor to bring consumers to the website is ensuring sufficient *quantity* of product and services offerings and information content. Additionally, services added around the product line add depth and uniqueness to the overall offering and can differentiate the retailer from competition (Porter, 1985).

Personalization: Another attractor is a site's content personalized on a group or individual basis (Lincke, 1998). The ability to personalize within this electronic channel is an advantage over a brick storefront. An application of personalization is to recommend other products that a consumer might be interested in purchasing based on collected data gathered from consumers with similar tastes (Kambil, 1997). Schubert and Selz (1999) recommend remunerating consumers for the "personal" information they reveal since the retailer can exploit this information in many ways.

Purchase Phase- *Consumer Aspect*: This phase includes placement of the order and payment (cash, debit, or credit card) (Kalakota and Whinston, 1996).

Purchase Phase- *Supplier/Retailer's Aspect*:
Long term consumers are critical to a virtual retailer's long term success (Peppers and Rogers, 1997; Sheth and Parvatiyar, 1995). "A website must not only get them to come, it must get them to come back, and come back regularly" (Fingar, 1998, p. 63). Rapp and Collins (1994) state that it is more cost effective to retain consumers than continuously prospect for new consumers. According to Reichheld and Teal (1996), a company can increase their profitability by 35% to 95% if they can increase their customer retention rate by just 5%. Doyle (1990) also points out that it is *much more expensive* in advertising, promotion and selling to acquire new consumers than retain existing ones.

Kotler (1999, p. 133) presents four reasons why long term consumers are more profitable to retailers. "1. Retained customers buy more over time if they are highly satisfied. 2. The cost of serving a retained customer declines over time. 3. Highly satisfied customers often

recommend the seller to other potential buyers. 4. Long-term customers are less price-sensitive in the face of reasonable price increases by the seller."

Griffin (1996) points to similar benefits as Kotler and adds a firm can obtain a stronger market position since consumers are not switching to competitors. Strader and Shaw (1997) concur and state that over time consumers who have bought products in the past, and have been satisfied, have less incentive to search the entire e-market for other sellers of the same product.

Repeat purchases are one aspect of a loyal consumer. Loyalty is manifested by: 1) regular purchases, 2) cross section product purchases, 3) consumer referrals, and 4) not interested in switching to other vendors (Griffin, 1996).

Sampler (1998) states that information gained by transactions can be separated, analyzed, and used to guide the next consumer interaction. In agreement, Parker and Gulliford (1996) state from a store perspective the loyalty program was a valuable source of information about consumer purchases. "By understanding who buys what, when, and where, they are able to devise tailor made product offers" (Parker and Gulliford, 1996, p. 11). By using consumer data, virtual retailers can target rewards so those consumers do not defect and are steered toward purchases that profit the retailer (East and Hogg, 1997). Additionally, a consumer's demographics combined with their purchase history provide an indication of a customer's inherent loyalty (Reichheld, 1993).

Ram and Sheth (1989, p. 11) state a strategy for overcoming barriers to innovation is to "provide significant performance value over alternatives". The on-line order entry process and the convenience and associated time saving over traditional ways to acquire food provided a performance value. An additional benefit is as consumers invest time in building an order list they are also building higher switching costs (Kadison and Modahl, 1997).

Traditional support channels should be in place to support the virtual consumer order process. Schubert and Selz (1999) stress the importance of offering multiple communication channels to the retailer via the web (e-mail questions, website question

forms), and telephone (help desk, call customer center) for assistance during the order process.

Post-Purchase Phase- *Consumer Aspect*: In the post-purchase phase, the consumer accepts or receives the product or service (Selz and Schubert, 1998).

Post-Purchase Phase- *Supplier/Retailer Aspect*: The consumer activity of product acceptance corresponds to the retailer logistic activities of production and delivery (Thome and Schinzer, 1998) and customer service interactions (Selz and Schubert, 1998) including handing complaints or returns (Kalakota and Whinston, 1996).

WAREHOUSE: Logistic issues such as picking from store shelves or setting up a warehouse are important issues for existing retailers adding a virtual channel and virtual only retailers considering partnerships. Jukka et al (1998) state that by using an existing retailer facility to pick from, the retailer is able to leverage upstream logistics. A disadvantage is setting up a warehouse operation is that it requires a totally new layout and design of operations. Brick stores are set up for consumer picking therefore items are arranged with incentives for impulse buys whereas in contrast, the warehouse would be setup for picking efficiency.

Overall, there are more recommendations to pick from a warehouse. A Forrester Report (Kadison and Modahl, 1997) recommends that virtual grocers select from a warehouse operations approach rather than pick from grocery store shelves. Kalakota and Whinston (1996, p. 418) state, "Theoretically, when the pool of teleshoppers becomes substantial, a fancy grocery store situated on high-priced real estate becomes unnecessary. A warehouse will do."

CUSTOMER SERVICE: Lincke (1998) emphasizes that to ensure repeat visits retailers should maintain continuous contact with their consumers (e.g. send e-mail announcing new products and specials).

Aspects of customer service that impact the overall customer relationship and customer retention is the way that returns and claims are handled (Kalakota and Whinston, 1996).

Schubert and Selz (1999) agree and state feedback, problem resolution, and providing order status information to customers is important.

COMMUNITY: "The notion of community lies at the heart of the Internet revolution" (Selz and Schubert, 1998, p. 224). Schubert and Selz (1999, p. 16) define virtual communities as "the union and the communication between individuals who are common values and interests and who use electronic media to get in touch with another." Firms that emphasize community content offered interactive access to experts and other aspects that make the site worth visiting by community members. Community is an aspect of consumer relationship that fits within processes after the sale as well as before the sale. Electronic customer relationships that include community aspects should be incorporated into the virtual business processes when possible (Schubert and Selz, 1999).

2.3.7.4 Business Process Transformation

Dutta et al (1998, p. 546) strongly argue, "Most organizations are simply taking their existing business models and transporting them to the Marketspace. Few organizations are seriously evaluating the transformational impact of the Marketspace on their current business models. Most firms seem to be content to view the Internet as an extension of the telephone – simply 'yet another' channel. Firms which do not realize the paradigm shift inherent in the Marketspace are in for a shock in the next years". As was discussed in Participation, consumers view security of payments over the Internet differently than that of other channels (brick stores, catalogs) therefore this is but one example of how virtual retailers must change their business processes in support the arguments of Dutta et al.

Bloch and Segev (1997) argue that virtual retailing will fundamentally change the way products are conceived, marketed, delivered, and supported. Schubert and Selz (1999) claim that the use of electronic media on the Web requires new marketing concepts and the exploitation of community (consumer groups). Additionally, they argue that the transaction interaction patterns with customers are different in the virtual space. These authors argue that activities within the business process models must be different in the virtual world.

A central issue of the virtual world that impacts many areas of the virtual business process model is the emphasis on interactivity in all areas (Selz and Schubert, 1998) which

provides an example of an electronic media attribute that will impact business process activity design.

Froehlich et al (1999) state that e-commerce requires the same business functions that were part of the non-virtual world but provides an opportunity for the business to change the way it delivers services and also to expand its client base in a new way. They state electronic commerce enables the *opportunity to enhance the processes* (e.g. building consumer profiles) and also *brings additional process requirements* such as adding electronic transaction security.

In sum, the same categories of activities are performed in both the traditional and virtual world; however, the way these activities are implemented leads to new business models within the virtual world.

2.3.7.5 Virtual Intermediaries

The business process can be fulfilled by the (manufacturer) suppliers or by intermediaries. Two of the cases fulfill the role of virtual intermediaries. Intermediaries can be represented by a broker or agent who interfaces between buyers and supplies and helps match one party to another (Malone et al, 1987). They are likely to have an impact on the virtual marketplace. Bailey and Bakos (1997) suggest that intermediaries perform four important roles: aggregate buyer demand or sell product to achieve economies of scale, protect buyers and sellers from opportunistic behavior, facilitate the market by reducing operating costs, and matching buyers and sellers.

If intermediaries can perform a variety of services they will continue to play critical roles and be of value to consumers (Sarkar et al, 1996). The role of intermediaries could evolve into additional roles in the future. Quelch and Klein (1996, p. 66) state "an intermediary's value-add may no longer be principally in the physical distribution of goods, but in the collection, collation, interpretation, and dissemination of vast amounts of information."

Intermediaries are electronic brokers. Kalakota and Whinston (1996, p. 418) define this as "multiple services provided by a single interface with a single point of accountability on an order-by-order basis. Brokerage service providers are intimately involved in the details of

customer operations, end to end, in order to understand customer needs and deliver better service."

Goodale and Telesio (1997) project those intermediaries will make use of electronic commerce capabilities ahead of many providers of goods and services thereby setting up competitive advantages for themselves.

2.4 CHAPTER SUMMARY

This chapter reviewed literature relevant to this thesis. Definitions were included for electronic markets and electronic commerce. Since a virtual channel is an innovation in retailing, aspects of innovation including innovation types, and innovation attributes were discussed. The diffusion and decision process for innovation was also described. Understanding Internet user demographics is critical to the success of virtual retailers therefore aspects relating to income, lifestyle stage of life, and learning attitude were presented. Adoption and dropout consumer characteristics were also included.

The marketing mix literature was used as part of the framework for analysis and will be used in case analysis in Chapter 5. Traditional definitions and attributes of the 7Ps (product, price, place, promotion, physical evidence, participation, and process) were described. Differences in product and service marketing mixs were highlighted. Ansoff's generic growth strategies presented different approaches for current and new products within current and new markets.

This chapter included a contrast of the traditional and virtual elements of the 7Ps. However, the focus was to present the literature that illustrated how the 7Ps relate to the virtual world. *Product* e-commerce elements included: larger product line offering, services added to products, exploitation of information aspect of product, product customization, and personalized services. *Price* e-commerce elements included: dynamic and customized pricing, facilitated price searches, on-line price negotiations, and lower distribution costs. *Place* e-commerce elements included availability of convenient on-line ordering and elimination time and place limitations however, there is the potential for channel conflict. Aspects of virtual *physical evidence* included the impact of web screens appearance and website navigation efficiency. Virtual *participation* elements included the

ability to capture and track consumer data on-line and the ability to create on-line communities. Participation concerns regarding privacy, training, and security issues were discussed. *Process* e-commerce elements included procedures to create and retain customers, logistics to fulfill on-line orders, as well as aspects of customer service.

3 RETAIL FOOD INDUSTRY OVERVIEW

3 RETAIL FOOD INDUSTRY OVERVIEW

This chapter overviews food trends and the associated demographics (3.1). Section 3.2 presents an overview of traditional and emerging virtual grocery retailing trends. Section 3.3 overviews quick service restaurants or "fast food" trends and introduces virtual meal retailing.

3.1 FOOD TRENDS

This section includes a discussion of a major food trend and key demographics impacting food retail. This trend represents a change in the *process* of obtaining meals -eating ready-made foods more and cooking from ingredients less, as a result of requirements from the convenience oriented consumer.

3.1.1 Key Demographics

Keh and Park (1997) argue that changing consumer characteristics and their associated demand for convenience is one of the most important forces driving the grocery industry today. Zeithaml (1985) further defined the changing demographics that had produced new grocery consumer segments: *working women* (spent more on grocery shopping than any other group), *elderly* (had increased number of weekly shopping trips and shopping trip duration), *male consumers* (in increasing number and did not respond well to conventional promotion programs), *buying for one consumer* (a large growing segment which desired products in smaller sizes), and *high income* (spent higher amounts and planned shopping lists significantly less). Two groups of special interest to this research are working women and elderly.

A study by Tordjman (1995) presents factors that impact the European food consumer. He observes the increasing number of working women in Europe concur with the USA trend. Additionally, he states that other pertinent factors are the aging European population along with low population growth, and the increase in the number of households.

A lifestyle change that is impacting food trends is women returning to the workforce. In the United States, the number of working women doubled between 1960 and 1990 (Kahn and McAlister, 1997). Berry (1979) calls this segment the "time-buying" consumer. Women traditionally are the cooks at home and the grocery shoppers. Busy consumers place a premium on leisure time. Women are trying to reduce the time they spend in meal

preparation by cooking fewer homemade dishes, using appliances such as the microwave, and enlisting others, such as restaurants, to cook (Kaufman, 1990; Food Marketing Institute, 1997a).

Working women desire to reduce time shopping in grocery stores, the ability to shop at extended hours, and desire full cooked dinners that can be consumed at home (Zeithml, 1985). Corresponding to women entering the workforce, the percentage of households with two incomes increased which created a larger income that could be spent on convenience food and services (Park et al, 1996).

Zeithmal (1985) states that due to the increasing aging of the population, the elderly will increase in importance to grocers. This group has special health and diet needs. She argues that this segment responds best to traditional promotions and should not be ignored as retailers seek new segments. This last point is important, as virtual grocers will utilize both traditional and non-traditional promotion mechanisms, to reach targeted consumers such as the elderly, as will be discussed in Chapter 5.

As Morganosky (1986, p. 36) quotes Engel and Blackwood, "consumers are constrained by two budgets: a 'money' budget and a 'time' budget". Time constrained working women as described above use their increased income to purchase convenience items (Bellante and Foster, 1984). Kaufman (1990, 1987) further defines some of the tradeoffs in preparing food in the home versus purchasing prepared meals. These include factors such as cooking skills, attitude about cooking, spouse's household role (as possible cook), available household technology-e.g. microwave, time available to cook contrasted with available restaurant or prepared meal sources in the area, and household income levels.

Verlegh and Candel (1999) state that consumers who perceive convenience as important have a tendency to minimize food preparation time, e.g. obtain fast food meals. Waldman and Jacobs (1978) support this as they found that two-income families (implying working women) spent more on food prepared outside the home than one-income families (even those with high income). However, Bellizzi and Hite (1986) argue that role overload (such as working women) is not necessarily the main factor for convenience consumption (such as fast food). They argue that other factors such as education, lifestyle, and income should

be considered. Additionally, they state that role overload might not be related to a job but to other activities where time is spent such as community, church, or family. Nevertheless, these non-work related overload consumers could also be oriented to convenience products and services.

It is interesting to note that in 1967, Dommermuth and Cundiff wrote about the convenience oriented shoppers that weighed the opportunity cost involved in a longer search against the possible benefits to be derived from it. They claimed that consumers had more money, more information, and better ways to use their time than to shop. They cited a 1957 Dupont study of supermarket shoppers that found that consumers spent less than a minute and a half selecting the average grocery item. Therefore, the trend of the time starved shopper is not a recent one.

3.1.2 Shift to Prepared Food

The demographic trends discussed previously substantiate a need for convenience which results in a shift to prepared food. As consumers purchase more prepared meals there is a corresponding shift in food budget being directed from grocery retailers to food service retailers. In 1990, ten pence of every pound sterling were spent on fast food takeaways and restaurants. In 1996 it was 27 pence per pound (Abass, 1996). A Food Marketing Institute (1995) study found that UK consumers on average ate out 2.56 meals per *month* in 1992 and increased to 5.82 meals in 1995.

In 1994, Americans spent approximately 44% of their food budget income on food away from home (Saporito, 1995). In 1996, half of every dollar spent on food was spent in restaurants. The average cost of a restaurant meal was $4.23 per person in contrast to the home supplied meal cost $1.42 per person (Food Marketing Institute, 1997a). Factors discussed previously such as working women and dual income families enable consumers to afford the higher amount of restaurant meals. As of 1998, 15% of USA consumers were eating out three or more times *per week*, 17% twice a week, and 35% once per week (Food Marketing Institute, 1998a).

As consumers seek ways to save time, grocers have responded by offering more prepared food both pre-cooked and ready to heat in recognition of the consumers' need for

convenience and saving time with household tasks (Food Marketing Institute, 1998a). Interestingly, this has impacted the *source of prepared meals eaten at home but not cooked at home* as shown in the Food Marketing Institute table below (Food Marketing Institute, 1998a).

TABLE 3.1 Sources of Prepared Meals Eaten at Home in the USA, 1992 – 1998

	1992	1993	1994	1995	1996	1997	1998
Fast Food (QSR)*	55%	46%	46%	41%	48%	41%	37%
Supermarket	12%	15%	15%	17%	12%	22%	20%
Restaurant	24%	27%	25%	22%	25%	21%	20%

* Quick Service Restaurant

The above graph lists meals eaten at home which in 1998 represented 66% of the meals USA consumers ate within a week (Food Marketing Institute, 1998b). Also, consumers ate 19% of their meals at restaurants and 15% were eaten elsewhere. The study found factors impacting the consumer meal decisions were time of day, demographic group, where they lived, and day of the week (weekend versus weekday).

In summary there is a trend in both the USA and UK toward consumers choosing prepared meals over cooking from ingredients due to less time available to cook. This trend corresponds to a need for more convenience from busy consumers, especially working women. These prepared meals are sourced both from restaurants and from supermarkets.

3.2 GROCERS

This section includes discussion of pertinent aspects of the grocery industry that provides background for the case study discussion. This section has two parts: an overview of 1) traditional and 2) emerging virtual grocery retailing.

3.2.1 Traditional Grocery Retailing

A supermarket or grocery store can be defined as "a large integrated food store offering groceries, meat, dairy, product, and frozen food, operating primarily on a self-service basis and having an annual sales volume of at least one-million dollars" (Appel, 1972, p. 39).

Goldman (1975-1976, p. 52) recommends characterizing the supermarket on six dimensions: "(1) the number and composition of product lines (groceries, non-food); (2) breadth of products in each line (narrow, large, broad); (3) type of store organization (counter-service, partial or full self-service); (4) level of prices and margins (low, regular, and high prices); (5) nature of store's trading area (immediate neighborhood, appeal outside immediate neighborhood, and mass appeal); and (6) physical size of establishment (small, large, huge)". Jukka et al (1998) further define a grocer's product line to consist of *perishables* (vegetables, meats, dairy items), *non-perishables* (canned foods, beverages), and *non-food commodities* (household products). Perishable groceries present special challenges to virtual grocers relating to logistics such as the requirement of refrigerated trucks as will be described in Chapter 7.

Sampler (1998) characterizes the retail grocery industry as one with a) intense price competition, and b) low profit margins around one percent (in USA). While USA grocers realize lower profit margins, UK retailers enjoy some of the highest margins worldwide at 6- 9% (Abass, 1996).

Historically, groceries were purchased at fairs and open markets. From the 18th century onwards, specialty shops such as bakers and butchers emerged within villages and larger towns. In the UK in the 1920s, the first supermarket chain emerged which represented a retailer that carried multiple food lines. This has continued and in the last twenty five years product ranges have increased from 500 items to 25,000 per store which include *perishable, non-perishable foods, and non-foods* (Abass, 1996) which is in agreement with Jukka et al's classification. The increase of the number of product lines is considered an innovation within the supermarket and was instituted as an incentive for consumers to have larger orders (Goldman, 1975-1996). As introduced in section 3.1, grocers are increasing adding ready-to-eat and ready-to-heat product lines in response to consumer demands (Food Marketing Institute, 1998a).

As the supermarket has evolved, grocers have emerged in the role of an intermediary between the food manufacturers and the consumer (Keh, 1998). The grocer as an intermediary provides a more efficient way for consumers to obtain food products in one place rather than dealing with individual food sources (farmers and manufactures).

Later, the grocer expanded their in-store intermediary role through the addition of non-food products and services (pharmacies, dry cleaning, etc.) as described later in this section. The role of the grocer as an intermediary is a key point in this research, since the virtual grocer is simply *the next evolution of an existing intermediary role.* However, this is in contrast to the virtual meal provider, *a new type of intermediary,* which provides a more efficient way for consumers to obtain meals rather than dealing directly with individual restaurants. The concept of intermediary and related business processes introduced in section 2.3.7, will be explored more in the case analysis in Chapters 5 to 8.

In Europe, three *grocery store formats* have developed that sell both groceries and household supplies: 1) the supermarket, 2) the hypermarket, and 3) the hard discount store (Food Marketing Institute, 1995). Additionally, this 1995 study reported there were two other grocery formats: 4) specialty shops (e.g. a store for fresh produce) and 5) neighborhood markets used for convenience fill-in shopping that are utilized by consumers. In the UK, the service oriented superstore, a large supermarket (over 3,500 square meters), is the most popular grocery store format followed by the price oriented hard discount store. Based on Nielson 1995 data, the UK consumer typically frequents 3.7 different grocery stores representing 2.4 of the 5 grocery store formats, on average, for purchasing food (Food Marketing Institute, 1995). This implies that consumers go to more than one store within a specific grocery store format.

In 1995, the UK consumer typically visited their primary store 1.81 times per week spending $76 (USA) which represents 14% of annual income (Food Marketing Institute, 1995). A 1998 Food Marketing Institute (1998a) study found that traditional grocery shoppers in the USA spend two to three hours' grocery shopping every week. This represents 2 to 3 trips to the store each week. This number of shop visits has remained constant for 15 years.

East and Hogg (1997) cite a Nielsen 1995 report on the grocery trade that found, on the average in Britain, 65% of consumers' expenditures are with their main store over a year. Bell et al (1998, p. 352) cite Progressive Grocer which in 1995 claimed that "industry research suggests that *location* explains up to 70% of the variance in people's supermarket choice decisions." East and Hogg (1997) concur that accessibility to the store is a key

criteria in grocery store selection. Bell et al (1998) state that higher switching costs are incurred as the distance to the grocery store increases. Also, stores that a consumer visits on a frequent basis impose lower costs due to familiarity with the store layout and service. East et al (1998) found evidence that busy consumers were more loyal to a primary store as a way of simplifying their shopping.

Half of the shoppers visit multiple grocery stores, with the primary grocery used for the main shop and other stores used for the "fill-in". In a 1990 study, Urbany et al (1994) discovered that while consumers regularly shopped at up to two grocery stores *based on the convenience of their location* they typically spent 75% of their grocery food budget at a single primary store. East and Hogg (1997) add that when a consumer purchases across two stores there is a higher likelihood that they will belong to the same store chain if the chain has a large number of stores. The top factors in selecting a supermarket (within a convenience location) are: high quality fruits and vegetables, clean store, high quality meats, use before/ sell-by dates on products, and accurate shelf tags (Food Marketing Institute, 1998a; Koprowski, 1995).

Consumers do switch grocery stores. The Food Marketing Institute (1995) study found in 1995, 15% of Europeans switched their primary grocery store as contrasted to the USA switching rate of 24%. Consumers switched grocery stores primarily due to a new store that was more conveniently located (store movement) or when the consumer moved to a new location (East et al, 1998). In concurrence, Reichheld (1993, p. 66) states "mobile populations are inherently disloyal because they interrupt their business relations each time they move." However, East and Hogg (1997) argue that when consumers move they are more likely to seek out a conveniently located branch of their old grocery store.

Switching, within an existing store's area, is impacted by the consumer's willingness to learn a new store format balanced by the need for a change e.g. better prices, wider selection, and/ or better location (Urbany et al, 1996). "Because of the ongoing nature of grocery shopping, the benefits of regular, extensive [price] search and store switching exceed the costs for only a minority of consumers" (Urbany et al, 1996, p. 94). As discussed earlier, a key factor in grocery store selection is the amount of time or distance to

the grocery store, whereas in switching it is the incremental time or distance to the alternative store (East et al, 1998).

As traditional grocery stores evolved (in their intermediary role) they continued to differentiate themselves by the size and type of their product line as well the addition of *services within the store* (Food Marketing Institute, 1998a). The Food Marketing Institute study stated that some services were *prepared food* related departments such as bakeries, coffee bars, and delis. As an added convenience for consumers and further differentiation, many grocers set up *nonfood service departments* including dry cleaners, video rentals, pharmacies, ATM machines, photo finishing, and florists. In the 1990's these non-food categories were a competitive battleground between groceries and discount stores (Kahn and McAlister, 1997).

An *out of store service* of value to consumers is home delivery. Grocery home delivery is not a new concept in the UK or USA and is frequently offered by small supermarkets (Park et al, 1996; Supermarket News, 1997). Park et al state that 38% of the grocers in the United States, with one to three stores, offered home delivery and 31.3% of Canadian grocers offer home delivery. In the UK, grocery delivery is of added importance since 60% of the UK population is dependent on public transportation (Supermarket News, 1997). The changing consumer demographics described above are seeking time saving services such as home delivery. Virtual Grocers are enabling home delivery in a new way (Internet) and on a much larger scale than the small supermarket, as will be explained in the next section and expanded upon in the analysis chapters.

The grocery retail industry has been responsive to consumer requirements, social changes and *innovative in adopting new technologies* (Appel, 1972). Types of technology adoption which has been noticeable to grocery consumers include: scanner systems, bar codes (UPC), electronic cash registers, shopper ID (loyalty systems), consumer scanning, electronic shelf labels, and the emerging virtual grocery shopping (Keh, 1998). The adoption of technologies such as electronic scanners at check out coupled with computer database technology allowed grocers to capture consumer purchase data at a *store level* (Food Marketing Institute, 1996), which enabled stores to use the data to set a better store product mix (Sampler, 1998).

Retailers and manufacturer are re-examining their use of coupons. Food manufacturers, like Procter and Gamble, are reconsidering if they want to provide coupons as an incentive to purchase since they are expensive programs with low redemption rates (Keh and Park, 1997). "Some retailers and consumer product companies have begun using coupons in a new way. Instead of distributing them *en masse* to bring hundreds or thousands of new and probably disloyal customer into the store, these businesses are directing coupons to existing customers in order to broaden their purchases" (Reichheld and Teal, 1996, p. 82).

In the UK [and the USA], the grocery industry introduced customer loyalty cards which enable grocers to track consumer purchases on an *individual level* (Sampler, 1998). Grocers have implemented loyalty, or frequent shopper programs as they are also called, for a variety of reasons including: to promote consumer loyalty, gain information on shoppers, increase best shoppers' sales, and in response to competition (Food Marketing Institute, 1997b). As will be described in Chapter 6, loyalty programs can also apply to virtual grocers.

3.2.2 Virtual Grocery Retailing

A broad definition used in this research for virtual grocery retailing is –consumers use an Internet interface to order groceries electronically that are delivered to the home.

Consumers obtain groceries through different processes in traditional versus virtual supermarkets. In traditional grocery retailing consumers travel to the store, pick the goods off the shelves, go through a checkout line to pay for the goods, then transport the items home (Jukka et al, 1998). This is in contrast to the typical virtual grocery process where consumers order remotely, usually over the Internet (sometimes phone or fax), and the grocer picks and delivers the goods to the consumers home (Food Marketing Institute, 1997a).

In contrast to other virtual retailers of commodity goods (e.g. books), virtual grocers face different challenges. Two challenges related to the process of fulfilling and delivering the grocery order are 1) the perishablity of food (Jukka et al, 1998) and 2) the large number of items per order (Gould and Silberzahn, 1996).

Virtual grocery retailing (also called groceries direct) first emerged in the early 1990s in the USA (Parker and Gilliford, 1996). In the USA, pioneering in this area emerged from new companies in this marketspace (Peapods, HomeGrocer, NetGrocer) as opposed to traditional grocers adding a virtual channel. Three basic models of *virtual grocers with no brick and mortar stores* have evolved. The first model represented by virtual grocer pioneer, Peapod began in 1990, is a grocery *delivery service* where the virtual grocer takes on-line orders, picks from store shelves of existing local grocer partners to obtain the grocery products (rather than take possession of the inventory), and has a fleet of temperature controlled trucks for home delivery (Park et al, 1996; Liebeck, 1996; Muchmore, 1997). A second model is represented by HomeGrocer.Com, who *are grocers* that own inventory, set up a warehouse for order fulfillment, pick and deliver the groceries locally with their fleet of trucks (Ervin, 1997). A third model is represented by NetGrocer who only deals in *non-perishable groceries* therefore can utilize delivery services such as FedEx (Muchmore, 1997).

In contrast to the USA virtual grocer pioneers, in the UK the initial virtual grocers have emerged from traditional grocers, e.g. Tesco and Sainsbury. These grocers added a virtual channel to their existing business. One motivation for these traditional grocers to seek this new store format was the lack of available land with planning consent in the UK where new brick and mortar store can be built (Stores, 1998). In 1996, Tesco and Sainsbury launched on-line grocery pilots in the UK (O'Connor, 1998; SuperMarketing, 1997). These grocers have set up pilots associated with specific existing store locations. At Tesco, consumers order via telephone, fax, or on-line; the grocers pick the goods off the store shelves and deliver the groceries using a fleet of vans. At Sainsbury, they also offer consumers the option of store pick-up (O'Connor, 1998).

Parker and Gilliford (1996) state that virtual grocery retailing requires 1) a segment of consumers willing to purchase on-line and 2) grocers willing to make major logistic investments for order fulfillment. Parker and Gilliford argue that traditional grocers that want to add this virtual channel must be able to adapt and execute radical changes to their own infrastructure. This relates to the new business processes that must be implemented that are described in the analysis chapters.

Consultants predict that this emerging market will grow. Forrester Research predicts that by 2003, USA on-line grocery sales will reach $10.8 billion representing three million USA households (Kadison et al, 1998). Anderson Consulting forecast that by 2007 USA virtual grocery purchases will equate to $85 billion representing buyers from fifteen to twenty million USA households (McGovern, 1998). Bill Gates has predicted that by 2005 one-third of all grocery food sales will be handled electronically (Chandler, 1995).

A UK survey published in 1997 by Healey & Baker project that 16% of the money spent for groceries, £8 billion per year, could be diverted to home deliveries and drive-through stores (Cunningham, 1997). Healey and Baker's 1997 survey revealed that while price had been the competitive differentiator of the 1990s that grocery shoppers were now placing a higher value on quality and services such as delivery (SuperMarketing, 1997). Both Tesco Direct and Sainsbury project growth in this market. As of 1997 Tesco Direct projected that grocery home shopping in five years could represent 5% of the current grocery volume and in twenty years represent 10% while Sainsbury projected that 20% of UK households would do grocery home shopping within ten years (Cunningham, 1997).

Based on an Austrian study, the major benefits consumers expect to receive from purchasing their groceries on-line are convenience, time saving, and independence from store hours (Schuster and Sporn, 1998). Schuster and Sporn also point out virtual grocers provide an efficient way for consumers to do price comparisons and obtain more detailed product information.

Peapod, as one of the first electronic grocery delivery services, demonstrated that consumers will order electronically over retail store transactions if consumers can obtain benefits such as low prices, high quality, sufficient selection choice, and/ or time savings (Benjamin and Wigand, 1995).

From a consumer's perspective, deterrents to virtual grocery shopping include: a) many consumers prefer to personally select perishable items, such as meat and vegetables rather than receive an unknown quality from a virtual grocer and b) some consumers are unwilling to pay a delivery charge (Thachenkary et al, 1997; Schuster and Sporn, 1998;

Kalakota and Whinston, 1997). Other deterrents are high telephone costs (in parts of Europe), need for Internet skills and computer equipment, and concerns about how virtual grocers will handle complaints (Schuster and Sporn, 1998; Kalakota and Whinston, 1997). Additionally, Thachenkary et al (1997) argue that some consumers enjoy traditional grocery shopping or perceive it as an excuse to get out of the house.

An Anderson Consulting study identified six major potential groups for on-line grocery shopping: shopping avoiders (those that dislike grocery shopping), necessity users (challenged in their ability to travel to the store), time starved (willing to pay more for services that save time), new technologist (like to use technology tools), responsibles (who gain self worth by shopping), and traditional shoppers (typically older and enjoy shopping in a store) (Kutz, 1998). Of the above categories, two are mentioned most often as key groups for online grocery shopping: time starved professionals (Thachenkary et al, 1997) and the elderly and individuals with mobility impaired disabilities (Heikkila et al, 1998; Thachenkary et al, 1997).

Accord to a Food Marketing Institute (1998a) study, 71% of grocery shoppers are women. As described earlier in this section, as women return to the workforce they have less time for household chores which places a premium on leisure time. Some consumers have found that virtual grocery shopping can be accomplished in about ten minutes (Food Marketing Institute, 1998a); however, initially placing the order can be very time consuming (Park et al, 1996). One perspective is that virtual grocers are selling time not food, as they are freeing up time from household chores (Food Marketing Institute, 1998a; Park et al, 1996).

3.3 MEAL PROVIDERS

As discussed in the previous food trend section, consumers are increasingly eating prepared food from restaurants. This section focuses on the "fast food" restaurants that are pertinent to the cases, describes the trend of place of meal consumption, and provides an introduction to virtual meal retailing.

3.3.1 Traditional Meal Retailing

The restaurant market can be divided into quick service restaurants (QSRs) also known as fast food, mid-priced family style outlets, and upscale restaurants (Food Marketing Institute, 1997a). This thesis is focused on QSRs.

In the USA, there are five types of QSRs (quick service restaurants) that represent the majority, three-fourths, of the meals purchased at restaurants but consumed at home in the USA. In 1996 they were pizza (42%), hamburger (14%), chicken (10%), Chinese /Asian (5%), and Mexican (4%) (Food Marketing Institute, 1997a). This restaurant take home food represents $38 billion dollars (Food Marketing Institute, 1997a).

The reasons consumers select takeout from QSRs are: they don't have time to cook, their hungry family wants a meal quickly, consumer purchaser feels rushed, or they want a meal they can pick up on their way home. Consumers are seeking convenient quality (Food Marketing Institute, 1995; 1997a).

Connor (1994) investigated the correlation of food trends in North America and Europe and discovered that on an aggregate level, food trends in North America were good predictors of current or future food trends in Europe. For example, he found in North America dual income households spent 40% of their food budget on food cooked away from home in contrast to singles who spent 24-30% (which supports earlier discussion on working women and food trends). Connor stated that fast food was one of the fastest growing segments in Europe as well as encompassing a higher percentage of food budget.

During the last ten years, restaurants have switched from a place to eat at, to a place to obtain prepared food. In 1996, Americans purchased 133 meals per person at restaurants, which was eleven percent more than 1985. In 1996, half of the consumers in the United States *carried out more restaurant meals than they ate within a restaurant.* Consumers are using restaurants as supermarkets for prepared foods (Food Marketing Institute, 1997a).

Segments that tend to bring home meals are working couples with no children, working parents, and affluent families where just one parent works. Six tenths of all take home dinners are consumed just by adults (Food Marketing Institute, 1997a).

Restaurants *that offer takeout* have two segments: a) meals that are consumed at home (refer to Table 3.1) and b) meals that go elsewhere. Growth in restaurants has been from the purchase of meals that are eaten outside the restaurant. While the trend is for more meals sourced from restaurants, the number of meals eaten *at* restaurants by Americans has dropped from 72 meals in 1985 to 65 meals in 1997. This represented 22% of restaurant dollars for home consumed restaurant meals. The most popular take home meal is dinner. The quick service restaurant (QSR) dominates the take-out market which is the main area of competition to grocers (Food Marketing Institute, 1997a).

There are three methods to take meals to the home: *carryout (go into the restaurant), drive-thru, and delivery.* As of 1996 carryout represented 60% of the take home dinners however it had declined from approximately 70% in 1985. Drive-thru at approximately 22% and delivery at 19% represented slow growths trends (Food Marketing Institute, 1997a). Of the carryout dinners 57% of the consumers traveled from home to acquire the food, while 13% were leaving from work followed by shopping, recreation or other locations (Food Marketing Institute, 1997a).

3.3.2 Virtual Meal Retailing

Many individual restaurants do not offer on-line ordering of food today. However, some have set up websites. Restaurant web applications have initially focused on non-food ancillary activities such as interactive games, over-the-net job applications, online newsletters, and purchasing of logoed merchandise. Some Taco Bells have installed a kiosk that allows consumers to send electronic postcards from the restaurant's site (Dysart, 1998).

Emerging virtual meal intermediaries such as Waiter.Com and Cybermeals offer an online restaurant takeout and delivery service. Their service allows on-line consumers the ability to pre-order meals from a collection of partner restaurants, for pick up or delivery. Waiter.Com pioneered the virtual meal service in 1995 (O'Brien, 1998). Both virtual retailers have websites which contains menus, restaurant hours and maps (O'Brien, 1998; PR Newswire, 1998b). The value proposition for consumers is one stop shopping from a

large number of restaurants plus a more efficient ordering and delivery system (Lewis, 1998).

3.4 CHAPTER SUMMARY

This chapter provided background on food trends, traditional and virtual grocery shopping, and meal retailing. It included a discussion of major food trends including the changing process of obtaining meals- cooking less and purchasing more ready-to-heat and ready-to-eat meals. These trends are related to changing demographics such as the increase of women in the work force and their need to find ways to save time such as minimizing food preparation. Working women are also a key group for ordering groceries virtually since it decreases shopping time.

The development of the supermarket and the extension of product lines over time was described. Important consumer factors of interest to grocers were discussed including shopping frequency and factors impacting store switching. Grocers have been innovative in embracing new technologies such as bar coding of products. Additionally, grocers were innovative in developing store loyalty programs which enabled them to track consumers purchases on an individual level.

Virtual grocery retailing was defined as- consumers use of an Internet interface to order groceries electronically that are delivered to the home. Consumers' shopping processes differ in virtual grocery shopping and traditional grocery shopping. A discussion of how virtual grocery retailing has evolved within its short history was introduced. Benefits of virtual grocery shopping for consumers include convenience, time saving, independence from store hours, and an efficient way of price comparison. Deterrents to online grocery shopping include unknown quality of food products, especially meats and produce since they cannot be examined in person.

The QSR (quick service restaurant) industry growth is related to consumers' requirements for more convenient foods. Additionally, restaurants have shifted from a place where consumers eat meals to a source of prepared foods, which is purchased for home consumption.

Virtual meal retailing includes restaurants that offer on-line ordering of food for pick-up or delivery. Additionally, intermediary virtual meal providers are offering online ordering of meals from multiple restaurants from a single source. The advantage to the consumer is the ability to pre-order meals for delivery or pick-up and compare multiple restaurants' menu offerings and prices from a single site.

4 RESEARCH METHODOLOGY

4 RESEARCH METHODOLOGY

A rich case study analysis was used for this research. The variety of triangulated data sources utilized included: interviews, observation, literature, business articles, government reports, industry journals and reports, and websites. This Chapter describes why the case study approach and grounded theory were selected as the research methodology. An explanation of case selection and background is included.

4.1 RESEARCH APPROACH

This section describes the case study methodology (4.1.1 and 4.14) and grounded theory (4.1.2). A flowchart of the research process is in section 4.1.3.

4.1.1 Methodology Options

There are a variety of research strategies for a researcher to choose from. Each has a different way to collect data and analyze the results (Yin, 1994). Selection of research methodology is dependent on the current body of knowledge and the nature of the topic (Benbasat et al, 1987).

Yin (1994, p. 4) proposes three key conditions for research strategy selection are "(a) the type of research question posed, (b) the extent of control an investigator has over actual behavioral events, and (c) the degree of focus on contemporary as opposed to historical events." Yin (1994, p. 6) offered the following criteria displayed in Table 4.1 as a guideline for matching research strategies with relevant situations.

TABLE 4.1 Relevant Situations for Different Research Strategies

Strategy	Form of Research Question	Requires Control over behavioral events?	Focus on Contemporary events?
Experiment	how, why	Yes	Yes
Survey	who, what, where, how many, how much	No	Yes
Archival Analysis	who, what, where, how many, how much	No	Yes / no
History	how, why	No	No
Case Study	how, why	No	Yes

The **experiment** has traditionally been utilized for exploratory research when the researcher can "manipulate behavior directly, precisely and systematically" (Yin, 1994, p. 8). A key difference from the other research options is this *control over behavioral events*. Experiments are often limited to measuring behavioral results of an experimental group in a laboratory setting which are compared to a control group (Moser and Kalton, 1979). The experiment was not selected since the objective was not to control the behaviors of the participants.

Easterby-Smith (1991, p. 122) state the purpose of a **survey** is to "obtain information from, or about, a defined set of people or 'population'". Similarly, Moser and Kalton (1979, p. 1) state social surveys are "concerned with the demographic characteristics, the social environment, the activities, or the opinions and attitudes of some group of people." The above collective definitions focus on a much broader sample, e.g. a country population, than a case study which could be as few as one individual in one firm.

Oppenheim describes one type of survey that consists of a questionnaire that is mailed to potential respondents. He claims the advantages of postal survey are the low cost of data collection and processing, the avoidance of interviewer bias, and the ability to reach a broader group of participants. However, he states some of the disadvantages of a postal survey include the potentially low response rates, the lack of opportunity to correct misunderstandings or probe for more information, and the lack of ability to collect additional data based on observation. In concurrence, Moser and Kalton (1979) state that a problem with a mail questionnaire is in securing a sufficient response rate. Unlike a live interview which focuses on how and why, a mail survey is better suited for who, what, where, how many and how much (Yin, 1994). Case studies differ from surveys in that they are interactive and facilitate in-depth data collection. It was felt that since more detailed data was needed, a mail survey was ruled out for this research.

Social surveys can also be accomplished via telephone interviews or focus groups. However, due to the depth and amount of the question areas to be explored, the telephone interview was felt to be inadequate for this research. Also with telephone interviews the respondents cannot be viewed in their environment. Focus groups were not selected since it was not deemed appropriate to interview the different e-food companies simultaneously.

One reason was the selected retailers were in different locations and it would not have been feasible to get them together. Also since they were potential competitors, they would not have been as candid in their responses. However, if the opinions of the *consumers* of e-food had been of interest, a focus group would have been an appropriate means to gather data.

In **archival analysis** research, a variety of records are investigated. Examples can include service records, organizational records (charts and budgets), maps and charts, list of names, survey data, and personal records (Yin, 1994). Archival research is selected as the methodology when the retrieval and analysis *data contained in records* is of key importance. Archival analysis differs from historical research in that it can be used for contemporary events. Additionally it does not attempt to explain *why,* as historical research does, but *how much, how many, whom, what,* and *where*. Yin suggests that advantages of gathering data from archives is that it is stable, unobtrusive, precise and quantitative while weaknesses are potentially limited accessibility due to privacy issues and biased data. McDonalds, the pilot case, supplied several company documents that described some of the related programs they were considering. Additionally, websites was another utilized archival source for this research.

Histories deals with the dead past and not contemporary events (Yin, 1994). He states that histories are the preferred approach when the researcher relies on evidence from primary and secondary documents and artifacts. Histories are typically selected for research where there is no availability of living subjects in the research area. Since employees of these firms were available for interview, histories were not appropriate for this research. Case studies are different from the historian's approach in that it includes direct observation and a systematic interview (Yin, 1994).

"The **case study** is a research strategy which focuses on understanding the dynamics present within single settings" (Eisenhart, 1989, p. 534). Yin (1994) claims that case studies are appropriate where the objective is to study contemporary events and where it is not necessary to control variables. He also claims that case studies offer a source of evidence that gathers data from direct observation and systematic interviews.

As of the mid-1990's, minimal research had been conducted in the area of business to consumer e-commerce. Since the emergence of e-food was a contemporary event, case study was the appropriate methodology. Both Yin (1994) and Eisenhart (1989) recommend the case study methodology is appropriate for contemporary areas where little previous research has been done. Benbasat et al (1987) suggest the use of case study when researchers are studying the work of innovation practitioners. Additionally they claim that case studies allow the researcher to understand the issues and the complexity of the processes being studied.

Benbasat et al (1987, p. 371) argue that case studies are "more suitable for the exploration, classification, and hypothesis development stages of the knowledge building process." This research was focused on *how* e-food was evolving and *why* the practitioners were selecting one course of action over another, which fits with the case study criteria that will be described in 4.2.4.

4.1.2 Limitations of Case Research Methodology

However, any methodology has its limitations. For this research, the limitations on the case study methodology included: lack of quantitative evidence since sometimes the participants would not reveal requested data (e.g. Cybermeals and consumer information), the results were subjective, i.e. based on my interpretation of the interview data, the limited number of cases interviewed due to time, distance and cost constraints, the cases interviews were all conducted within a seven month period so reflect data only from a particular point in time, and the data gathered at the interview was biased to the participant's perspective.

Researchers advocate and utilize case studies while acknowledging their weakness (Eisenhart, 1989; Poon and Swatman, 1999). They recommend attempting to overcome these limitations by comparing the findings with literature, supplementing the interview data with other sources (refer to data collection section below) and requesting additional information when the information provided did not make sense. I followed these recommendations.

In sum, according to Benbasat et al (1987), the case research methodology is useful for exploration and hypothesis generation and is a legitimate way of adding to the body of knowledge. While no one research methodology is better than all other, for the type of research that was investigated, the case research strategy was the best selection based on the criteria discussed. The survey was the only other contender and the concern was since the field was so new, the survey would not have produced the depth of information that was desired.

4.1.3 Grounded Theory

In 1967, Glaser and Strauss first proposed grounded theory, a research methodology that can be utilized in a case study approach. Theory is developed by comparing the same event or processes in different setting such as different companies. Glaser and Strauss (1967, p. 6) argue "generating a theory involves a process of research". They state that the purpose of an interview is "to generate theory. This is especially true because evidence and testing never destroy a theory (of any generality), they only modify it. A theory's only replacement is a better theory (p. 28)." Easterby-Smith et al (1991, p. 36) suggest that grounded theory offers a flexible approach to research, and is "good at providing both explanations and new insights."

There were two aspects to how the grounded theory approach was utilized. First, the research questions and associated hypothesis changed as the research progressed from pilot phase to the multi-case interview phase. The original hypotheses were created to investigate ATM technology applications and evolving electronic interfaces at McDonalds. Based on data gathered during the pilot, the topic of electronic commerce in the food industry emerged. New hypotheses were developed to reflect the new topic area. Second, using the grounded theory approach within the multi-case phase, the theory and associated questions were revised before each interview based on new insights revealed during the previous interview. For example, questions relating to the emerging theory of the virtual order cycle were added and refined with each interview.

"Grounded theory can be presented either as a well-codified set of propositions or in a running theoretical discussion, using conceptual categories and their properties" (Glaser and Strauss, 1967, p. 310). Grounded theory allows the researcher to react to themes and

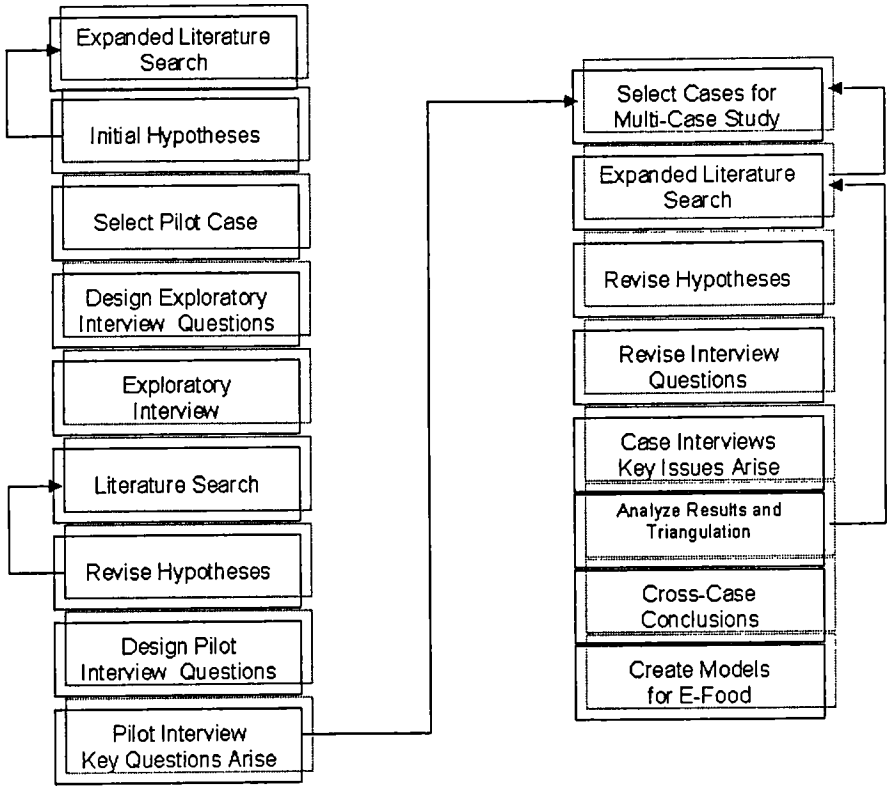
insights that emerge during the research. Eisenhart (1989, p. 534) states that grounded theory "relies on continuous comparison of data and theory beginning with data collection. It emphasizes... an incremental approach to case selection and data gathering."

4.1.4 Research Design Plan and Multi-Data Sources

The research plan for e-food was designed and organized after several literature searches and the pilot interview. "The drawing up of the research design takes place at the very beginning of the research process, though the plan may have to be changed later on" (Oppenheim, 1992, p. 7).

Most research designs go through similar stages. "A research design is the logic that links the data to be collected to the initial questions of a study" (Yin, 1994, p. 18). Yin suggests that the plan includes the phases of 1) define and design; 2) prepare, collect, and analyze; and 3) analyze and conclude. Oppenheim (1992) offers more detailed research design steps: decide the aims of the research and the theories to be investigated; review the relevant literature; conceptualize the preliminary ideas of the study followed by a series of exploratory in depth interviews, decide the design of the study; decide which hypotheses will be investigated; design the necessary research instruments such as interview questionnaires; do a pilot to try out instruments and make revisions if needed; collect data through interviewing; prepare the data for analysis; assemble the results; and write the report. A flow chart of the research design is presented in Figure 4.1.

FIGURE 4.1 Grounded Theory Research Design for E-Food Research



As shown in Figure 4.1, there is a collection of iterative steps, related to each interview, that illustrates the grounded theory process. They are 1) expanded literature search, 2) revise hypotheses, 3) revise interview questions, 4) case interviews key questions arise, and 5) analyze results and triangulation. After each interview, the hypotheses and interview questions are updated.

4.1.4.1 Multi-data Sources

The objective of having multiple data collection sources is to combine an objective perspective of the research area with a subjective interpretation of the interview.

LITERATURE REVIEW

Based on grounded theory, there is a series of iterative steps that revise the hypothesis and associated interview questions between each case interview, which includes *periodic*

literature reviews. For this research as new topics emerged they required literature searches on these new areas. Also, throughout the research, literature searches continued for current articles on the core topics. The objective of a literature review is to "review previous research to develop sharper and more insightful *questions* about the topic (Yin, 1994, p. 9). Thus, the initial literature search suggested initial research questions. As perceptions changed during the research, new literature reviews were conducted not only to update the current research areas but also to suggest new research questions.

ON-SITE INTERVIEW

An interview is a key source of data for case study methodology (Moser and Kalton, 1979). The principal data collection source for the e-food research was the on-site interview, which included a tape recorded session. This follows Bensabat et al's (1987) advice to keep meticulous records and not trust the data to memory. Oppenheim (1992, p. 67) states that "it is essential for the exploratory interviews to be recorded on tape. In this way they can be analyzed in detail afterwards, for there is much that will have escaped the busy interviewer in the stress of the actual interview." The NUDIST tool was utilized in analyzing the extensive case data.

Observation provided input to data collection. Examples included information gathered by viewing the virtual grocery order fulfillment operations in HomeGrocer's warehouse and Tesco Direct's pilot store. Additionally, it was of interest to view Waiter.Com's office located in an incubator start-up facility.

INDUSTRY REPORTS, BUSINESS ARTICLES AND GOVERNMENT REPORTS

Data about the case firms and industry (both e-commerce in general and e-food specifically) was gathered from consultant reports, government reports on e-commerce, related industry sources such as the Food Marketing Institute, and business articles.

WEBSITES

Information gathered from the case's websites was utilized as data source. I "practiced" placing an order on each site to obtain a direct impression of the order process.

TRIANGULATION

Validation of the case interview responses was done where possible via triangulation. Triangulation provides multiple measures, or multiple sources of evidence of the same phenomenon (Yin, 1994). The objective is to corroborate the evidence collected during the interview. Triangulation adds support to the researcher's conclusions (Benbasat et al, 1987; Easterby-Smith, 1991; Eisenhart, 1989).

Selected cases were sent a follow-up email to request supporting data to some of their previous responses. Separate sets of questions were provided for each case. Since Ford Smith was no longer at Cybermeals, this case was not pursued further. The other three cases (Tesco, HomeGrocer, and Waiter.Com) received an email with additional questions. However only Tesco and Waiter.Com responded to the request. Since this research investigated e-food within a specific period of time the respondents were requested to provide data related to that timeframe.

4.1.4.2 NUDIST

One of the tools for case study analysis was NUDIST. NUDIST, a computer software package, facilitates understanding of relationships of ideas and concepts within case interview data by allowing the researcher to assign case information to categories within a hierarchical structure, e.g. trees, branches, and leaves. The process of coding or assigning the case interview data to the tree structure is discussed in Appendix A.

4.1.5 Case Study Methodology

Benbasat et al (1987) recommend a pilot study to be appropriate when the research is highly exploratory. This research followed their advice. This research had a single case for the pilot and four for the multi-case study. A single case study is appropriate if the objective of research is to explore a previously not researched subject or to use a pilot to identify a potentially important problem (Yin, 1994). Benbasat suggests that a multiple case study might follow an exploratory pilot case and this recommended approach was adopted for this research. McDonalds looked interesting as a pilot based on issues in 1996. Pilot interviews were in July 1996, April 1997, and July 1998 with John Abrams at McDonalds HQ in Oakbrook, IL. Ironically, as it turns out, while they raised extremely interesting questions, the final data collected from them was not as useful to this research.

Investigation of multiple cases allows the researcher to do a comparative study. The result of a multi-case study is considered more compelling and robust since it allows cross-site comparisons without sacrificing within site understanding (Herriott and Firestone, 1983). Benbasat et al (1987) state that an advantage of multi-case research is that it allows for cross-case analysis and theory building.

In summary, there were differences and similarities as to how the different cases were implementing virtual retailing as will be discussed in the analysis chapters. As new insights were discovered (e.g. virtual order cycle in Chapter 6), new hypotheses were set up and tested in subsequent case interviews. Using the grounded theory approach, the theory continued to be developed as the investigation of the same processes in different cases using a comparative method of analysis. The grounded theory approach allowed for the flexibility of incorporating new ideas into the investigation as it progressed.

4.2 RESEARCH PROCESS: MULTI-CASE INTERVIEWS

This section describes how the multi-case firms were selected.

4.2.1 Case Selection

After the pilot was completed, the decision had to be made as to what cases would be selected for the multi-case interview. Two key decisions included 1) how many cases and 2) which cases. The number of cases selected for study was constrained by time, money (travel to the cases was self-funded) and willingness of the potential case to be interviewed. The goal was to have a minimum of four cases. Eisenhart (1989, p. 545) states "while there is no ideal number of cases, a number between 4 and 10 cases usually works well."

The other cases needed to have a logical "fit" with McDonalds. Since McDonalds was still in the planning stages of electronic kiosks and e-commerce, it was decided that it would be of value if the other cases were already implementing e-commerce. However, at the time of the interviews, business to consumer e-commerce was in the early stages and many firms were only planning or in early implementation stages.

To select the other cases, an extensive search was made in business newspapers, periodicals, and literature to create a potential list of candidates. Benbasat et al (1987) suggest ways to identify potential research sites are scanning business newspapers, library searches, and talking with colleagues. An additional source of information that was utilized by this research was to visit potential candidate's websites.

Several authors speak to the importance of thoughtful case selection (Benbasat et al, 1987) as it provides the pivotal data for analysis (Glaser and Strauss, 1967) and theory building (Eisenhart, 1989). To determine how the other cases would fit with McDonalds, relevant McDonalds attributes that could impact case selection were listed: planning stage of e-commerce, industry was food retail, had existing brick infrastructure, and food product was ready- to-eat meals- a perishable product.

The considerations for other cases included should they be confined to the retail food industry or would it be more interesting to select four virtual retailers, each in different industries? The final decision was that there was better potential for theory development by concentrating within the industry of retail food since comparisons of approaches could be made.

The next decision was what would be the *criteria for case selection within e-food.* Factors for selecting the cases included the following.

1) The case had to be a virtual food retailer with at least a pilot program in process. Therefore, issues relating to *implementing* electronic commerce versus just planning for it could be explored.
2) Some cases were to be virtual only retailers and some to be existing "brick" retailers that were adding a virtual channel so that potential differences in business processes could be explored.
3) The virtual retailer had to include perishable products in their product line so that the demanding associated logistic issues could be compared.
4) From a travel expense issue most cases would be in the USA (and also there were a larger pool of virtual food retailers in the USA at that time), however if possible the goal was to have at least one case in UK because the interview could be coordinated with a trip to the University of Kent. It was of interest to look for issues that impacted

e-food business processes on a country level. For example, the cost of telephone connections to the Internet was very different in the USA (inexpensive) and UK (expensive) and required different order entry methods in the UK.

The above criteria defined the population from which the new cases would be drawn. Benbasat et al (1987) state the case selection criteria should include characteristics of the firm such as industry, company size, organization structure, and geographic coverage. The above criteria included industry and geographic coverage. Two categories of food retailers were selected for investigation: ready-to-eat meal food retailers and grocery food retailers. Table 4.2 illustrates the case category selection matrix that needed to be completed with the multi-case interviews.

TABLE 4.2 Case Category Selection Matrix

E-FOOD CASES	**GROCERS**	**MEAL PROVIDERS**
Brick and Virtual Channels	To be determined	McDonalds (pilot)
Virtual Only Channel	To be determined	To be determined

Yin (1994) claims that every case should have a specific purpose within the collective scope of research. Discussion on the selection of the e-food retailers selected follows.

VIRTUAL ONLY MEAL PROVIDER CANDIDATES

The candidates for the virtual only meal retailing service included Waiter.Com, Cybermeals, Newyorkdelivery.com, and Cyberchefs, which were all located in the USA. UK virtual meal providers were not in operation at this time.

These virtual only meal providers were intermediaries between hungry on-line consumers and restaurants willing to take meal orders in advance. They offered on-line restaurant ordering services that allowed consumers to place takeout and delivery orders from their Internet accessed computers. Menus of the participating restaurants were listed as part of the virtual retailer's order entry system. Consumers could browse the virtual menus and make meal selections on-line. The consumer orders were conveyed to the restaurants that then prepared the meals for delivery or pick-up.

Waiter.Com was selected since they were the first virtual retailers in this marketspace beginning in December 1995. Additionally, they had an established consumer loyalty program that was of interest to investigate. Cybermeals was selected because since they had the broadest USA presence. Since starting in December 1996, they had grown to the point that they were expanding into more cities. Also, they had set up a potentially strategic partnership with a national food delivery service, Takeout Taxi. Cybermeals had the stated goal of being the largest on-line restaurant ordering service on the Internet.

The original plan was to interview just one company in the virtual only meal provider category. Waiter.Com and Cybermeals were contacted around the same timeframe and since both were willing to participate, both were interviewed. The Vice President of Cybermeals turned me down because of lack of time, however Cybermeals' co-founder and former Board of Directors member agreed to the interview even though he had left the company six months earlier. We agreed to discuss Cybermeals' status as of the point of time that he departed the organization.

VIRTUAL GROCER BRICK WITH VIRTUAL CHANNEL CANDIDATES

The two *brick grocers with virtual channel* candidates were Tesco Direct and Sainsbury, both of the UK. The UK traditional grocers were ahead of their USA counterparts in adding a virtual channel. Tesco was the current UK market leader and had begun their virtual operations ahead of Sainsbury. I had obtained two contact names for Tesco Direct from business news articles. One contact was in marketing and the other was involved with the technical implementation. Both were contacted and both accepted. They were interviewed separately but on the same trip.

VIRTUAL ONLY - VIRTUAL GROCER CANDIDATES

The only remaining interview to be secured was for the virtual only grocer. There were several USA virtual only grocers to select from including Peapod, Groceries to Go, Streamline, Shoppers Express, NetGrocer, and HomeGrocer.com. NetGrocer was eliminated since they did not carry perishable groceries, which was one of the four selection criteria. Of the remaining candidates, the two early leaders were Peapod of Chicago and Streamline of Boston. The main difference in their approaches were Peapod, as a *virtual grocery delivery service*, picked groceries from partner grocery stores whereas

Steamline, as *a virtual grocer*, had their own warehouse for food storage and picking. It was decided to pick Streamline since the warehouse approach offered a contrast to the Tesco operation. However, Streamline declined to participate due to lack of time for the interview.

The decision was then to select one of the other virtual grocers that used a warehouse operation. HomeGrocer was selected since they planned from the beginning to distribute groceries from their own warehouse rather than pick from existing grocery store shelves such as Peapod's original model. Additionally, they offered a complete line of groceries instead of just non-perishables such as NetGrocer. The warehouse only approach provided a contrast to Tesco model of picking groceries from the store shelves

Table 4.3 displays the four selected cases plus the pilot McDonalds and compares their attributes.

TABLE 4.3 Multi-Cases And Pilot Attributes

	HomeGrocer	**Tesco**	**Waiter.Com**	**Cybermeals**	**McDonalds**
Food space	Grocer	Grocer	Meals	Meals	Meals
Also Brick	No	Yes	No	No	Yes
Virtual Now	Yes	Yes, in pilot	Yes	Yes	No, in plan
Location	USA	UK	USA	USA	USA HQ

As the candidates were contacted to request the interview they were told of the scope of the research and the anticipated amount of time for the interview. This followed Bensabat et al's (1987) recommendations. A follow-up e-mail was sent to the case to confirm the appointment and to further explain the scope of the research. Prior to each visit, relevant background company related business articles were reviewed.

4.2.2 Interview Schedule

For the multi-case interviews, the updated questions relating to the shift to business processes within e-food were utilized. All four case interviews were completed within a

five-month timeframe. Tesco involved multiple interviews. Both Tesco and HomeGrocer included a tour of their picking and truck loading operations as part of the interview.

TABLE 4.4 Multi-Case Interview Schedule

CASE	DATE	INTER-VIEWED	TITLE	INTERVIEW LOCATION
Tesco	September 15, 1998	Helen Bridgett	On-line Marketing Controller	Tesco offices Welwyn Garden City, England
Tesco	September 17, 1998	Jon Higgins	Internet Systems Consultant	Tesco office Welwyn Garden City, England
Waiter.Com	November 17, 1998	Michael Adelberg	VP	HQ San Jose, California
Tesco	January 13, 1999	Jon Higgins/ With Neil Whithey	Internet Systems Consultant/ IS department consultant	Sunbury Tesco Grocery store-virtual pilot
Cybermeals	February 2, 1999	Ford Smith	Former BOD member and co-founder	Seattle, Washington
HomeGrocer	February 3, 1999	Ken Deering/ With John Landers	Co-founder and VP of Business Development/ VP of Marketing	Bellevue, Washington (suburb of Seattle)

4.3 INTERVIEW QUESTIONAIRE

For each interview, an interview guide of research questions was prepared prior to the meeting. Some of the main decisions in questionnaire design include which questions to include and the question format (Easterby-Smith et al, 1991). As explained, using grounded theory, the e-food questions were modified between interviews, based on ideas that emerged from prior case interviews. "In preparing for interviews researchers will have, and should have, some broad questions in mind, and the more interviews they do and the more patterns they see in the data, the more likely they are to use this grounded understanding to want to explore in certain directions rather than others" (Jones, 1985, p. 47).

As stated previously, there were two different interview phases pilot and multi-case. There was a considerable change in the pilot and multi-case interview questions For the multi-

case interviews a refocused set of questions, building on the later pilot questions, was created. Appendix B contains the final set of interview questions.

An interview goal was to understand the respondents' views and ideas on the research area and not limit them just to the preconceived questions that had been designed. Case study interviews often have an open ended nature where the respondent provides both facts and opinions (Yin, 1984). As previously stated, using the grounded theory approach allowed the branching into areas not previously thought of. Additionally, the new information was used to modify and update the questions that would be used for the next set of interviews. This was an interactive, open discovery process with structure. Two important research areas that emerged using the ground theory approach were 1) the virtual order entry cycle, and 2) the local aspect of this virtual market.

The interviewee was allowed to change the order of the areas discussed or within area switch directions to another question section if there was an issue they felt was important to discuss. Both Holstein and Gubrium (1995) and Moser and Kalton (1979) advise the interviewer to vary the question order, and add new questions as necessary in reaction to the respondent.

TABLE 4.5 Order of Key Categories of Questions for Multi-Case Interviews

Core Products, Services and Goals
Customer Demographics
Electronic Retailing Strategy
E-Food Business Processes
In-Store Electronic Retailing (if applicable)
E-Food Benefits and Inhibitors
Business Partnerships
Competition
Technology

One example of how this flexibility was important was illustrated during the interview of Cybermeals with Ford Smith. At the beginning of the interview all the topics and their potential order (refer to Table 4.5) were mentioned. Technology was the last topic on the

list. The interview began, but shortly into the interview Smith said that technology was really important to Cybermeals and their implementation and he wanted to talk about it. So we immediately went to that area and key technology areas were revealed that were unique to this case. These technology innovations will be discussed in Chapter 5.

Moser and Kalton (1979) and Holstein and Gubrium (1995) are in concurrence, that it is important to have structure in the interview and focus the respondent on the objectives but that it is equally important to allow flexibility to shift the order of the questions based on the evolving flow of that specific interview.

GROUNDED THEORY EXAMPLES

The following three examples further illuminate the use of grounded theory within the case study interview process. First, as a result of the McDonalds pilot interview, a list of consumer and retailer benefits and inhibitors for e-food was created. These were put into a list that was shown to the interviewee in the first multi-case (Tesco) interview. Each progressive interview had the option to add to the list or explain why they did not agree with an item on the list. These benefits and inhibitors impacted the ordering process.

Second, during the first interview with Jon Higgins at Tesco the distinct phases of a consumer's purchase behavior in the context of an e-food order cycle was mentioned. A preliminary model of this order cycle was developed in a chart and shown to all subsequent cases. The collective input from the cases resulted in the development of a model for the Virtual Order Cycle (Chapter 6).

Third, the Waiter.Com interview provided a new understanding regarding the potential growth models for e-food. Adelberg mentioned that Waiter.Com was a local retailer. As a result I generated a diagram displaying different ways e-food retailers could grow, which was discussed in subsequent interviews. The cases modified and validated this model which is presented in Chapter 6. In summary, these models evolved and changed with each interview using the grounded theory methodology.

4.4 CHAPTER SUMMARY

Chapter 4 explained the research methodology choices of experiment, survey, archival analysis, history, and case study. Factors that influenced the selection of the case study methodology included: the topic was a contemporary event in which little research had previously been done, it was not necessary to control the variables, and a live interview allowed the researcher the flexibility to probe new interesting areas that arose during the interview. McDonalds participated as the pilot case. The multi-case interviews included Tesco Direct, HomeGrocer, Waiter.Com, and Cybermeals. Limitations of the case study methodology were discussed.

This chapter included reasons why a grounded theory case study approach was selected. The research design plan was illustrated including the literature review, data collection method, and use of grounded theory. As new insights were discovered, new hypotheses were set up and tested in subsequent case interview. With this approach, theory continued to be developed as the investigation of the same process in different cases utilized a comparative method of analysis. The grounded theory approach allowed for the flexibility of incorporating new ideas as the investigation progressed. The scope and the evolution of the questionnaire were outlined.

The selection criteria for the muli-case study within e-food were revealed. The case had to be a virtual food retailer with at least a pilot operation in process. Cases included both virtual only retailers and brick and mortar food retailers adding a virtual channel. Most cases were from the USA due to the larger pool of available candidates for e-food however; there was the goal of at least one UK case to provide insights into potential international differences. The interview scheduled was described including interview dates and the name and titles of the individuals interviewed during the seven-month period.

5 CASE STUDY ANALYSIS

5 CASE STUDY ANALYSIS

This section contains a separate analysis of each of the four e-food cases within the context of the 7Ps. An overview of the company and an explanation of their target consumers precede the analysis. Some Ps were more important than others in e-food. The following key aspects of the 7Ps related to e-food will be further discussed in the individual case analysis.

In the e-food marketspace, the virtual retailers were concerned with the physical location of the target consumer since they were dealing with a perishable **product**. Therefore, the time specificity of perishable good (Sampler, 1998; Malone et al, 1987), as discussed in section 2.3.1, is a major factor in e-food logistics. The value of e-food (ready to eat meals and delivered groceries) is highly dependent on its reaching consumers within a specified period of time or the product can spoil. Time specificity is an aspect of product and place. Additionally, Process is impacted.

Price was the least relevant P to this research based on the focus areas that emerged from the case interviews; there will therefore be minimal discussion of this P within the individual case analysis. Since the timeframe of the interviews were in the early days of e-food, the emphasis areas for the cases were on determining the processes for implementing e-food and not on the price aspects. Dutta et al (1998) state that in the early days of e-commerce, virtual retailers did little besides displaying prices online. During the interviews, the virtual food retailers spent less time discussing the area of price and more on how to provide convenience and productivity in their services. Additionally, the e-food retailers were focused on competing on service and not on price.

The virtual grocers' prices consisted of the price of groceries (similar prices to local brick grocers) with the addition of a delivery charge. The e-food grocers were focused on a target market that was time starved and therefore not concerned about the delivery charge. These busy consumers were less price sensitive and therefore willing to pay for convenience.

The virtual meal retailers did not set the price of the food, the restaurants did. It was up to the restaurant or the meal delivery services to determine what the delivery fee was, if any.

The virtual meal retailers did not charge a fee to consumers for their service; they charged the restaurants for participating in the virtual meal business.

While the cases agreed that the online nature of their business could facilitate price searches (Strader and Shaw, 1997) for their consumers, their initial consumer base was more concerned about learning the online ordering process and obtaining a time saving convenience rather than finding the best price. This supports Anderson's (1998) findings that that on-line consumers were more interested in making quick, well informed decisions than getting the lowest price. As will be discussed in the next chapter on the virtual ordering process, as consumers become more familiar with the ordering process, they could use additional criteria such as price, in making their product selection. However, there are other potentially more important aspects, such as trust of the virtual retailer, that can outweigh the issue of cheapest price.

Place emerged as one of the most important Ps in the e-food case study analysis. An important aspect of Place is the consumer availability of Internet access within a specific geographic location. The time specificity of the e-food product limited the distance (of Place) between the e-food consumer and the e-food operations (grocery picking location or restaurant). Furthermore, the analysis of issues related to Place led to one of the most important findings of this thesis, the existence of local e-commerce (see Chapter 6).

Market segmentation factors locate and target e-food consumers within a specific geographic Place. Busy lifestyles impact a consumer's tradeoff of time and money (Feldman and Hornik, 1981). Both lifestyle and income to afford convenience services such as e-food emerged as two key attributes of the e-food consumer. The cases targeted demographic segments for e-food were within the home, work, and college segments.

An interesting finding, which was an aspect of Place, was *channel* cannibalism. Channel cannibalism impacts virtual retailers that had an existing brick and mortar retail store channel and added a virtual channel. As discussed in section 2.3.3.3 the interrelationship between two products can be independent, complementary, or substitutable (Kerin et al, 1978). This concept extended to channels is *the interrelationship between brick and virtual channels can be independent, complementary, or substitutable*. One aspect of

substitutability is cannibalism. Product cannibalization is the process by which a new product diverts sales from an existing product (Heskett, 1976). This concept of the virtual space is defined as *channel cannibalization as the process by which a new channel (virtual) gains a portion of its sales by diverting them from an existing channel (alternative brick store)*. Examples of these concepts will be discussed in the Tesco case analysis.

The goal of an e-food **promotion** is to acquire an order for products or services from a new or existing consumer. Promotion relates to the innovation steps of knowledge (that the service exists) and persuasion (to buy the product/service) (Rogers, 1995). The three promotion channels that emerged from the analysis of the e-food cases were 1) off-line, 2) virtual but not the retailer's website, and 3) the retailer's website. Additionally, some of the e-food retailers established loyalty programs as an incentive to retain existing consumers.

As will be discussed in the cases, the e-food retailers utilized multiple promotion channels to acquire consumers. It is an important point that both traditional (offline) and virtual channels need to be exploited. Having a virtual on-line order entry process does not imply that promotion is only focused on on-line channels. Consumers needed to know that the retailer existed along with the scope of the product/ service offering. Additionally, the e-food retailer needed to have a well-publicized and easy to find website.

Websites are unique to virtual retailing, There were two distinct promotion categories within the e-food retail website that emerged from case analysis- 1) product content and 2) information content. Product content was the typical, 'this is the food that I have for sale, please buy.' There are three sub-segments of product content: 1) selling core products, 2) announcing new products for sale, and 3) promotion of specials. *Information* content was used as a draw for the consumer to access the website even if they did not plan to purchase at that time. "Providing information to... external audiences can increase revenues by facilitating incremental sales or increased margins" (Quelch and Klein, 1996, p. 63). The website information sub-categories were: 1) education, 2) local community information, 3) advisors' or experts' information, 4) hot links to websites of interest to consumers, 5) chat rooms, and 6) entertainment.

Virtual **physical evidence** includes the appearance of web screens and website navigation efficiency. The e-food retailers' websites were designed to facilitate consumer use. Therefore the appearance of the screens as they 1) impact ease of use, 2) the ability to locate products, and 3) the speed to complete an order were important virtual elements of physical evidence.

Additionally, as will be discussed for the virtual grocers, traditional physical evidence elements included the appearance of delivery drivers and delivery vans.

In this research, the interpretation of Shostack's definition of **participation** (section 2.2.2) is extended to include a consumers *interaction with the service provider's website* since it is an interaction that is part of the service process for e-food. An important aspect of participation via a virtual channel was the on-line capturing and tracking of consumer transaction data that enabled future customized transactions. E-Food retailers enabled faster re-ordering of favorite food products by creating personalized historical order lists.

Training on the virtual interface is a virtual participation element. To overcome the lack of knowledge that many consumers had in using a virtual interface for on-line product ordering, e-food retailers utilized telephoned based customer service assistance.

Order Fulfillment, an e-food **process**, can be delineated by three sub-processes: 1) transmit order to fulfillment location, 2) fulfill the order, and 3) delivery the order or prepare for pickup. Order fulfillment processes can be performed in-house or by an intermediary. The virtual retailer has logistic requirements to fulfill the virtual order which can include delivery to the buyer (Bakos, 1998).

The four cases will now be discussed and analyzed within the context of the 7Ps.

5.1 TESCO DIRECT

This section contains the case study analysis of Tesco Direct. Section 5.1.1 provides an overview of Tesco Direct. Section 5.1.2 discusses their target consumers for virtual groceries and section 5.1.3 contains an analysis within the context of the 7Ps.

5.1.1 Overview

Tesco Direct is the virtual channel of UK Tesco grocery store chain. The Tesco Direct service consists of on-line ordering and grocery delivery to the home. Tesco Direct was the first UK virtual grocer when they began pilot operations in November 1996. As of September 1998, the pilot had expanded to thirteen stores. Consumers had to live within a certain geographic distance from a pilot Tesco store to be eligible for the service.

Tesco selected pilot locations where high income, Internet PC owners were located. Their initial targets were competitors' consumers rather than converting their own brick consumers to shopping virtually. Tesco used both traditional and virtual channels to promote their service.

In the early pilots, Tesco Direct allowed consumers the option of placing orders by phone, fax, or the Internet. However, they found the telephone and fax orders prone to inaccuracies, labor intensive, and expensive to process. By the end of 1999, Tesco Direct *required* consumers to place orders over the Internet for their service.

Consumers can order the same products that are available in their local store shelves, a line of 20,000 items. Consumers can build a grocery order list off-line using a CD-ROM with available grocery items or alternatively they can access an on-line catalog. Many consumers elect to set up their orders off-line. The completed order is then transmitted to Tesco, which minimizes the cost of higher UK phone charges. Repeat orders can be built by selecting items in a saved buying history list.

Consumers provided their credit card number when the order was placed over the secure network or could optionally provide their card information by contacting the service department by telephone. Consumers selected a two-hour slot for delivery at order entry time and were charged £5 for each delivery.

Each pilot store had its own fleet of delivery trucks and Tesco Direct personnel (delivery drivers and order pickers) to service their customers. Orders were transmitted to the store the day of scheduled delivery. Tesco Direct employees picked grocery orders from a Tesco store, alongside brick shoppers. The orders were directly loaded into the delivery vans.

Tesco's customer service policy allowed the consumer to return any item they were not satisfied with.

Tesco estimates that there are one million people in the UK with the proper PC hardware and software to utilize their service (Tesco website, 1999). In 1998 they became an ISP which could assist in bringing more consumers to their Tesco Direct offering.

The parent company Tesco, founded in 1924, became the supermarket market leader in Britain in 1995 when they surpassed Sainsbury (East and Hogg, 1997). There is intense competition between the top four British supermarkets Tesco, Sainsbury, Asda, and Safeway (European Cosmetic Markets, 1997). The European Cosmetic Market report quotes an Institute of Grocery Distribution report stating that as of December 1996, Tesco had a 14.6% share of the £ 82.4 billion UK grocery markets, followed by Sainsbury 12.6%, Asda 8%, and Safeway 7.9%. East and Hogg (1997) primarily attribute Tesco's sales growth to shopping area expansion, their loyalty program (introduced February 1995) and price competition. According to their website, as of 1999, Tesco had 600 UK stores in a variety of formats including large superstores, neighborhood stores, metro stores, and express stores.

Tesco has a reputation as an innovator and customer focused grocer (Patterson, 1997). Their website states their focus is on initiating new ideas and services in response to consumer needs. Their core purpose is to "create value for customer to earn their lifetime loyalty...[by offering] quality products, good service, attractive store and low prices" (Tesco website, 1999).

Tesco's innovation into home shopping fulfills their goal of bringing value to the consumer. As an established grocer, the advantages that they have moving into virtual grocery retailing are: in-depth knowledge of the supermarket business, large product range, high quality produce and meats, universal brand awareness, consumer understanding, and trust (Brand Strategy, 1997).

5.1.2 Target Segment

As discussed previously, the location of consumers for e-food is an aspect of Place due to the time specificity of the food product. The following discussion is related to Place.

5.1.2.1 Target Geographic Location

There were two important aspects in selecting a geography for virtual grocery service 1) Internet access had to be available and 2) the e-food consumer had to have access to an Internet enabled PC from home or work.

Established Internet penetration within geographic areas was a core requirement in selecting a location for a Tesco pilot since consumers were required to order food via this mechanism. This is an important point, since this is in contrast to most virtual retailers of commodity goods who are not concerned where the consumer physically resides since they mail or ship merchandise. It is similar to traditional grocery retailers who place their store location by their target consumers. In fact, Tesco Direct utilized reports from their existing store location planning system that included demographic data used in selecting their pilot sites.

As discussed in section 2.3.3.1, Huff (1964) offers considerations of retail store placement by traditional retailers. Traditional retailers are concerned about locating a store site based on where consumers reside and how far *consumers are willing to travel* to the retailer. Similarly, virtual grocers want to place their operations close to their consumers; however, the constraint is based on how far the *virtual grocer is willing to travel* to deliver groceries to consumers.

Tesco was only targeting consumers, within a specified catchment area, that had access to an Internet enabled PC from home or work. Higgens (Tesco Direct technical leader) argued, "There's no point trying to recruit those who are not [on-line]... You have got to have a PC to do this [e-food] and you've got to be on-line." Tesco's new initiative as an ISP could assist in expanding the number of consumers that have Internet access within their target area.

5.1.2.2 Target Demographics

Zeithaml (1985), as discussed in section 3.1, reported on the changing demographics of the (traditional) grocery consumer which included busy consumers such as *working women* who desire to reduce time shopping for groceries. Tesco targeted busy families, such as those with working women, which comprised an important segment of their virtual customers.

Bridgett (Tesco Direct marketing) stated, "within Tesco Direct, it's your classic cash-rich time-poor. The dual income professionals [working women] with or without families... but it's actually a classic Internet profile, ages 35 to 44." Tesco sub-segmented families into several categories of mothers: new mothers, mothers with young children, and mothers of teenage children. Tesco also discovered that they also acquired consumers in other home sub-segments including singles and pensioners.

Tesco discovered *consumer attitude* toward home shopping was important. The e-food consumer must be willing to let a retailer shop for them. This fits into the class of services described by Zeithmal (1981) that include those that the consumer is capable of doing themselves (but choose to outsource) as opposed to the group of services that the consumer is not skilled to do (e.g. tune an engine). Helen Bridgett related that at Tesco Direct they had discovered that their consumers "just really perceive they do not have enough leisure time and are willing to pay someone to do their grocery shopping for them... it's actually their attitude that we perceive [as the key reason to shop for groceries on-line]... They're used to outsourcing domestic chores and they're confident using them in all transactions."

Tesco also found the "technophile" consumer also had the "attitude" to shop on-line. This segment liked using the Internet and found grocery shopping a "useful application for it." The technophiles would be an example of the innovators or early adopters of an innovation such as on-line shopping as discussed in Chapter 2. However, attitudes about ordering on the Internet will change over time as this innovation diffuses through society.

As discussed in Chapter 2, Zeithaml (1985) noted that the elderly were an increasing segment of the traditional grocery market. While this group is important to traditional grocers, the elderly has typically been the last group to adopt new technologies as

discussed in section 2.1 (Lunsford, 1992). Therefore one could predict that pensioners would not be an initial target for e-food retailers. However, the delivery aspect of e-food services is valued by the elderly and those with disabilities (Heikkila et al, 1998).

Tesco Direct did not target the elderly for several reasons. They were concerned that the delivery fee, an aspect of PRICE (section 2.3.2), would potentially be an inhibitor for this group. Also many elderly are traditionalists that like to shop in brick stores and are not early adopters of new technology such as the Internet (Lunsford, 1992; Kutz, 1998).

Interestingly, in 1996 prior to offering *on-line* grocery service, Tesco piloted home shopping with pensioners as sub-contracted by social services (Lee, 1996). Pensioners could place orders by phone or post from a 2,500 items paper catalog. Tesco viewed this pilot as 1) a community service and 2) an opportunity to test the economics of the home shopping concept. Tesco felt that if home shopping worked for the elderly who typically resist change and technology (refer to section 2.1.4) then it should work with other groups that are more open to this innovative way to shop. In section 2.1.3, Rogers discussed related aspects of innovation adoption.

5.1.3 7Ps Analysis

Only the most important aspects of the Ps are discussed as revealed by the Tesco case study analysis.

5.1.3.1 Product

Since Tesco Direct had picked groceries from the store shelves they offered the same number of items as the store. Unknown food quality was not an issue since consumers could view the products at the store at any time.

Tesco Direct discovered a trend for purchases of more convenience foods. The same trend was emerging in the grocery market, confirming the discussion in Chapter 3 on the increase of food prepared outside the home (McGovern, 1998), Tesco found that their consumers were definitely interested in ready-to-heat meals. Bridgett explained, "We call these customers convenience eaters because the proportion of their basket made of convenience food is high. That tends to be quite high within Direct... and definitely

increasing." The two lifestyle factors relating to the concept of convenience were the need to save time in general and the desire for food that involved less of the consumer's time in preparation or in acquisition. This desire to save time was discussed in section 3.1.1.

A traditional product element is a return policy. Tesco's "core business policy says if you're not happy with anything, we'll refund it or we'll exchange it." Tesco empowered the customer service reps to resolve complaints to the customers' satisfaction. Two common resolutions to complaints were 1) providing a credit for problem or incorrect food and 2) sending a special delivery with the correct food. Doyle (1990) states that firms that deal with complaints quickly and effectively retain the majority of the dissatisfied consumers. He found that brand loyalty increased when complaints were effectively dealt with. In support, consumers who have had complaints resolved to their satisfaction become more loyal than consumers who were never dissatisfied (Kotler, 1999). Therefore, a strong service department for the e-food retailers can assist in customer retention. Customer retention will be further discussed in the next chapter in the virtual order cycle.

5.1.3.2 Price

Tesco set their virtual grocery prices identical to their brick store prices. There was an additional cost to the virtual consumer of a £5 delivery charge. Because of the target demographic of time starved, cash rich consumers, Tesco did not view the delivery charge to be an inhibitor. However, as part of their marketing promotion within a new catchment area, Tesco would eliminate the delivery charge for a limited timeframe. Pensioners were not a key target since Tesco determined the delivery charge would remain an ongoing inhibitor for this group.

Tesco planned to accept coupons, a traditional aspect of price, for online purchases since their brick channel accepted coupons. Their goal was to replicate online the Tesco brick buying experience. As of early 2000 they had not implemented coupons for online purchases. However, this was not considered a problem since they were targeting the time starved, cash rich consumers who were not traditional "coupon-clippers".

5.1.3.3 Place

Tesco is facing cannibalism of a channel since the virtual channel relates to *how* consumers will do business with them, due to an aspect of Place. Unlike product cannibalism, Tesco's grocery products remain the same. The product price is the same with a delivery fee added. Place, however, changes dramatically along with the associated processes. This discussion on Place focuses the substitutable and the complementary channel aspects of Tesco's brick and virtual channel.

There is a substitutable aspect of Place. Tesco did not market Tesco Direct services within the brick Tesco stores at the time of the pilots. There were no signs or promotional material available about those virtual services within the store. Higgins declared, "We don't want to force you out of the store at the moment. Now, if they come in and shop in the store, if they're an existing customer and they find out about it or know about it that's fine they can do it." Tesco was initially going after competitors' consumers. Whenever Brick retailers add a virtual channel there can be internal politics that impact or inhibit marketing the virtual side of the business within the brick channel. Not advertising within the Tesco brick stores was one of the manifestations of concerns for channel cannibalism.

There is another issue of the aspect of substitutability in channel cannibalism that Tesco will face as the popularity of grocery delivery increases. As more consumers switch to virtual grocery delivery, Tesco will need more vans and fewer stores. Some of their retail grocery stores might convert to warehouses for delivery operations over time.

There is a complementary aspect of Place. The discussion on Place concludes with two examples that demonstrate the complementary aspect of Place.

1) Virtual Channel Assisting the Brick Channel

One important way the Tesco virtual channel assisted the brick channel was via the substitution report that was generated. This report listed the items that virtual consumers wanted to buy but could not since the store was out of stock. For the first time the Tesco store manager had specific data on what consumers wanted to purchase that was unavailable.

2) Brick Channel Assisting the Virtual Channel

An important way the Tesco channel assisted the virtual channel was in using loyalty card data from brick shoppers to pre-generate a virtual order list that assisted these consumers in placing their first virtual order. The hurdle of the first order will be discussed in the next chapter. It is important to note that this was a later development implemented in early 2000, since as of the time of the interviews the focus was not in enabling the virtual channel for the Tesco brick consumers.

5.1.3.4 Promotion

Tesco was focused their promotion efforts on their offline and their website channels. Additionally, Tesco extended their existing loyalty program to virtual shoppers. Examples are illustrated.

Tesco offered their existing loyalty program to virtual shoppers. Virtual shoppers could apply for a loyalty card when they placed an order online. Tesco discovered, to their surprise, that most virtual consumers did not bother to fill out the loyalty card form. However, due to the demographics there were targeting, the cash-rich time-starved consumers were not concerned about earning free food from a loyalty program. As purchasing groceries virtually diffuses through society, it will reach the "early and late majority". These new consumer groups will encompass a greater range of income levels and therefore could be more attracted to the consumer benefits of a loyalty card program, e.g. free food or discounts.

Tesco utilized offline promotions of mail leaflets and newspaper advertisements. Higgins explained that Tesco sent mail leaflets, within targeted catchment areas, to streets with homes that cost more that a million pounds; therefore, having a higher probability of having a PC and being able to afford the £5 delivery charge. This relates back to the discussion on target demographics. Promotion activities need to be focused on the target consumers.

Tesco spent considerable time designing the content of their website. Tesco's virtual grocery store included information about the food items that could be found quickly. Examples included nutritional information and ingredient information that might be

important for allergy reasons. Section 2.3.1 discussed the ability of the virtual format to easily contain extra product information and potentially reduce the consumer's search cost. This additional food information added to the attractiveness to buying food products via a virtual channel.

On the informational side, having games on the website was considered and discarded by Tesco because their consumers wanted to purchase fast and get off the website. This contradicts arguments discussed in Chapter 2 by Angelides (1997) and Eighmey and McCord (1998) that entertainment can be important to the website.

5.1.3.5 Physical Evidence

Both virtual and physical evidence were relevant within e-food. Tesco was concerned about website navigation efficiency, an aspect of virtual physical evidence. Included is page loading speed and ease of locating products to purchase. They had considered and then discarded having photos of the products on the website. Tesco felt that the extra amount of time that it would take to download images outweighed the advantages of viewing a photo of the product. This concurs with discussion by Schaffer and Sorflaten (1998) and Dutta and Segev (1999) on avoiding website image content because of the slow modems installed by the majority of the consumers. In contrast, Lohse and Spiller (1998a) recommend providing the option of downloading product pictures.

Delivery vans and drivers comprised traditional, non-virtual, physical evidence for Tesco. The delivery driver, "the company representative" was the most important traditional physical evidence. Delivery drivers were Tesco employees. These uniformed drivers were considered a key part of the retailer's brand and customer service image.

Higgins stated at Tesco, "The whole *brand values of customer service* are quite strong throughout the company so we just have to remind (the drivers) of what that means in a delivery environment rather than a store environment... Since the drivers are the prime customer contact. It's very important to the service that they are friendly." Berry and Parasuraman (1991, pp. 120- 121) relate the power of brand to service, "The service the company provides, how well it performs the service, and the service's value combine to influence customers' interpretations of the presented brand."

5.1.3.6 Participation

both traditional and virtual participation elements were relevant of e-food. Participation In contrast to typical virtual retailers like Amazon.com, Tesco had a traditional face-to-face participation similar to brick retailers. Tesco's drivers interacted with their consumers at delivery time. Participation was discussed by Solomon et al (1985) and Shostack (1985). The Tesco drivers would sometimes provide extra services such as bringing groceries all the way to the kitchen counter and chatting with the elderly housebound consumer.

Aspects of virtual participation important to Tesco included: 1) training on the interface, 2) community aspects, 3) creation of personalized reordering lists and 4) privacy issues. These participation elements are very important to the virtual order process and are discussed in more detail in the next chapter.

Interface training can be an enabler to virtual participation. Tesco provided order entry assistance via the telephone with customer service representatives. Tesco discovered that many of the consumers had not ordered products on-line before. Tesco expected the need for this type of hand-holding service to grow as more technically illiterate consumers came on-line and as this innovative way of acquiring groceries diffused through the next wave of adopters (section 2.1.4).

Community is an aspect of virtual participation that was relevant to e-food. Tesco allowed consumers to specify on an item basis how they wanted substitutions filled. For example, select brand B beans when brand A beans are not available. Often consumers did not enter a substitution policy and therefore the pickers had to make a decision on how to handle the substitution. For the non consumer specified substitution cases, Tesco used the collective data on consumer specified substitutions. Therefore if a substitution for beans is needed and most consumers who order Brand A beans request Brand B beans if substitution is needed, this data will be applied to unspecified substitutions if Brand A beans are requested but not in stock.

This is a powerful and effective use of using aggregated community information for improved service to individual consumers. A community defined substitution policy was a very interesting aspect of virtual participation.

A personalized reorder list was created for each consumer based on previous purchases, which is an aspect of virtual participation. These reorder lists had a dramatic impact making re-ordering faster and simpler. This aspect will be discussed in more detail in connection with the virtual order cycle in Chapter 6.

Since all consumer transactions were on-line, data was automatically collected. Tesco's consumers understood that the data could enable more personalized transactions; however, they were concerned about privacy as revealed via Tesco focus groups. Privacy concerns are a major deterrent for many consumers who are reluctant to make purchases over the Internet.

5.1.3.7 Process

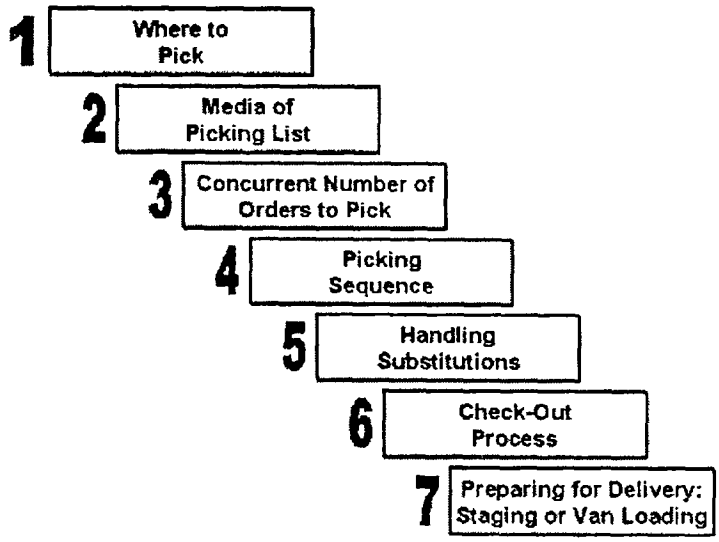
Tesco provided delivery as part of their service. They did not offer pickup because of issues related to storage space requirements that would affect the Tesco store and have a potential impact on food quality.

Order fulfillment and delivery processes were dependent on the product attributes (time specificity). Due to the perishability of food, Tesco had additional challenges in designing a system to handle order fulfillment and logistics. The movement of the groceries to the consumer is an essential element in e-food. "The physical movement and storage of goods for customers... plays an important role in selling a product" (Coyle et al, 1996, p. 39).

Order Fulfillment involved complex logistics to productively pick orders and load them into the delivery van. Tesco focused on where to pick the food items and how to pick for maximum efficiency and accuracy. Bridgett of Tesco declared, "The challenge with all of this [virtual groceries] is logistics.... The front end is not a challenge and everybody focuses on it, but until you've actually got the logistics sorted out, you really are stuck."

In support of Bridgett's statements, there are indeed major logistical implications in setting up a virtual grocer. Parker and Gulliford (1996, p. 13) state that as existing grocery stores become virtual grocers they must be "able to adapt and execute radical changes to their own infrastructure." They argue that virtual groceries should focus on the distribution network and develop logistics to deliver the goods or enable consumer grocery pickup. Virtual grocery operations management must build systems to meet the needs of "customers who have high quality service expectations" (Parker and Gulliford, 1996, p.13).

FIGURE 5.1 Model of Grocery Order Fulfillment Logistic Factors



Tesco collected the orders centrally for their stores participating in the pilots. The orders were then electronically sent to the specific store that would fulfill the order. On the day the orders were to be delivered, pickers took a special trolley that had a special purpose PC attached, and went onto the retail store floor to pick the grocery order. The PC display directed the picker to a specific aisle and item to pick. The items were scanned as they were put into paper bags within the special trolley. Order checkout was at the back of the store. The orders were then loaded onto the delivery van. The rest of the section further describes the grocery fulfillment operation at Tesco as related to the seven factors of order fulfillment.

1. The first factor was *selecting the picking location.* The two choices discussed by the virtual grocers were 1) picking from the shelves of a brick grocery store or 2) from a warehouse.

On-line retailers have several options for fulfillment locations with different levels of cost, control, complexity and risk. Hewes (1996) states that if virtual retailers have a physical product then it must be picked, packed and prepared for transport to the consumer. The warehouse versus pick from store shelves was one of the major logistic decisions that Tesco faced.

Tesco evaluated both options and chose to pick from their existing stores. In Tesco's analysis, setting up a warehouse for virtual groceries would have required a large volume of orders to cost justify it. However, they encountered logistic problems by picking from the store shelves, alongside brick consumers.

Tesco felt there were both advantages and disadvantages to picking from the store shelves. Higgins at Tesco described one advantage was "the perception [of the consumer]... that 'that' meat came from 'that' counter which they know" since consumers trusted Tesco's quality of produce and meat. "It was all those things that hopefully they'll associate with our brand anyway, but reinforce the fact that at any point they can go in and think, well, it's that bit of meat that I'm going to get." Trust can be defined as one individual's confidence in the interaction partner's honesty and reliability (Morgan and Hunt, 1994).

Another advantage for Tesco with in-store picking is associated with 1) utilizing the existing inventory replenishment store systems (e.g. leverage upstream logistics re Jukka et al (1998)) and 2) the minimal delivery distances from the local stores to the consumers. Higgins explained that a warehouse model implies increased delivery distances, which is not feasible with lower volume sparse delivery routes. This is another instance of the impact of time specificity.

Bridgett explained that Tesco investigated the financial implications of both models and discovered they had enough demand for a store-based model but not for a warehouse-based model. "You'd be bankrupt... All the warehouse models – and this includes the U.S. and any of the ones that are in this country – work on the basis of providing five to six

thousand lines. We sell 20,000 lines. Five to six thousand lines wouldn't make up 70% of the shopping basket for a customer. So therefore, *when they see Tesco, they expect to be able to buy everything* [large product line]. They wouldn't expect us to restrict their purchasing." Consequent to the expectations of their legacy brick consumers, Tesco has to carry identical lines to those of the store.

A potential model for grocery fulfillment emerged in the discussion, which used a combination of a warehouse (non-perishables) with store satellites (perishables). This is only an option for grocery retailers that have a brick component. Bridgett argued, "You cannot keep perishable lines [products] in the warehouse. You've got to have a fast turnover of them... you cannot run a grocery home shopping service across 20,000 product lines with a warehouse-only model; you have to have the store satellites."

Tesco also discovered disadvantages to store picking. As volumes grow, a virtual grocer that picks in-store becomes limited by the retail grocery store capacity. Additionally Higgens stated, "you just can't have any more pickers out there getting in the way of the customers." Additionally, since "stores are dynamic environments. We can't guarantee that everything is going to be in stock." Therefore, independent of how far in advance the order is placed, on the day of order fulfillment, pickers are competing with brick shoppers for store items.

Another concern with in-store picking, as explained by Higgins, was that the (brick) store manager wanted to minimize the square footage allocated to Tesco Direct for staging orders at the back of the store. Therefore, these virtual orders were loaded directly into the vans. This also avoided the need for Tesco Direct to have their own freezers and chillers for storing orders.

As Tesco gathers a critical mass of virtual shoppers, the warehouse model will become a viable option, and potentially a necessity so as to not interfere with the brick shoppers and to have better control of the inventory. In section 2.3.7, Jukka et al's (1998) views on the advantages and disadvantages of using an existing retail facility to pick from were discussed.

2. The second factor was whether to *utilize paper or electronic picking lists*. In Tesco's early pilots they had tried a paper picking lists but found they were prone to inaccuracies and required extra processing steps in order fulfillment. Therefore they switched to electronic picking lists.

3. The third factor was selecting the *number of orders to concurrently pick*. To improve efficiency, Tesco wanted to pick multiple orders concurrently and this impacted on the picking trolley design. Higgins explained that at this time their special picking trolley held four trays. However, their goal was to have a trolley with six trays since "the more trays you have on, the longer you can stay out on the floor, the cheaper it is for us to pick." The larger trolley had to be balanced with the greater effort to push it due to increased weight and the potential to interfere with the brick shoppers.

4. Tesco utilized a special purpose PC, attached to the trolley, to *direct the picking sequence*. This is the fourth factor of order fulfillment. The picker would pick the item listed on the PC. Then they would scan the item and place it into the cart. If the wrong item was picked, as it was scanned the system would beep. This system allowed the picker to pick quickly and accurately. Another feature of the system was the ability to pick multiple orders simultaneously, which increased productivity. In fact, computer directed picking was quicker than the shoppers doing it for themselves.

Productivity was an important component of the picking sequence factor. Higgins declared that their objective was for the pickers to spend as much time as possible on the floor picking items and to minimize the number of trips to the back of the store. Therefore they had set up a system of picking zones where every item in the store was assigned a zone. "One of the things [that impacts] our productivity is the distance you have to walk to do your pick. And if you can contain a picker within a small area of the store, but still give them a full load to pick, they will pick faster because of the density of the pick. And that is the main reason we go for picking multiple orders [within zones]." Tesco used a complex algorithm that organized the sequencing of the items to pick. The frozen and chilled items were the last to be picked so that they could be loaded directly onto the vans.

The number of brick consumers shopping also impacted picking productivity. It was harder to push the trolley around during popular shopping hours. Since the pickers wore Tesco uniforms, brick customer asked them service related questions, which impacted their picking productivity. "So, it would be nice if we could disguise them as ordinary-looking citizens."

5. The fifth factor is *handling substitutions*. Tesco let their consumers set up a substitution policy during order entry. During the early trials, when they were using paper list to pick from, the pickers would manually write in their substitutions. With the electronic picking system, the computer guides the picker if substitutions are needed. A computer generated list is printed indicating how the substitutions were to be done according to the consumer's rules. "So [scanning] improves their productivity enormously and also it improves their accuracy enormously and that had been an issue in the past... Because, I mean, we're talking about probably 25-30,000 products in this store and it's very easy to pick a slight variation on what the customer has actually asked for. But because we put the bar codes into the system, now when they scan we check it is exactly what the customer ordered." Tesco monitored the required substitutions printed in a Home Shopping report.

6. The sixth factor of grocery order fulfillment was the *check out procedure*, which created the printed invoice and charged the purchases to the consumer's credit card. A significant benefit of the scanning system is that it electronically transfers the information on the scanner to the central PC. An invoice is printed. This is a fast and efficient process.

7. The seventh factor is *preparing the order for delivery*. As previously described they loaded cold and frozen items directly onto the trucks. Ambient items were loaded onto the truck if they were available otherwise they were staged at the back of the store until the trucks arrived. Higgins summarized "So what we've got is a single touch operation. We only touch the goods once."

Tesco utilized a computer-based route management scheduling system in setting up efficient routes. Delivery vans operated from a single store. Most of Tesco's consumers were within a five-mile radius of the store. Tesco typically allocated fifteen minutes for each delivery.

As the drivers learned about the location of the homes and the individual needs of the consumer the drivers could provide a better time estimate. Once the driver arrived at the home, they took the groceries out of the three sections of the truck: cold, frozen, and ambient. The driver carried the assembled order to the door. The Tesco driver presented the consumer with a manifest of what was being delivered. The consumer signed the charge slip and the driver was off to the next stop. However, Tesco found that some consumers liked to chat with the drivers (participation). Therefore the drivers had to balance a customer service function with delivery productivity.

Tesco had designed their vans for efficient food delivery. Design factors included how wide the roads were, densities of housing, local traffic, and parking restrictions. Tesco had to use smaller vans due to the city and country street sizes in some of their locations, e.g. London. The size of the van limited the amount of food that can be carried which therefore impacted the efficiency of the delivery operations.

Tesco originally used trucks for home delivery that had fixed temperature settings within partitions. Subsequent designs included partitions with variable temperature controls (frozen, cold and ambient). They could change the partitions seasonally or daily as needed. The latest designs included outdoor access to the food compartments, which was a productivity advantage in the process of loading and unloading.

5.2 HOMEGROCER.COM

This section contains the case study analysis of HomeGrocer.com. Section 5.2.1 provides an overview of HomeGrocer. Section 5.2.2 discusses their target consumers for virtual groceries and section 5.2.3 contains an analysis within the context of the 7Ps.

5.2.1 Overview

HomeGrocer.com is an on-line grocer headquartered in Bellevue, Washington. They were the first virtual grocer in the Seattle area and were founded in 1998. The key individual interviewed was Ken Deering, co-founder and Vice President of Business Development. Their website describes their business as a *full function grocer*, however unlike traditional grocers they do not have any brick grocery stores. As of the interview in 1998 they had a

single 65,000 square foot warehouse, which contained the food inventory to service the consumers located within fifty zip codes in the Seattle area.

Consumers placed their grocery orders over the Internet for next day delivery with a choice of 90-minute time slots. HomeGrocer employees picked items from the warehouse and loaded orders directly into delivery vans. The food was transported in their fleet of temperature controlled trucks and delivered to the consumers' kitchen counter.

As of June 1999 (which was after the interview), according to company press releases posted on the website, they stocked 11,000 items and had 15,000 customers. Consumers could usually place their on-line orders in twenty minutes. HomeGrocer offers free delivery to consumers who place orders totaling over $75. Consumer benefits include saving time by avoiding a drive to a grocery store, finding a parking place, and not waiting in checkout lines at supermarkets. They offer a 100% guarantee to their consumers and pride themselves on offering produce of the freshest quality.

It is interesting to note that on May 18, 1999, HomeGrocer received a $52.5 million round of financing from Amazon.com, a leading on-line book retailer and virtual pioneer. Additionally, Amazon.com secured a seat on the board of HomeGrocer.com. This investment assisted HomeGrocer in expanding to other geographic areas. HomeGrocer discussed the potential for eventual national expansion. They discussed moving down the coast into Portland and then into California. As of May 1999, according to their website, they had set up operations in Portland and had 200 employees between the two locations.

5.2.2 Target Segment

HomeGrocer targeted consumers within a bounded geographic area in Seattle. HomeGrocer selected Seattle for their site of operations because of the high Internet density within a specific geographic boundary. Deering said "When [HomeGrocer] started on the business plan, Internet connectivity seemed to be important... and with the IT companies here, *it removed a barrier*." In HomeGrocers's targeted Seattle area, 75 to 80% of the consumers already have a computer in the home and two-thirds have Internet access. This geographic boundary is an aspect of Place. As discussed in section 2.3.3.3, different geographic areas have different penetrations of Internet users.

Additionally, they had no interest in marketing to consumers, residing in their targeted geography, that did not have Internet access. Their target segment was consumers that already had Internet access. HomeGrocer said, "we don't mind missing people who don't have it [Internet access] because there's a large enough pool out there. We'd rather go after the ones that do."

HomeGrocer's target demographic was families. "We said our core demographic that we wanted was two parents, one or more children, and we did not segment by whether they both worked or not. We also got the two adults, the two professionals [working women], but definitely we have a higher percentage of two adults than we envisioned we would get... A base of $50,000 household income was [assumed]... Our consumer's commonality is the number of mini-vans and kids in sports activities and schools... Our best target group is with the presence of children." This point is in agreement with section 3.1.1 that working women are seeking ways to save time in grocery shopping.

HomeGrocer did not initially target the elderly because of the $75 minimum order requirement for free delivery. They felt that the elderly would place smaller orders. However, they realized that their service would be of value to that segment.

5.2.3 7Ps Analysis

The following discussion continues the case analysis of HomeGrocer within the context of the 7Ps.

5.2.3.1 Product

A virtual retailer with a warehouse based inventory, such as HomeGrocer, has the opportunity to have a larger product line than a brick retailer restricted by the limitations of their store shelves (cf. Tesco comments). As of the time of the interview, HomeGrocer had around 6,000 grocery items in their inventory. They were focused on increasing their product line by extending the product range and the variety of product sizes (12 oz, 16 oz., etc.) for many food items based on consumer feedback. Jukka et al (1998) project that virtual grocers with a warehouse model have the potential for carrying a significantly broader line of products than can be found in a brick grocer.

Part of their brand and image was their superior quality produce over those obtained at local brick and mortar grocery stores. Interestingly, they felt that a warehouse environment contributed to the superior produce since at brick stores consumers handling produce during product selection can impact its quality.

The delivery service was embedded into their product offering. They were selling the concept that the consumer only had to select the items they wanted to buy virtually from the comfort and convenience of their house. HomeGrocer would pick the items for the consumer and deliver the next day to their kitchen counter. The service was linked to saving time for busy consumers, which is reflected in demographic discussion in Chapter 2 and 3.

They offered service guarantees, a traditional product element. Because they were a new company establishing their brand and reputation, and their product could not be viewed ahead of time, a customer service policy was essential for them. They offered an unconditional guarantee policy. HomeGrocer's policy is "we ask them what they want [HomeGrocer] to do... it's our responsibility to fix it." Consumer satisfaction with the retail store is linked to store loyalty (Parasuraman et al, 1993).

5.2.3.2 Price

HomeGrocer set their grocery prices to be competitive with the local Seattle brick grocers. They charged a delivery fee for orders less than $75. A factor in setting the service price is related to the value the consumer places on the service (Thomas, 1978; Murdick et al, 1990). However, HomeGrocer found that since most consumers placed orders for more than $75 the delivery fee was not an issue. They did not target pensioners since they felt that this group would place smaller orders and therefore be impacted by the delivery fee for orders less than $75.

HomeGrocer positioned their business to compete with the local brick grocers on service (delivery to your home) rather than price. Additionally, HomeGrocer focused on providing superior produce quality for the same price as their traditional counterparts. As discussed

in Chapter 2, Thomas (1978) stated that competition impacts the price charged by service firms.

5.2.3.3 Place

HomeGrocer only had a virtual channel. They do not have brick retail stores with an existing consumer base. Therefore, they were not concerned with channel cannibalism. However, that also meant that all their customers were new customers. They had the challenge of any new business in building their brand and acquiring consumers for this virtual marketplace.

An interesting aspect of place that is relevant to HomeGrocer and other e-food retailers is Place in relation to the consumer. HomeGrocer required the consumer to be at home, a specific Place, to accept the delivery. This was sometimes an issue with the time-starved demographics that grocery delivery was to help. David Rogers, president of DSR Marketing Systems states that with more consumers working outside the house there are fewer people at home to accept grocery deliveries during the day which provides one of the biggest challenges for virtual grocers (USA Today, 1999).

5.2.3.4 Promotion

HomeGrocer was focused on both offline promotion channels and promotions within their own website. Home Grocer had decided not to initially have a loyalty program because these programs were expensive to implement. HomeGrocer felt they could delight consumers through excellent service and exceptional food quality and therefore that they did not need a loyalty program to retain consumers.

A goal of their offline promotions was to develop awareness of their service and how to locate their website. They offered a promotion of a free bag of produce as a way to overcome a consumer's reluctance to buy food from an unknown grocer, especially since the produce could not be inspected prior to purchase. Offline promotions were important since consumers had to understand HomeGrocer's product/service offering and how to locate their website.

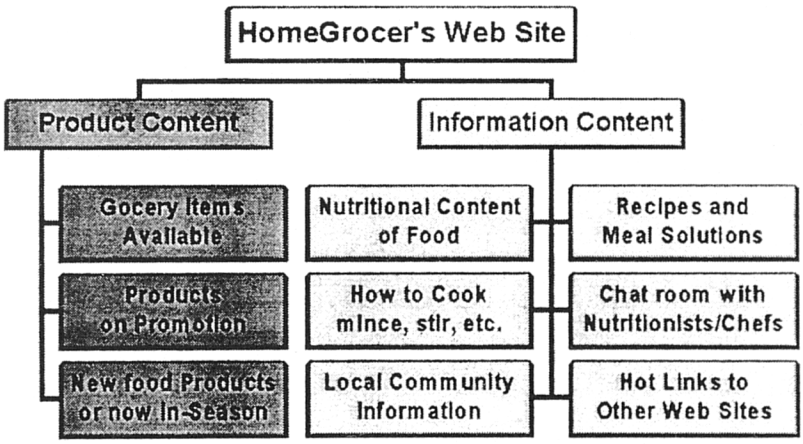
HomeGrocer had purchased and utilized several direct marketing lists for their demographic mailings focused on families with children. They placed ads in a local parents' magazine targeted at their key demographics. The ineffectiveness of the traditional paper media promotions was related to the lack of assurance that the reader audience would meet the online criteria for their target segment.

HomeGrocer had a program called a Peach Party, which is structured similar to a Tupperware home party. At a Peach Party, a satisfied consumer invites their friends over for an evening to listen to a HomeGrocer representative describe and sell their products and services. It had had limited success. This is an example of word-of-mouth as a way to acquire consumers.

Another category of promotions were those that were online but not on the retailers' website. ProHomeGrocer placed ads with local electronic newspapers. HomeGrocer was still learning how to be effective utilizing other on-line advertising.

The website was an important channel of promotion. HomeGrocer was focused on refining the product content side and information content side of their website. Refer to Figure 5.2 for an overview of key website content categories.

FIGURE 5.2 HomeGrocer's Website Content



In addition to the products they regularly sold, HomeGrocer had a section on their website where they provided information on new items as suggested by Lohse and Spiller (1998a). For example, in HomeGrocer's "What's New?" section of their website they had

information about fruits that were now in season. This is a similar type of promotion as a brick grocer has in offering specials.

The information, non-product sales side of the website was also important. As previously discussed in section 2.3.4, a virtual retailer should establish content that provides an additional incentive for a consumer to go to the website besides for the purchase of food. HomeGrocer offered a variety of draws to the website. Home Grocer was considering content in several areas as per the above Figure 5.2.

HomeGrocer also had experimented with establishing a chat room since they thought there were possibilities in building a community around recipes. However, the issues to be worked out included: "if you have a recipe chat room, do we need a way of testing recipes that people put forward for us to put on the website? Would a chat room need to be moderated? And if so how do we do that?" The value of the chat room was as discussed in section 2.3.4, considered by Green and Browder (1998) and Armstrong and Hagel (1996).

As discussed by Javenpaa and Todd (1996-1997) in Chapter 2, there is a wide variety of links that could be set up to websites of interest to consumers. HomeGrocer had evaluated setting up electronic linkages to other sites their consumers might be interested in. If they set up the linkages, HomeGrocer would have to "make sure it fits our branding and then we have to figure out if it's just something we do as a courtesy or is there actually the possibility we could make some money from it." HomeGrocer considered establishing links to cooking schools, cooking supplies retailers, and cookbook sellers, and local community sites or potential interest to their consumers.

5.2.3.5 Physical Evidence

There is a challenge to make products and services appear *tangible* to the consumer in this virtual environment. To address this issue, HomeGrocer placed photos of their delivery and picker employees on the website. Additionally, HomeGrocer's delivery truck was an important form of traditional physical evidence of their service.

HomeGrocer's website features a group photograph of their drivers along with their biographies, which personalizes this aspect of the service. This website photo provides a tangible clue or physical evidence of HomeGrocer as discussed in section 2.3.5.

Additionally, the driver photo was a tool in promotion as it provided information about an aspect of the company that the consumer would interact with, as discussed in section 2.3.4.

HomeGrocer's vans were an important part of the *physical evidence* of their firm and important in establishing their Brand. HomeGrocer purchased delivery vans painted with their name and peach logo. Deering stated that the vans had been *important in establishing trust* with their consumers. "We're not a Domino Pizza car with an antenna flyer kind of thing. It's a very substantive looking vehicle"

5.2.3.6 Participation

Virtual and traditional elements of Participation were important to HomeGrocer.

HomeGrocer discovered that the consumers developed a relationship with their delivery drivers, an aspect of traditional participation. This relationship can create a bond that ties the consumer to the store (Macintosh and Lockshin, 1997). The drivers were an important factor in their customer service as discussed in Physical Evidence section. This is similar to traditional service firms but different from most virtual retailers who have no face-to-face contact with their consumers.

Two elements of virtual participation that were focus areas for HomeGrocer were creation of re-ordering lists for fast reordering and training the consumer to use their virtual interface. These virtual elements are also facilitators in assisting the consumer in the virtual order process as will be discussed in detail in the next chapter.

HomeGrocer provided order entry assistance to their consumers via the telephone with customer service representatives. HomeGrocer had discovered that their consumers needed assistance with browsers due to lack of experience making online purchases. They expected the need for this type of ordering assistance to continue in the future.

For each consumer, HomeGrocer created a reordering list, which contained products they had previously purchased. These personalized reorder lists enabled quick and efficient re-ordering of groceries. However, HomeGrocer discovered if the reorder lists were too large or too small, as discussed in the next chapter, that it could hinder the reordering process.

5.2.3.7 Process

The *processes* that are needed to support the fulfillment and delivery of e-food are complicated. Deering of HomeGrocer stated "virtual groceries were probably two to three times more complex than we thought. And we came in, we thought, with pretty open eyes... [The complexity] was the single biggest learning we had."

HomeGrocer selected a warehouse approach for order fulfillment instead of partnering with existing brick grocers and picking off those store shelves. As discussed in 2.3.7, as pointed out by Kadison and Modahl (1997), there are advantages to picking from a warehouse.

With a warehouse model, HomeGrocer could arrange the items on the shelves in a manner to enhance picker productivity. At the time of the interview, they were picking from paper lists but were planning to go all electronic. To capture the items picked for an order, they utilized a scanner attached to the picker's arm.

A picker would pick one order at a time starting from one end of the warehouse and traveling to the opposite end. There were no plans to pick multiple orders concurrently. Orders that were complete, without items missing, were placed directly into the trucks. Orders that had substitutions were placed into a large cooler that was next to the truck loading area. Orders were kept in the holding area until an accurate invoice could be placed with them. The invoice was prepared in an office upstairs.

HomeGrocer explained that a factor behind their logistics methodology was related to their *brand of delivering superior produce.* "It touches my hand, it touches the personal shopper's when they put it in the bag, and that's it. We don't have a whole bunch of people handling your food. Produce here has to be better than anywhere else." They felt that since they pick directly into the temperature controlled delivery truck they were able to deliver superior produce over the supermarket.

Since the HomeGrocer pickers were not competing with consumers for items off the warehouse shelves they had a goal of zero substitutions. "I consider a substitution to be a

faux pas. So we really want to drive it down to just a nominal amount... We don't publish a substitution policy nor do we ask them what their substitution is." If the pick was out of stock they substituted with a larger size. Their major concern was not supplying the item – a short. Part of the HomeGrocer brand is delivering exactly on what was ordered. They felt strongly that shorts were a *barrier to repeat business*, which ties to the virtual order cycle discussed in the next chapter.

Although HomeGrocer offered grocery pickup from their headquarters location only a few consumers utilized this option (also an aspect of Place). It had primarily been utilized in the early days when HomeGrocer only delivered within a few zip code locations. As they had expanded the reach of their delivery, there had been a decrease in the number of consumers that needed pickup. However, HomeGrocer still kept grocery pickup as an option. Deering remarked that grocery pickup was not popular since their consumers wanted delivery to the home.

5.3 WAITER.COM

This section contains the case study analysis of Waiter.Com. Section 5.3.1 provides an overview of Waiter.Com. Section 5.3.2 discusses their target consumers for virtual meals and section 5.3.3 contains an analysis within the context of the 7Ps.

5.3.1 Overview

Waiter.Com pioneered the concept of on-line ordering from restaurant menus in 1995. These pre-ordered restaurant meals are available for pick-up, dine-in, and in some cases for delivery. They began their service in San Jose, California with menus from 60 restaurant partners, targeting high tech Silicon Valley consumers to pre-order lunch or dinner. Waiter.Com also targeted corporate meeting planners who organized meals for group lunches or special events.

Consumers can browse the Waiter.Com website menus by food type and location. Cuisine includes Chinese, Indian, Italian, pizza, sandwiches, seafood, and Californian. They can specify special requests in meal preparation, e.g. extra pickles, light on mustard. Consumers' favorite meals with their special requests are saved in a Waiter.Com history file, which enables quick re-ordering of meals.

Orders are sent to the restaurant via fax, which provides an accurate typed order (Morch, 1996). Meals can be delivered or picked up. Some restaurants provide delivery; alternatively, local food delivery services are sometimes utilized. As an intermediary, Waiter.Com's role is to sign up restaurants and delivery services to participate in this food service as well as recruit consumers to order meals on-line.

Ordering meals via Waiter.Com is an alternative to standing in line at a restaurant or pre-ordering food over the telephone. Consumer benefits include the convenience of having menus online, the increased speed of ordering meals, and more accurate ordering of meals. In 1997, they initiated a loyalty program called *WaiterPoints* where consumers could earn future free meals (PR Newswire, 1998a).

Waiter.Com's online ordering meal service is free to consumers. Restaurants pay different fees to participate; some a monthly fixed fee and others a percentage of the order. For example, one of Waite.Com's participating restaurants, Boston Market, pays 32 cents per order and around $20 a month operation fee for each participating franchise location (Emert, 1997).

Michael Adelberg, Vice President and co-founder was interviewed. Waiter.Com had grown from four employees in 1995 to twelve in 1997 (Emert, 1997). Most of the co-founders were in their late twenties with no previous experience in the food industry. As of 1998, they had 250 Silicon Valley restaurants signed up (PR Newswire, 1998b). While multiple cities and states are discussed in the news article, Waiter.Com stated that most of their business was focused in the Silicon Valley area.

For their HQ office space they utilized an incubator facility for Internet start up companies sponsored by the San Jose Chamber of Commerce. They were provided with a small office area and a few desks with telephones in a shared area with other start-ups. Additionally, they shared the services of a receptionist and could reserve the use of a Boardroom for meetings.

5.3.2 Target Segment

Waiter.Com targeted consumers in the Silicon Valley and San Francisco Bay area. They selected this geographic area because of the high Internet density from home and work. They were targeting consumers who were already online. There were two key segments for their virtual meal service 1) individual or family meals and 2) workplace group meals.

Waiter.Com had observed the value of a consumer having a persistent Internet connection. The attribute of *persistent connection* might be more of a factor in ordering meals than in ordering groceries since these meals could also be ordered from the restaurant by telephone. A single meal is more of an impulse purchase so Waiter.Com felt that if the consumer was not already online, they might more easily pick up the phone to order the meal. Adelberg stated, "If you are not already on-line at home doing something else then it is not realistic to believe that you are going to turn on your computer, wait for Windows to boot up, get into the operating system, dial into your dial-up account, wait for that to connect, open up your browser and then go and order food. That whole process is a 5 minute ordeal! So it only works where you have *a persistent connection* or you are already on-line with something else."

Waiter.Com's primary target segment were individuals who ordered their own lunch from work and secondary target were family dinner meals. According to Adelberg, the majority of Waiter.Com business is "probably 70 or 80% of the orders are done from work. So we probably segment the work into 'I'm responsible for my own lunch and I have to get it myself... It's very much the working demographic. Age was 25 to 40 and they were all working people and that is who we thought of [when we stated this service]."

Often the family dinner meals were ordered from work but eaten at home. Adelberg of Waiter.Com related "there is actually a lot of people who order from work to pick up on the way home for dinner... because everyone has to get from work to home at some point." The Food Marketing Institute study (1997a), discussed in section 3.3.1, substantiates this trend.

To summarize, the majority of the individual or family meal consumers fit into one of three segments: 1) order from work for pickup and bring back to eat at work, 2) order from work to eat at the restaurant, and 3) order from work to be eaten at home.

The *workplace group meal* segment comprised people who would order food for a group at work, which would be consumed at work. Waiter.Com valued this important segment. Adelberg explained how many companies in Silicon Valley order group lunches on Thursday or Friday for their employees as a type of perk. Additionally, Waiter.Com received group meal orders from employees that were working over a weekend that ranged from $80 to $200 an order.

Waiter.Com discovered a commonality among the e-food consumers in their *demand for convenience relating to saving time*. Waiter.Com maintained that the reason people use their service was for convenience. "Everyone says convenience, which is a funny word because you never know what that means... And I think what they're saying is it just saves them time. We're giving them time back, and people are very time pressed." Consumers' desire to save time was discussed in sections 2.1.4 and 3.1.1.

5.3.3 7Ps Analysis

The following discussion continues the case analysis of Waiter.Com within the context of the 7Ps.

5.3.3.1 Product

Waiter.Com's service is to offer on-line preordering of meals for delivery or pick-up. To enable this service, Waiter.Com signs up restaurant partners that offer meals from a variety of cuisines. The working individual who orders their own lunch frequently typically orders from three to five restaurants located close to where they work. Waiter.Com had a goal to sign up all the restaurants that their online consumers would want to order from and therefore regularly solicited recommendations from their consumers. In many cases, Waiter.Com was taking pre-existing relationships (restaurant to consumer) and simply bringing them online.

An interesting point is that Waiter.Com has found that it is easier to sign up restaurants that already took orders over the telephone or fax. These restaurants were already participating in the order-ahead business.

Waiter.Com discovered that some individuals would go to their website to view the menus but would not place an order on-line. There is value in the information separate from the product as noted by Rayport and Sviokla (1995) and other discussion in 2.3.1. The ability to exploit the information aspect of a product is a virtual element of Product.

5.3.3.2 Price

Meals ordered via the Waiter.Com system have their price set by the associated restaurant. The price is the same as if the consumer ordered food within the brick restaurant. If a delivery option is selected, the restaurant or the delivery service adds a delivery fee. Therefore, Adelberg felt that the price of the food was not a factor on the consumer's decision to order meals online. He stated that their service provided a better value to the consumer. "It's not a better price [than if they ordered directly from the restaurant –in fact it is identical] but they earn free food, so it is a better price. It's a little bit of a kickback."

Waiter.com charged a one time setup fee plus a transactional price to their restaurant participants, which was invisible to the consumer. Consumers were offered Waiter.Com's service for no charge.

5.3.3.3 Place

One element of virtual Place is that Waiter.Com's consumers must have access to an Internet access device and reside in a geographic area within a designated proximity to the partner restaurants. In the case of delivery, the geographic distance between consumer and restaurant is specified by the restaurant delivery service provider- how far the delivery service is willing to travel. In the case of pickup the distance is dictated by how far the consumer is willing to travel to the restaurant. The pickup distance limitation is similar to traditional retail trading zones where the retailer places their store and targets consumer willing to travel the distance to that store.

5.3.3.4 Promotion

Waiter.Com was trialing on-line and off-line methods of promotion and comparing them against the cost of consumer acquisition before deciding on which ones to utilize.

One aspect of offline promotions that Waiter.Com discussed was word of mouth referrals, both from partners and other consumers. For Waiter.Com, the largest source of referrals were from other consumers followed by referrals from their partner restaurants. As noted above, Waiter.Com had a program where consumers could get extra Waiter Points if they refered a friend that ordered. Word-of-mouth recommendations were discussed in section 2.1.4 and 2.3.4.

Waiter.Com considered on-line promotions using portals, ads placed in electronic newspapers, and ads placed on other retailers' websites. Internet advertising is recognized as a viable promotional medium as discussed in section 2.3.4. Virtual channels encompass electronic means of promoting the retailer's product or services outside that retailer's website. The advantage with these online promotional approaches is the assurance that the consumers are already on-line.

Waiter.Com had decided to place ads with local electronic newspapers. Waiter.Com claimed that people were getting more information from on-line media such as electronic newspapers therefore they were good places for virtual retailers to advertise.

Adelberg of Waiter.Com noted that the portal partnerships were expensive and often only attracted low revenue consumers that were not worth retaining The concept that not all customers are worth keeping was discussed by Reichheld (1995) and Peppers and Rogers (1997) in Chapter 2.

An on-line promotion channel is the website.Waiter.Com had a loyalty program called WaiterPoints where consumers could earn points toward future free food for each food purchase. On the product side of their website, Waiter.Com placed special announcements promoting new restaurants that had joined their ordering system. On the informational side of their website, Waiter.Com placed links to restaurant reservations sites and selected community sites of potential interest to their consumers.

5.3.3.5 Physical Evidence

Waiter.Com wanted their site to be easy and fast to navigate. They felt this was important since in most cases the consumer had the option to pre-order food by calling the restaurant directly over the telephone.

5.3.3.6 Partcipation

The consumer Participated with Waiter.Com's website to order a meal. However, since Waiter.Com was an intermediary, the consumer would Participate with the restaurants directly for meal pickup or with the delivery personnel for meal deliveries.

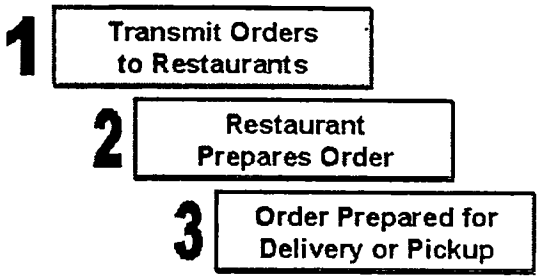
Waiter.Com had created a personalized meal re-order list, called MyWaiter, which contained a consumer's favorite meals. The meal list contained consumer specific details on meal preparation. It enabled fast reordering of favorite meals. Waiter.Com had found that the MyWaiter feature increased sales since it added to the convenience of the service. This aspect will be discussed more in the enablers for repeat orders in the next chapter.

5.3.3.7 Process

Three Waiter.Com processes will be discussed in this section: meal fulfillment logistics, pickup and delivery.

There were three steps of meal fulfillment process that emerged from case analysis. Only step one, *transmit order for fulfillment*, of the three-step order fulfillment process was performed by the virtual meal retailer. The fulfilling restaurant performed the last two steps. Refer to the diagram in Figure 5.3.

FIGURE 5.3 Model of Meal Fulfillment Logistics Factors for Waiter.Com



Waiter.Com had designed their order process around the fax machine. They estimated that about 50% of the 400,000 restaurants in the USA currently had faxes in place. But it had not been a concern because any restaurant that was appropriate for their service and did not have a fax machine either bought one or was provided one by Waiter.Com.

Waiter.Com had found the fax order transmission process successful. The restaurants received a meal order printout, which they could read at their convenience. "It gives them a chance to go to a *time shift.*" Restaurants could now schedule demand since they had a built in lead-time for orders. Overall, Waiter.Com felt that their system assisted the restaurants to manage their order traffic flow. It got people off the phone for taking orders, which increased productivity.

Waiter.Com explained how the fax system was also of great value for the *business group orders*. A business order could be six pages long with detailed orders for forty people; "individual sandwiches completely spelled out with the person's name below it, exactly how the person wants the thing, nice and typed out. The restaurant can just slap it up... And it's just incredible."

Waiter.Com mentioned PC to PC order transmission as a future development but felt that most restaurants were not currently sophisticated enough. Waiter.Com estimated that only about 12,000 restaurants had a PC based system for on-line ordering in 1998 within the USA. Therefore it would be some time before there is a significant base that could receive orders on a PC.

Pickup encompasses the process of travel by the consumer to the food origin location, food collection, and transport to home or other place (of consumption). Pickup was a very important option within the virtual meal space.

Seventy percent of Waiter.Com orders were pickup. Waiter.Com had found most of their pickup orders were for lunch. In their San Jose location, consumers could walk or take a short drive to the restaurants from work. However, Waiter.Com also had consumers who ordered from work and picked up the meal on the way home for dinner. Adelberg had discovered "more people are demanding takeout because people want to eat at home. People like restaurant food at home." An advantage of pick up is knowledge of when the food would be acquired since delivery times can be highly variable.

Waiter.Com had chosen not to deliver meals and therefore had outsourced that function to the fulfilling restaurant or a delivery service. Waiter.Com claimed it was by design that they did not deliver. Aldelberg stated that delivering food was a "messy business' and therefore they would prefer to rely on the infrastructure of restaurants that deliver and delivery services.

According to Parkinson of Peapods, a different logistic model is required for hot food delivery than grocery delivery (Hammel, 1997). Meal delivery has greater challenge in that the processing and delivery timeframe is much shorter- minutes not hours. This is an aspect of Product time specificity as previously discussed.

Waiter.Com had considered getting into the delivery side "a million times in response to all the delivery complaints plus if you're not doing the delivery part, the piece that you're adding sometimes is not a huge value to people maybe." As a pure intermediary, being a conduit to match buyers and sellers, it would be easier for competition to copy them. If Waiter.Com had added reliable delivery as a service therefore contributed to a stronger defensible position. As discussed section 2.3.7, if intermediaries can continue to perform additional services they will continue to be of value to the consumer. Additionally, the collection of services will differentiate them from their competition.

5.4 CYBERMEALS

This section contains the case study analysis of Cybermeals. Section 5.4.1 provides an overview of Cybermeals. Section 5.4.2 discusses their target consumers for virtual meals and section 5.4.3 contains an analysis within the context of the 7Ps.

5.4.1 Overview

Cybermeals offered on-line pre-ordering of meals for delivery or pick-up, also known as *home meal replacement*. Cybermeals was unique in their operations approach in that they combined sophisticated geopositioning software technology with a restaurant menu database. For example, when consumers signed on they are asked if they wanted pick-up or delivery. If they selected pick-up, they were queried as to how far are they were willing to travel and only restaurants that matched those requirements were displayed. If they selected delivery, they typed in their address, and only the restaurants willing to deliver to that address were displayed. After the order was submitted, consumers received a confirmation e-mail verifying the order and the delivery time (Business Wire, 1998d).

Cybermeals allowed a consumer to keep ten favorite meals saved for fast reordering. Meals could be ordered up to three months in advance. Their website had menus of participating restaurants, listed the type of payment accepted and restaurant hours of operation.

Cybermeals had expanded their service into many major cities in the USA including Atlanta, Boston, Chicago, Dallas, and Los Angeles. Their marketing targets include busy families, office workers, as well as students at college campuses. Also, the group office meal is an important segment. As of August 1999, according to their website, they had 12,000 restaurants participating nationwide and had over 500,000 registered consumers.

When a restaurant signed up to participate they were provided with a special map with their restaurant located in the center. This map was produced via special algorithms and a third-party geocoded database (Muraskin, 1997). The restaurant owner shaded in the grid spaces they were willing to deliver to. This information was loaded into Cybermeals database with the restaurant menu and hours of operation (Muraskin, 1997). An additional use of technology was their patented sophisticated telephone systems used for transmitting orders (using computer voice clips) to restaurants (Lewis, 1998).

They provided a free service to consumers. Restaurants paid a set-up fee, typically $300 to $400 and a percentage of each order (Harper, 1998). Commissions on a per-order basis ranged from five percent to fifteen percent (Rubenstein, 1998).

Cybermeals also had an online restaurant reservation system (for dine-in meals with no pre-ordering) which provided a restaurant with the ability to handle as many as twenty percent more diners through more efficient reservations, the ability to create diner profiles, and the ability to accept reservations even when the restaurant was closed (Business Wire, 1998b).

Cybermeals had set up several interesting partnerships. In 1998 they became the exclusive online ordering service for AOL, Lycos, Excite and Yahoo! (Business Wire, 1998c). In April 1998, Cybermeals announced a strategic technology and marketing alliance with Takeout Taxi, the largest delivery service of restaurant meals in the USA (Business Wire, 1998a) which was utilized for restaurants that did not provide their own meal delivery.

It is of interest to note that in Cybermeals' short history, since 1996, they had had three company names. They started out as Cyberslice, specializing in on-line ordering of pizza. In April 1998 they expanded to on-line ordering of all restaurant meal types therefore the name Cybermeals was used (Business Wire, 1998c). However, in 1999 they changed their name again to Food.com. Since they were called Cybermeals during the case interview, that name is used throughout this paper. Ford Smith, co-founder and former member of the Board of Directors was interviewed.

5.4.2 Target Segment

Cybermeals targeted consumers in home, work and college segments within selected major cities in the USA. The work segment, both individual and group meals, was their initial primary segment focus. Cybermeals was targeting consumers who had a propensity to eat convenience foods.

An important aspect of the work segment, consumers who ordered food from work, was the availability of the 'constant Internet connection' from the workplace, which removed a

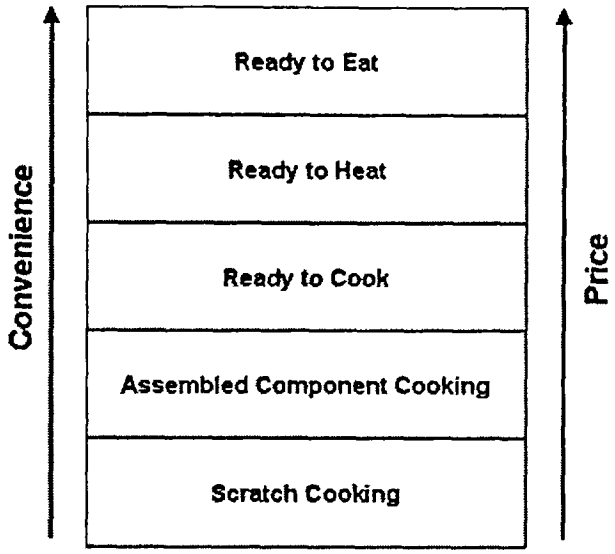
barrier for online ordering. The availability of this persistent connection was one of the reasons Cybermeals decided to go after the workplace market (Riedman, 1999).

The group business meal was an important sub-segment of the work segment. Smith of Cybermeals stated that the office manager or secretary was the target within the office for this group meal order. The group meal was more profitable since "when you get into delivery, it costs you just as much to deliver one pizza as it does to deliver 50... so the larger order has all kinds of economies of scale built in for the restaurant." Smith argued that both the at home and at work orders were essential for the success of a virtual meal retailer like Cybermeals, however the group meals were larger in volume and profitability.

Cybermeals was the only case to target the college segment. This related back to the premise that potential e-food consumers needed to have Internet accessed PCs. Therefore Cybermeals planned to target college students because virtually all USA campuses were wired. According to Riedman (1999), in February 1999 Cybermeals planned to launch a ten USA college marketing pilot. The article quoted a Cybermeals spokesman who stated that their service was a good fit for the college market since students 1) typically often ordered out and 2) were early adopters of technology. Early adopters of technology, such as computer literate college students, confirms discussion of innovation adoption described in section 2.1.3.

The above segments represent consumers with a *propensity toward convenience foods* that is seen in both the grocery and meal industries as discussed in Chapter 3 by Abass (1996). Smith of Cybermeals discussed his segmentation of the social trend toward prepared meals. Refer to Figure 5.4.

FIGURE 5.4 Cybermeals' Meal Gradient



The five segments were: scratch cooking, assembled component cooking, ready-to-cook segment, ready-to-heat segment, and a ready-to-eat segment. "People of course appreciated the *time savings* of somebody else assembling their components... Each one [segment] was designed to be more *convenient* than the previous. So as you work your way up the scale, there is a convenience and time saving element." Cybermeals substantiates observations on food trends discussed in Chapter 3. Cybermeals targeted the segment seeking the most convenience – ready to eat meals.

5.4.3 7Ps Analysis

The following discussion continues the case analysis of Cybermeals within the context of the 7Ps.

5.4.3.1 Product

The core product content for Cybermeals, a virtual meal retailer, was the food items on the menus of the partner restaurants they were brokering. Ford Smith discussed how critical it was to focus on having good "content" at an early stage. For Cybermeals, content referred to having lots of restaurants' menus on the system within a variety of cuisines.

According to Ford Smith, it was critical to focus on building website "content" before spending a lot of money on promotion. Cybermeals discovered that it was important that

once the consumer visited their site and perhaps purchased, that the consumer found sufficient products of interest to purchase. This equated to a sufficient number and variety of restaurant menus within a specific geography. As discussed in Chapter 3, Parker and Gulliford (1996) are in concurrence and state that a comprehensive product range, and not a restricted range, is a key success factor is the virtual world. This concept of sufficient product depth as a key attractor concurs with the Schubert and Selz's (1999) recommendation discussed in section 2.3.7.

5.4.3.2 Price

Similar to Waiter.Com, the price for food offered via the Cybermeals ordering system was set by the restaurant. Consumers received value from the convenience of pre-ordering their meals even when they selected to pick up the food at the restaurant. A delivery charge was added only when delivery was requested.

Also similar to Waiter.Com, there was a transaction price to the restaurant for participating in Cybermeals' meal service, which was transparent to the consumer. Consumers were not charged a fee to place meal orders via Cybermeals online meal service.

5.4.3.3 Place

Cybermeals had set up operations (sign up restaurant and delivery service participants) in several major cities in the USA. Initially these included Atlanta, Boston, Chicago, Dallas, and Los Angeles.

If consumers selected delivery then they had to be at a specific Place to receive delivery of food. Additionally, the delivery option was offered based on how far the delivery service was willing to travel. If consumers selected pick-up then they had to travel to a specific Place. This distance was limited by how far the consumers were willing to travel to obtain the food. As discussed previously, the pickup area is similar to the traditional trading area boundaries for a brick retailer (Huff, 1964), i.e. how far the consumer is willing to travel to obtain the product or service.

5.4.3.4 Promotion

Cybermeals was investigating promotion opportunities within their website and portals. Cybermeals focused on promoting their website by setting up interesting content that

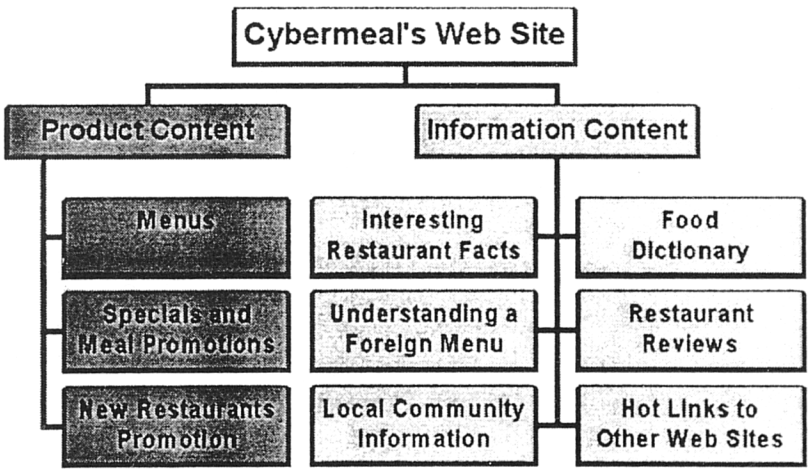
would draw consumers to the site. The goal of having information content was in fact to entice the consumer to move to the product (selling) side of the website and purchase food. Cybermeals was cautious in using portals as promotion channels.

As discussed in the promotion section 2.3.4, portals receive a high volume of traffic, which makes them a potential advertising medium. Some portal deals are partnerships and other are strict ad buys. According to Smith of Cybermeals, "a partnership says that if the orders aren't delivered the portal doesn't make much money. If they do deliver the orders, both sides make money."

Cybermeals felt that, due to the potential high cost of portal partnership deals an e-food retailer should cautiously analyze this promotion path before committing marketing expenditures. Cybermeals also claimed that promotions via a portal were more effective in reaching first time consumers (trial) but had minimal impact on repeat business. More discussion on enablers for trial and repeat business can be found in the next chapter.

Cybermeals was analyzing what type of content their consumers would value and that would therefore be a draw to their website. Smith of Cybermeals suggested, "I think there are things you can do to make your site much more interesting to the average person." Refer to figure 5.5 for product and information content considerations.

FIGURE 5.5 Cybermeals Website Content



On the product side, Cybermeals was focused on developing sufficient product content as discussed previously in the Product section. They also promoted new restaurants that joined their service.

Cybermeals was analyzing a variety of information draws that would make their site an interesting place to visit. Types of information considered were: how a restaurant works, restaurant reviews, a food glossary, and how to understand a foreign menu section. The related food information was 'bundled' with the food product thereby creating a unique offering, an augmented product (Alba et al, 1997) as discussed in section 2.3.1.

Cybermeals had also considered setting up a chat room that offered the opportunity to dialog with chefs or with other consumers about area restaurants. Cybermeals planned to set up links to restaurants reservations sites for consumers who wanted to dine in a nice restaurant. All of these information content areas added to the overall value to the site.

5.4.3.5 Physical Evidence

Physical Evidence for Cybermeals, as a service intermediary, was focused on their website. Cybermeals set up their website so that it was easy to locate meals by cuisine and fast to place a reorder. On their first web screen they displayed the number of restaurants by cuisine so that the consumer would know what to expect in advance, e.g. if French restaurants is selected there will be three sets of menus displayed.

5.4.3.6 Participation

Participation elements included interaction with Cybermeals website, relevant content, and personalized ordering.

The consumer Participated with Cybermeals' website to order a meal or visit the information side of the website. However, since Cybermeals was an intermediary, the consumer would Participate with the restaurants directly for meal pickup or with the delivery personnel for meal deliveries.

Cybermeals assisted with the food product search by displaying only the *relevant restaurants* to a consumer. Cybermeals provided a GPS (satellite based) technology that allowed each restaurant to define what geography they would deliver to in a very specific manner. Therefore consumers could only view restaurants that would deliver to their specific location. This is an aspect of personalizing the content to a specific consumer Place.

Cybermeals had created a *personalized meal re-order list* that contained five of a consumer's favorite meals and enabled fast reordering with just a few clicks. Cybermeals automatically saved the last order into the order list. Additionally, consumers could set up favorite meals. Using information accumulated about the consumer's preferences, the saved order list created a barrier to switching as discussed in section 2.3.6. Enablers and inhibitors for repeat order; aspects of Participation will be discussed in the next chapter in the virtual order cycle.

5.4.3.7 Process

Cybermeals concentrated on three processes: meal fulfillment logistics, pickup, and delivery.

Meal fulfillment logistics included informing the restaurant about the meal order. Cybermeals had selected a phone system for transmitting consumer meal orders since most restaurants already had phones in their kitchen. This technologically sophisticated system created a computer generated phone order using computer voice clips that "spoke" each consumer meal order. The restaurants could play back orders at a convenient time. Features such as variable speed playback were designed to accommodate the variety of English language skills and experiences of the person taking the order. Cybermeals focused on making the phone system user friendly. They considered this phone system a key asset and "we actually have several patents for our phone system."

Cybermeals had noticed a trend for of meal pickup for home consumption. As described in Section 3.1, restaurants have experienced a growth in the purchase of meals eaten outside the restaurant (Food Marketing Institute, 1997a).

Cybermeals secured delivery services via their partner restaurants or third party delivery services. Smith at Cybermeals explained that they had never considered providing the meal delivery service. He stated that since restaurant delivery services had their own vehicle and staffing, they were the best choice for delivery. One of the delivery services Cybermeals utilized was Takeout Taxi. In 1997, the delivery service, Takeout Taxi delivered about $1 million worth of restaurant meals per week in their USA franchise operations (Hammel,

1997). However, the majority of the Takeout Taxi meals were currently ordered by phone and not virtually.

5.5 CHAPTER SUMMARY

This chapter contained an overview and an analysis of the four e-food cases within the framework of the 7Ps. An important concept that emerged and impacted multiple Ps was the time specificity of e-food.

The e-food target segmentation was a function of Place. Consumers were targeted in specific geographic areas with high Internet density and within a limited distance from e-food fulfillment operations (virtual grocer picking operations or fulfilling restaurant). The distance between virtual grocers and their consumers was limited to *how far the virtual grocer were willing to travel* to deliver groceries. This aspect is further discussion in section 6.3. Pickup was a function of *how far the consumer was willing to travel* to obtain food.

As a virtual and brick retailer, Tesco was faced with the issue of channel cannibalism, an aspect of Place. This concept is an extension of product cannibalism discussed by Heskett (1976). Additionally, Tesco discovered that the virtual channel could assist the brick channel as well as the brick channel could assist the virtual channel. This relates to issues of channel compatibility, which build on product concepts discussed by Kerin et al (1978).

Tesco wanted to extend the brick buying experience to the virtual side; therefore offered their loyalty program as a promotion to their virtual consumers. Tesco was focused on participation and physical evidence aspects of their website to enable a fast and efficient buying experience.

Logistic processes of grocery fulfillment and delivery were complex. Tesco decided to pick food for virtual orders from the existing brick store shelves. This had the advantage of utilizing existing assets. However, as their volumes grew, Tesco was concerned about their pickers getting in the way of the brick store shoppers. Additionally, Tesco had minimal control of the store inventory so sometime had to make substitutions when fulfilling virtual

orders. Tesco's delivery vans and drivers, utilized in the fulfillment process, were important traditional physical evidence.

Since HomeGrocer was a new firm with a virtual only channel their food could not be examined prior to purchase. They periodically offered a promotion of a free bag of fruit to address the unknown product quality issue. Additionally, their unconditional satisfaction guarantees that was a key product element.

They utilized traditional and virtual channels for promotion. They planned information content on their website (aspect of physical evidence and participation) that would attract consumers. Examples included: nutritional content of food, how to cook, local community information, recipes, a chat room with food experts, and hot links to valued sites.

Traditional physical evidence of their delivery trucks and drivers were important in building their brand and image. HomeGrocer utilized a warehouse for their fulfillment operations processes, which enabled picking efficiency and minimal inventory shortages.

As a virtual intermediary, Waiter.Com provided an online service that enabled consumers to pre-order meals from participating restaurants. Meals had a restricted time specificity, which impacted the geographic distance of pickup and delivery. Each restaurant (or delivery agent) could specify how far they were willing to travel for delivery. Consumers would place their own limitation as to how far they would travel for pickup

Waiter.Com had the responsibility to transmit virtual orders to the fulfilling restaurant. For this process they sent a fax to the restaurants which produced a typed order which increased accuracy over a hand written order. Waiter.Com created a personalized reorder list, a virtual participation element, to enable fast reordering of favorite meals.

Cybermeals was focused on having sufficient (quantity) and relevant products on their website. The utilized sophisticated GPS technology to ensure consumers were presented with only the restaurant that would deliver to their location, an aspect of product personalization.

Cybermeals felt that their website (physical evidence and participation) should be a source of food information as well as entertaining. Their process to transmit orders to restaurants utilized a technology based patented telephone system.

6 COMPARATIVE CASE ANALYSIS AND KEY FINDINGS

6 COMPARATIVE CASE ANALYSIS AND KEY FINDINGS

This chapter presents two major findings of this research- the Virtual Order Cycle (section 6.2) and Local E-Commerce (section 6.3) which are discussed within the context of the 7Ps. Section 6.1 contains a cross-case comparison of one key aspect of each P.

6.1 CROSS-CASE 7Ps COMPARISON

This section contains a cross-case comparison of one key aspect of each of the 7Ps as revealed by the previous chapter. Table 6.1 presents one issue for each P and differentiates the virtual grocers' and virtual meal retailers' approaches.

Of the 7Ps, the most significant differences between virtual grocers and virtual meal providers (as well as between cases) were found within Process. The key issues discussed in this section (and revealed in the previous chapter) are time specificity, Place and Process. Important issues such as cannibalism of channel, which only impacted one case, Tesco, was covered in the case analysis in Chapter 5.

TABLE 6.1 Comparison of 7Ps of Virtual Grocers and Meal Providers

Key Issues	Virtual Grocers	Virtual Meal Providers
Time Specificity: aspect of Product	Product dependent on reaching consumer within a restricted amount of time	More stringent time specificity than groceries; e.g. minutes not hours
Delivery fee: aspect of Price	Both virtual grocers charged a delivery fee.	Consumers could alternatively pickup meals to avoid delivery fee.
Delivery or Pickup: aspect of Place	The virtual grocers focused on delivery.	Both pickup and delivery were offered.
Loyalty Program: aspect of Promotion	No significant differences between grocers and meal providers. Tesco had a loyalty program while HomeGrocer did not.	Waiter.Com had a loyalty program and Cybermeals did not.
Delivery trucks and drivers: aspect of Physical Evidence	Delivery trucks and uniformed drivers are important Physical Evidence.	The virtual meal providers did not have similar traditional Physical Evidence elements.
Face-to-Face Interaction with Consumer: aspect of Participation	Employee to consumer interaction was at time of delivery.	Consumer interaction is with restaurants not virtual meal providers.
Back end Logistics: aspect of Process	Complex in house process were needed for order fulfillment and delivery.	Order fulfillment and delivery processes are outsourced.

6.1.1 Time Specificity and Place

A time specificity product is dependent on reaching a destination within a fixed timeframe. Time specificity applied to the products/ services of both the virtual grocers and the virtual meal retailers. However, meals had more stringent time specific requirements, minutes not hours.

The issue of delivery is related to time specificity and Place. Delivery implies moving a product from one place to another. It is related to the point that the service provider (or agent of) is moving the product to the consumer for a fee. Mode of delivery is also related to product time specificity. In the case of groceries, special temperature controlled delivery trucks increased the amount of time to transport the product. Conversely, meal providers' uncontrolled temperature vehicles dictated delivery within a shorter period of time.

The options of delivery and pick-up are related to Place. The virtual grocers focused on delivery. They only accepted consumers within the geographic area that the virtual grocers were willing to travel to. The virtual meal providers offered both pickup and delivery. The specific restaurant or delivery service restricted delivery based on how far they were willing to travel to reach the consumer. In contrast, pickup was restricted by how far the consumer was willing to travel to the restaurant.

Delivery provides the most convenience for consumers. However, it can be highly variable in terms of costs and expected delivery times. Pickup offers less convenience and adds to consumer time costs but is more predictable relating to time of service (time specificity issue). E-food consumers can choose to utilize either option based on specific needs.

6.1.2 Process

The following discussion highlights Process differences between the virtual grocers' and meal retailers' operations. As an intermediary the virtual meal retailers' role in order fulfillment was transmitting the order to a partner restaurant. In contrast, the virtual grocers had to fulfill the order and deliver it to the consumer. It is interesting that there were differences among the approaches between each case.

Options utilized by the cases for transmitting orders to partner restaurants for fulfillment included telephone and fax. Cybermeals' and Waiter.Com had opposite views on the best *process* for transmitting orders.

Waiter.Com's restaurants received a faxed copy of the printed order, which increased order accuracy over consumer phoned in orders. The disadvantage was that restaurants had to purchase a fax machine if they did not have one. In contrast, Cybermeals transmitted meal orders by telephone. This technologically sophisticated patented system created a computer generated phone order using computer voice clips that spoke each consumer meal order.

Cybermeals felt there were problems with fax: it is usually not located in the kitchen, it can run out of paper, requires an additional phone line and the expense of purchasing the machine. Therefore they felt requiring a restaurant to have a fax to take orders could be an inhibitor for restaurant participation.

Cybermeals' phone system had the advantage of phone ubiquity; however, it added a process step over Waiter.Com's system. This extra step of writing down the order added time to the process and increased the likelihood of transcription errors. On the other hand, while Waiter.Com's system required the potential expense of a fax machine and an extra phone line, it produced a clear printout of the order that the restaurant could immediately use. While both systems had their advantages, the extra step required for the Cybermeals phone system did not outweigh the cost to put in a fax machine. Regardless of the transmission method, restaurants obtained an advantage in receiving orders in advance so that they could potentially plan and prepare more orders within specific time windows.

The two virtual grocers differed in where food items were picked. For economic reasons, Tesco utilized their existing retail store shelves to pick orders. Tesco had to consider their legacy assets when designing a fulfillment methodology. The advantage was they could utilize existing facilities; however, as volumes increased they were concerned about pickers getting in the way of store customers. Since Tesco was picking off store shelves

they could not guarantee that items would be in stock, therefore they needed to ask consumers to specify a substitution policy.

On the other hand, HomeGrocer had a clean investment slate unencumbered by legacy systems. HomeGrocer set up a warehouse for picking, which provided the advantage for arranging warehouse shelves for picking efficiency. HomeGrocer could control and anticipate the inventory levels since they picked from their own warehouse. Both virtual grocers utilized electronic scanners to improve picking accuracy. Additionally they both loaded orders directly into the delivery van to streamline operations and avoid the need for a chilled storage area for staging orders.

The Promotion P highlights differences in loyalty programs approaches. However, it is differentiated in that there were no differences *between* the virtual grocers and the virtual meal retailers. However there were differences between cases in each category. Specific loyalty program approaches will be discussed in section 6.2.3.

In summary, the 7Ps were a useful framework for analysis in e-food. Key P's included product, place and process. The following two sections present two original findings and continue the cross case analysis and relates key aspects to the 7Ps.

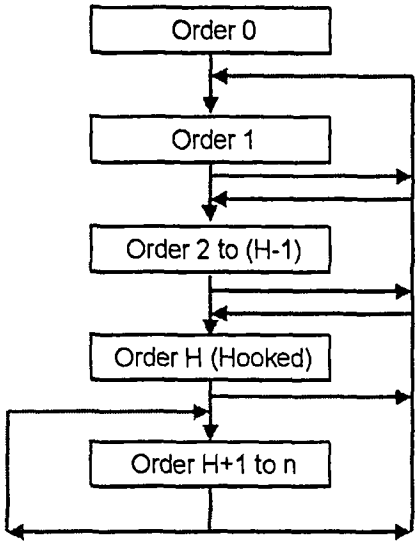
6.2 VIRTUAL ORDER CYCLE

The cases argued that a consumer must go through a stepped process (beginning with the first order) to become a loyal virtual consumer. Store loyalty can be defined as either the *attitude* to use the store or the *intention to use* the store whenever possible (East et al, 1998). The ***cyclic nature of consumer virtual ordering*** is an important idea that emerged from this research. The first step was performing the trial order, followed by other steps until becoming a "trained and regular" e-food consumer. During an early interview, the phenomenon of *backsliding to a lower level ordering characteristic* was discussed. Using grounded theory, this phenomenon was addressed in subsequent cases and the resulting model, presented in Figure 6.1 is the result of the cumulative information.

6.2.1 Model

The virtual e-food retailers referred to these order progression steps that the consumer progressed through as "life cycle", "ordering procedure", and "consumer order cycle". The cases mentioned that this consumer order behavior was an area of concern and that therefore they were monitoring it. This section presents the steps of the virtual order cycle in Figure 6.1 followed by an explanation of the order steps. Sections 6.2.2 and 6.2.3 relate the enablers and inhibitors that impact the consumer's movement through this process.

FIGURE 6.1 E-Food Virtual Order Cycle



6.2.1.1 Process from Prospect to Consumer

As consumers move through the stages of pre-purchase to purchase they are transitioning through the stages of becoming a *loyal consumer*. Key aspects of this Process are 1) consumers find virtual retailers, 2) trial orders, and 3) repeat orders. As was discussed in 2.3.7, the Process elements are tied to elements of other marketing mix areas. These purchase order stages are closely linked with the Promotion elements.

The virtual food retailers claim that a major barrier for consumers is placing the first virtual order for their product. Tesco said "You know there is a big jump from saying, 'yes I am interested to I would love to do this.'" The trial order process steps can be broken into two sub-barriers: 1) the barrier of enticing the consumers to the retailers' web page and 2) the barrier to placing the first order after the consumer has entered the retailer's website.

6.2.1.2 Consumers Find Virtual Retailers: Order 0

As Bakos (1998) discussed in section 2.3.7, consumers and sellers must find each other on-line before a purchase transaction can occur. This Section will primarily focus on the period after the consumer has arrived at the website and has decided to try and buy from the e-food retailers for the first time.

6.2.1.3 First Order Hurdle: Order 1

Higgins asserts the "*life cycle of the customer* is finding those on the Internet, the conversion after they have shown interest... helping them to do their first shop which is a hurdle." Tesco has discovered, "three quite clear stages. The first order, getting through the first order is important. We found people sign up and they'll get their ID so they are completely ready to go. Then they kind of fool around [on the order entry website] or they might get the whole [order] in their basket but they don't actually place the order. So that *first order is the most crucial order.*" Forrester Research statistics show that two-thirds of virtual shoppers get as far as putting items in a the shopping cart and then abandon the process before they check out (Westlake and Clark, forthcoming 1999).

6.2.1.4 Second Order Until "Trained": Order 2 to "H"

Higgins at Tesco alleges that the second stage is getting them past the third order. Higgins explained that to move the consumers through three orders that "we need to offer a bit more communication and bit more incentive." Repeat traffic is much more difficult to achieve than trial (Hoffman et al, 1997). Section 6.2.3 contains a detailed discussion on enablers for repeat orders.

HomeGrocer felt that you should get a consumer to *order a certain number of times within a specific time period* to reach the "H" or hooked level. "Otherwise it means they have to rely on somebody else [for food]. You really haven't changed them... So within the grocery trade it's a different level of need."

6.2.1.5 "Trained" Consumer: Order H + 1 to N

The virtual retailers discovered that there was a definitive order level that consumers needed to attain before they ordered regularly. This step represented 1 to N (a number greater than 1) beyond the "H" hooked step. Waiter.Com stated that once someone has

completed five orders, "then they have kind of gotten use to our system and they use it a lot." Tesco Direct claims that "if we get the fourth order in... they are hooked by and large" and consumers usually continue on a fairly static order cycle between a week and two weeks. Waiter.Com got their data from customer usage reports and Tesco received reports from their Home Shopping Systems.

Facilitators for repeat business that will be discussed in this section related to good products and good service. Firms that can provide consistent service reliably can achieve *higher consumer retention rates* as well as: competitive differentiation, more business from current consumers, increased word-of-mouth recommendations, and greater opportunity to obtain a premium price (Berry and Parasuraman, 1991). By keeping the consumer in the virtual order cycle, the e-food retailers could also gain these other benefits.

Higgins described how consumers change their expectations as they become experienced in ordering. He projected that for the first few shops consumers were focused on the process of entering an order correctly. However, "I think once you have gone through the initial hurdle then you start to notice the things that are missing, that you would expect from a [brick] shopping experience [such as store promotions]." After four or five shops virtual retailers need on-line promotions that maintain or raise the consumer's interest as discussed by Dutta and Segev (1999) in Chapter 2.

The virtual grocery consumers averaged one to two weeks between orders. HomeGrocer's goal was to be positioned as the "regular weekly shop" and the brick grocery store used for the incidental shop.

HomeGrocer thought that after consumers had gone through a few virtual grocery shops that they would continue to do so "but we do find [some] drop off eventually." HomeGrocer's VP of Marketing discussed an implication of infrequent ordering. If there is too much time between shops, "it's almost like your first shop again... [The consumer] drops back to behaving like a first shop or questions back to the value proposition... So they don't always fall off [become a lost customer]. They move back at a different juncture [like a newer consumer]." Some of the dropouts could be related to the phenomenon of Internet dropouts as described in section 2.1.4.

Additionally, HomeGrocer discovered their consumers could easily revert back to purchasing groceries, in the old way, via a brick store. "People said, 'I got busy and I was near a store and I bought, and then I bought again. And then I realized that I wasn't using you.' Some of it is, even though people who like the service, when you get out of that rhythm, it is [hard] getting them back in because [it's] a newer thing as opposed to the one they knew all the time." HomeGrocer is trying to determine what is the right frequency that determines an active consumer.

As discussed in Chapter 2, based on traditional marketing ideas, Kotler (1999) suggests that after consumers have purchased for the first time, the probability that they will buy again is *related to their level of satisfaction with the first purchase*. If they are satisfied then there is a high probability that they will buy again however, they will become a *lost customer* if dissatisfied. Dissatisfied customers will easily switch to other retailers if other suppliers can offer them equal or better service or products. A customer that has been highly satisfied will be less likely to switch. Loyalty programs implemented by the virtual retailers are discussed in section 6.2.3.

The e-food retailers spoke of the *high cost of consumer acquisition.* Therefore the goal was to get the consumers to "H" and keep them there. HomeGrocer stated that since consumers that did not order frequently enough could backslide to a lower stage, they had debated if they should set up programs to go after shoppers that shop only once every six to eight weeks. And so "we're just trying to figure out ways to understand what our customer base is and then look toward programs that actually grow it as opposed to churning it."

Kotler (1997b) states that companies hope to convert prospects to first-time customers and then convert them into repeat customers while realizing that some customers will drop out or become inactive because of dissatisfaction. The e-food retailers were planing strategies to win back customers and get them back on the virtual order cycle. Kotler (1999) claims it is often easier to re-attract former customers than get new ones. Facilitators for attracting repeat purchases will be described in section 2.2.3.

Table 6.2 cross case comparison of order cycle metrics summaries the cases' hooked and order frequency numbers. Cybermeals did not share information in this area.

TABLE 6.2 Virtual Order Cycle Metrics

Loyal Cycle	HomeGrocer	Tesco Direct	Waiter.Com
Number of orders until Hooked	4+	4	5
Order Frequency	14 days desired	9-14 days on average for "regular consumers"	best 2-3 times a week to twice a year

In summary, arguments were presented that there is a virtual order cycle with a progression of steps. Each virtual retailer observed that there were a significant number of on-line shops that a consumer must have until they were trained or "hooked" in ordering food on-line. The number was between three to five for all of them. Order frequency was an important factor associated with loyal consumers.

The next two sections discuss the impact of enablers and inhibitors to the consumers' progression through the virtual order cycle. The enablers and facilitators are related to the 7Ps.

6.2.2 Trial Order Inhibitors and Facilitators

The e-food virtual retailers found the cost of customer acquisition was quite high. In traditional retailing, according to a study by the U.S. Office of Consumer Affairs, the cost of attracting a new consumer was five times the cost of keeping a current consumer satisfied (Kotler, 1999). The e-food retailers need to understand the factors in this area to be effective. Cybermeals argues that all consumers are up for grabs in the new paradigm of e-commerce therefore the understanding of acquiring and retaining consumers is a critical area of study.

This Section examines the *benefits and inhibitors* that the e-food retailers discovered impacted the consumers in completing the first order. Upon analysis, both the inhibitors and facilitators were further broken down into NUDIST sub-nodes of: 1) *traditional retail*

facilitators: such as, why you should buy my product, 2) *traditional retail inhibitors:* such as, 'due to bad experience' will not buy your product again, 3) *technology related facilitators*: such as tools to assist in the virtual order and 4) *technology related inhibitors*: such as the amount of time it takes to learn how to order electronically. See Figure 6.2.

FIGURE 6.2 Facilitators and Inhibitors for Trial Orders

TRADITIONAL FACILITATORS	TRADITIONAL INHIBITORS
Promotion	Desired Product not available for sale
Return Policy	Lack of Trust (unknown product quality)
	Delivery Charge
TECHNOLOGY FACILITATORS	**TECHOLOGY INHIBITORS**
Simplify User Interface	Turn on PC
Help Build First Order	Find and Go to Retailer's Website
Customer Assistance Via Phone	Consumer Technology Illiterate
Search Tools	Interface with Retailer in New Way
Order Any Time of Day	Lack of Ease of Use
Order Off-Line	Inability to Locate Products to Purchase
	Time to Enter First Order
	Lack of Trust: lack of on-line Credit Card security
	Unknown -related to Internet

6.2.2.1 Traditional Retail Inhibitors for Trial

Three traditional inhibitors to trial were 1) *product not available* (product), 2) *lack of trust* (product), and 3) *delivery charge* (price).

A classic traditional retailing concern is ensuring that the *products* desired by consumers are offered. Product (and service) issues apply to the e-food retailers as discussed in section 2.3.1. Similar to traditional grocers, HomeGrocer wanted to understand if they were losing orders because of not having the *desired grocery item* or because they did not have the consumer *preferred item size*. This could be an issue since HomeGrocer carried a smaller number of grocery items than traditional grocers.

HomeGrocer also had concerns, as a new virtual only company, that consumers could have a *trust issue* with them about product *quality* (e.g. meats and produce). Being virtual,

consumers could not physically view food in advance. This can be an issue with experience goods as discussed in section 2.3.1. As was shown in Chapter 2, the issue of brand and quality are factors when consumers make product decisions (Angelides, 1997).

An Anderson consulting study by Kutz (1998) found that due to trust issues, consumers would prefer to virtually shop from grocery stores they were familiar with rather than an unknown grocer. This advantage will not last long as independent virtual grocers become established and build a reputation (Kutz, 1998). Therefore virtual grocers with brick facilities like Tesco will have an advantage over virtual only companies like HomeGrocer when competing in the same area due to the power of brand. Another perspective is that HomeGrocer had to exploit the window of opportunity that they have while the local Seattle brick grocers delayed adding a virtual delivery channel. This window would allow them to build and establish their brand.

It is not a surprise that trust was not as much a concern with Tesco since consumers understood the food quality was equivalent to the brick counterpart since it was being picked off the same shelves. Strong service brands reduce consumers' perception of risk in buying services, which are difficult to evaluate prior to purchase (Berry and Parasuraman, 1991).

Therefore, one aspect of the trust inhibitor *for trial* is *customer perception of the quality of the products*. Berry and Parasuraman (1991, p. 57) argue that consumers are the "sole judges of service quality." HomeGrocer relates that once a consumer has had a delivery, then the trust issues about food quality goes away. They sometimes offered a promotion of a free bag of fruit as a way to demonstrate the quality of the product without any cost to the consumer.

Virtual meal retailers' products are the restaurants and their associated menus. A major inhibitor for virtual meal retailers is to not have the *desired restaurant* on their web order entry site. Cybermeals explained an early primary focus of their business was to acquire restaurant participants for their site. "The one thing we know is that if content [restaurants] is not there you lose your consumer and you may lose them for a long time if you disappoint them."

Tesco Direct felt that the £5 delivery service charge, an aspect of price, was an inhibitor for many pensioners or other low income individuals. This concurs with the discussion in section 3.2.2. This was demonstrated by the fact that most of Tesco Direct's acquired consumers had predominantly high incomes and were PC owners.

6.2.2.2 Technology Inhibitors for Trial

There were nine technology inhibitors discussed by the cases for trial as listed previously in Figure 6.3. Some inhibitors were discussed in section 2.1.4. The following key inhibitors are discussed in this section: 1) *turn on the PC* (process), 2) *interface with retailer in a new way* and *ease of use* (participation), 3) *inability to locate product* (process), 4) *time to enter order* (process, participation), and 5) *security* (participation).

There were numerous inhibitors pertaining to the fact that the orders were placed virtually. Cybermeals argues that the first inhibitor occurs before the consumers even arrives at the website. "Trial is a matter of people actually spending time on the Internet. To give you an example, it's hard to get somebody to sit down and actually *turn on the computer* to place an order, to become aware. So ultimately we were at the mercy of other forces to get somebody to actually sit down in front of a computer. But *that is the most important thing for a trial to occur.*" Waiter.Com agrees that "the trick is just to get them to our website." This was perhaps more of an in issue in the early days of the Internet. Therefore as usage becomes more pervasive, the user will be online more and this inhibitor will be less of a factor.

Once the consumer has entered the website they now had to learn how to *interface with the retailer in a new way.* HomeGrocer stated that "[the key inhibitor to first order] is ease of use of technology plus they have to do something they have never done before in any way." As discussed in 2.1.4, the low skill base of consumers in performing e-commerce transactions is a barrier to purchasing products virtually. Waiter.Com projects that it is difficult for a consumer to initially learn how to interface with a retailer on-line. "They have to learn our interface and how you choose the food items, and it is a really hard problem. I mean the whole computer/ user interface issue, it is very hard to get it right. So what happens is you end up losing a lot of customers because it is just not easy like using

the telephone... *Ease of use*, big time, that is a major [inhibitor]." As the innovation of using the Internet to make purchases diffuses through society, this barrier will not be as significant since more consumers will be "trained" on using a computer interface. Rogers discussed the concept of innovation diffusion in section 2.1.3.

McQuirvey et al (1998a) reported that Forrester found that groceries were not likely to be the type of product that *new* Internet users would order (refer to section 2.1.4). In contrast, Tesco and HomeGrocer discovered that typically their consumers' only previous experience with the Internet had been with email and groceries were the first product they had ordered on-line. This meant the virtual food providers needed to provide *assistance with on-line ordering*, otherwise it could be a barrier to ordering as discussed in section 2.1.4.

Food items need to be *easy to find and easy to understand.* Waiter.Com has found that consumers do not always interpret abbreviations correctly. The consumer *needs to understand how to navigate the site* to find the products they want to purchase as discussed by Tilson et al (1998) in section 2.3.5. HomeGrocer states that the challenge for consumers is they have *no considerable paradigm* to work from on how to do an on-line shop.

It takes a consumer a long *time to place their first order,* which is an inhibitor (Feldman and Hornik, 1981). HomeGrocer has found that it takes their consumers 45 to 75 minutes to enter the first order and Tesco consumers take about 45 to 60 minutes. Tesco used websites reports to gather this type of data. Additionally, Tesco periodically had focus group sessions where they asked consumers how long it took to enter virtual grocery orders. In fact, it is often the consumer's perception, rather than reality, that is the more important metric.

Higgins explained that building the first grocery list from scratch was very time consuming because consumers needed to learn the menu options and navigate through the product search tools to locate the desired food items. For virtual meals, the consumer must navigate through different cuisines and select items off a menu. The previously ordered items that are electronically saved will make repeat orders faster and easier.

As consumers conclude entering their orders, they are prompted to enter their credit card information. As discussed in section 2.3.6 some consumers have trust concerns about the *security* of sending that type of information over the Internet. Tesco and HomeGrocer allowed their consumers to provide their credit card information over the phone to customer service representatives as an alternative.

In summary, there was a wide range of technology based inhibitors that the virtual retailers had discovered. Gehrke and Turban (1999) describe categories for good website design that will remove some of the inhibitors as discussed in section 2.3.5. Some of these inhibitors would diminish as ordering products electronically is diffused though society.

6.2.2.3 Traditional Retail Facilitators For Trial

The two traditional facilitators discussed by the cases were: 1) *promotions* and 2) *return policy* (product, process).

The virtual grocers offered *promotions* to encourage consumers to order for the first time. Bridgett explained that in a new catchment area, Tesco would offer free delivery for a limited period of time. HomeGrocer's promotional offering aimed at first orders also included free delivery plus a free bag of fruit. The ability to sample the produce prior to purchase could impact the inhibitor related to the food quality. The offer of a free delivery might motivate a price sensitive consumer to try the service.

The e-food retailers utilized a variety of traditional promotional channels as discussed in the previous chapters. HomeGrocer used promotions to acquire consumers and build a brand simultaneously; whereas, Tesco already had a strong brand and market share in the brick world and could utilize promotions to create awareness of a virtual channel.

6.2.2.4 Technology Facilitators for Trial

Six technology facilitators for trial order were identified from the case study: 1) *simplify user interface* (participation), 2) *help build first order* (participation, process), 3) *search tools* (participation, process), 4) *customer assistance via phone* (participation, process), 5) *order off line* (process, price), and 6) *order any time of day* (place).

According to McQuivey et al (1998b), a Forrester study found that the highest objective of virtual retailers' promotions was first time buyer conversion. They discovered providing *ease of use* was a key factor in converting first time buyers, which applies to the first four facilitators.

The e-food retailers wanted to *simplify the virtual user interface* and make it easy for the consumer to explore the products the retailer had to sell. HomeGrocer made it easy for the first time consumer to visit the website, look around, and put items in the cart without first requiring registration.

HomeGrocer's goal was to simplify their user interface by reducing the number of pages a consumer must go through to place an order. They felt this could assist in enabling both first and repeat orders. HomeGrocer also simplified their user interface by having a single checkout page. As discussed in 2.3.5.2 recommendations are for virtual retailers to minimize the number of web screens and simplify the checkout function.

Higgins at Tesco claimed that "the easier we can make it [to enter an order], the more likely they are to actually try and use it." He described how most of their consumers shop from an *electronic list of previous purchases*. They can also do product searches based on keying in the name of the food item. Virtual retailers can move the consumer through the first order by assisting them in building it through a variety of ways. Existing Tesco (brick loyalty) consumers new to Tesco Direct are assisted in creating their first on-line shopping list. Higgins explained that they compile an electronic list of all the products the consumer has purchased, at Tesco stores within a 30 mile radius, within the last three weeks. This list is presented to the consumer the first time that they sign onto Tesco Direct. This provides ease of use for the first order. Tesco has found that it is "a nice little hook."

There was also the potential of utilizing the existing brick grocery store to facilitate entering the first order. Higgins discussed how their competitor, Sainsbury, assists their on-line consumers with the first shop. A Sainsbury consumer goes into their store and is given a scanner to scan the items they usually buy which creates their first virtual list. Sainsbury sends an ID and a preloaded electronic list to the consumer. When Higgins asked their consumers if they would like this as an option they responded, "the whole point

about home shopping is that I don't have to go to the store." Tesco thinks it's a "bizarre model." Both Higgins and Bridgett strongly felt it defeated the whole purpose of home shopping to require the consumer to go to the brick store even one time and that this would probably take the same 45 minutes it takes for the first on-line virtual shop. However, if Tesco Direct offered this as an option it might remove a barrier for later adopters who are less sophisticated users.

An interesting point is brought up by Waiter.Com about *the merits of trying to assist the consumer by pre-entering their profile for the first order*. Adelberg reflected, "We were wondering if we get all those [additional] customers, are they going to be lower quality customers? I think they will be because we're actually setting them up. We'll get more customers. We'll get a bigger set but what we're getting right now is the people that make it through, the people who don't get tripped up. So those people have overcome the mountain [five orders to H]. So those people are going to stay around and do well. Whereas when we push you all the way to the top of the mountain, you may not have as good as a characteristic as someone who makes it up themselves." Therefore, it would be of interest for e-food retailers to monitor the retention rate of consumers as a function of level provided assistance.

Assisting the consumer with the first order by pre-creating the profile and a potential first order can remove a huge barrier. This specifically addresses the inhibitors of time to create first order and locate the products they want to buy. It can also positively impact ease of use in interfacing with the retailer in a new way.

HomeGrocer offered a choice of *product search* paths including a product class category hierarchy [e.g. meats] and a quick finder search engine to seek a specific product [e.g. pork chops]. Tesco claims on-line shopping is quicker than a "real shop... but it is a different way of shopping." There are a variety of ways for virtual consumer to search for food products based on the way they want to shop – by categories, specials, lowest cost per ounce, package size, or nutritional value (Kalakota and Whinston, 1996; Choi et al, 1997).

The meal retailers have organized their sites so that consumers can locate the food they want easily. Waiter.Com wants their system to be fast to navigate. Cybermeals has set up

"search by cuisine." They went through a process to determine the number of cuisine categories so that they would not be too sparse. They also alerted the viewer on how many restaurants would be listed for each specific food category.

An additional way that Cybermeals assisted with product search was to display only the relevant restaurants to a consumer. Cybermeals provided a GPS (satellite based) technology that allowed each restaurant to define what geography they would deliver to in a very specific manner. Therefore consumers would only view restaurants that would deliver to their specific location. In contrast, Waiter.Com's system listed restaurants by zip code.

HomeGrocer has found their consumers often need *assistance from customer service* getting through the first order. "I would say the broader we get, the more and more we run into people... who are less and less experienced on, I wouldn't say the Internet but using browsers... this is the first thing they've done other than email." A valuable way to assist new consumers with the first order is provide telephone assistance with customer service reps on–demand (Schubert and Selz, 1999). Customer Service on demand can address many of the e-food technology based inhibitors for first order.

There are some aspects of ways to order that are important. In the UK it is important to be able to set up the *order off-line.* Tesco offers both an off-line version and on-line method of shopping. The off-line option allows the UK consumer to avoid a potential high telephone connect charge since local phone calls are charged by the connect time. If consumers select off-line they are sent a CD-ROM which they install on their PC. They are off-line for building the order list and then on-line for the short time needed to transmit the order.

Higgins feels that Tesco needs to assist their consumers in choosing which order entry method to use to eliminate a potential inhibitor to the first order. "We know we have a problem in terms of getting people to the best method." A virtual retailer needs to minimize the decisions that a consumer needs to make in entering their first order beyond what products they want to purchase. Response rate goes down when choice is introduced. "The more alternatives you ask the customer to choose from, or the more times you require

a customer to make the same choice, the bigger the barrier is" (Peppers and Rogers, 1997, p. 139).

Being able to place an e-food order 24 hours a day was considered a facilitator that virtual ordering enabled. This feature also is attractive to their target demographics. An Austrian study found that independence from store hours was a major benefit consumers were seeking in buying groceries on-line (Schuster and Sporn, 1998).

6.2.3 Repeat Orders Inhibitors and Facilitators

Section 2.3.7 presented discussion about the importance of obtaining repeat orders from consumers. Refer to Figure 6.3 for the traditional and technical facilitators to enablers and inhibitors for repeat orders as revealed through case study analysis.

FIGURE 6.3 Comparison of Facilitators to Inhibitors for Repeat Orders

TRADITIONAL FACILITATORS	TRADITIONAL INHIBITORS
Deliver Quality Product	Desired Products not for Sale
Return Policy	Bad buying experience
Promotion	
Coupons	Delivery Charge
Personalized Offering	Delivery Time not when desired
Reminder Notices	Shopping site (displays) not fresh
Loyalty Program	Rising expectations
Reward Good (Profitable) Consumers	
Excitement in Shopping	

TECHNOLOGY FACILITATORS	TECHNOLOGY INHIBITORS
Simplify User Interface	Turn on PC
Search Tools	Go to Retailer's Website
Saved Order List	Interface with Retailer in New Way
Substitution Policy	Lack of Ease of Use
Order Any Time of Day	Inability to Locate Products to Purchase
Order in Advance	Saved Order List Too Small or Large
Order Offline	Privacy Issues
Non-PC based Ordering	Time to Enter Repeat Orders (Grocers)
Customer Service Assist Via Phone	Minimize Unfavorable Surprises
	Lack of Trust: to enter Credit Cards on-line
	Electronic Advertisements unwanted
	Rising Expectations
	Unknown Internet related

6.2.3.1 Traditional Retail Inhibitors for Repeat

There are several inhibitors for repeat orders that emerged from case study analysis. Similar to the trial orders, traditional inhibitors are *desired product not available* (product) and *delivery charge* (price) as discussed in the previous section. New inhibitors are *bad buying experience* (product), *delivery time not when desired* (product), *shopping site not fresh* (physical evidence), and *rising expectations* (participation, process).

An important point related to *Product and customer retention* is stated forcefully by Waiter.Com. You will lose your customers if you do not have the restaurants they want. It would be a "major faux pas for us. That would be death to us." Peters (1987) advocates being obsessed with listening to your consumers on a regular basis as a way to stay focused on their needs.

HomeGrocer expressed concern that their consumers might not tell them if they did not have the desired product or size. "Therefore, we might not even know were not satisfying the weekly need." As Kotler (1994) discussed in Chapter 2, to attract repeat customers, retailers should periodically survey their customers' level of satisfaction. He claims that studies have shown that customers tend to be dissatisfied with their purchases 25% of the time, and that of this dissatisfied group, 95% of them do not bother to complain which is consistent with HomeGrocers' concern.

The delivery charge, as an aspect of Price, remains an inhibitor to some consumers. As previously discussed, Tesco Direct often offered free delivery for a limited time when opening up a new catchment area so that the delivery charge would not be a factor inhibiting trial. Therefore, the true test of the delivery charge as an inhibitor emerges for the repeat purchases. Tesco found that after trying one shop some consumers have decided that for "£5 I can go and do the shopping myself." Price sensitive shoppers would be impacted by the delivery charge; however, the target demographics of the time-starved consumers are less price sensitive, as they trade time for money (section 2.1.4).

Consumers who had a *bad experience* might not reorder. Kotler (1994, p. 199) states that "the consumer's satisfaction or dissatisfaction with the product will influence subsequent behavior." Examples of bad experience could be shorts- missing items from the order, incorrect items delivered, too many substitutes, and poor quality food. HomeGrocer realized that if you do not deliver all the items that are ordered then it is a definite barrier to repeat business.

Waiter.Com felt that due to their role as an intermediary, there was very little that they could do when a consumer had a bad experience with one of their restaurants besides trying to educate the restaurants in providing a higher level of service. They felt that it was

the nature of the restaurant business and would unfortunately reflect on them. They had not yet discovered a good way to eliminate this problem. However, Waiter.Com felt that orders placed though their system were more accurate than those placed over the telephone. If consumers complained, the customer service process was involved in resolving the situation.

Sometimes consumers cannot obtain the preferred *delivery time*, an aspect of product (service), due to peak demand (e.g. holidays) or increasing number of consumers on the system. This type of situation has generated complaints from consumers. HomeGrocer claims "and we're already proven to ourselves it's a bad answer to not give the [delivery] time they wanted."

The aspect of site "*freshness*" should be considered for the retailer's website, especially for repeat visits. Similar to the way brick retailers update their storefront windows and aisle displays to keep consumer interested and motivated to come inside and shop, a virtual retailer needs to provide the analogous function. This is an aspect of physical evidence as per section 2.3.5.

6.2.3.2 Technology Inhibitors For Repeat

There were five technology inhibitors to repeat orders that were not inhibitors to trial: 1) *the amount of time to enter repeat orders* (participation), 2) *saved order list too small or too large* (participation), 3) *privacy issues* (participation), 4) *unfavorable surprises* (participation, process), and 5) *electronic advertisements* (promotion). Other technology inhibitors that were also related to trial (discussed in 6.3.2) were: *turn on PC and find retailer's website*, *interface with retailer in new way*, *lack of ease of use*, *inability to locate products to purchase*, and *unknown inhibitor*. Rising expectations is unique in that it is also a traditional repeat inhibitor (promotion related).

Repetition allows an e-food consumer to learn *how to locate products faster*. However if consumers still have difficulty locating products then they will not reduce their order time. HomeGrocer stated that if a consumer does not understand how to locate the products, then that is an inhibitor to the second or any repeat shop. It is also an *inhibitor in building their electronic shopping list*. As discussed in Chapter 2, Lohse and Spiller (1998b) point out

that a failed product search could be interpreted by the consumer as meaning that the virtual retailer does not carry the product whereas it simply might be the case that the consumer does not know how to locate it on-line.

There are negative and positive aspects of using saved order history lists. The negative aspects are revealed here. The virtual grocers were concerned about saved order lists that were *too large or too small.* HomeGrocer has found that if their consumers do not order at least 25 items on the first order that they might not save time on the repeat shops (a consumer expectation) because the saved list is too short. Consumers who have lists with 200 items or greater find them unwieldy and usually start removing items from the list. Both issues have the same result- it takes longer to enter the order, whereas the objective of using a saved list is to reduce order time.

There are *privacy issues* related to the use of the collected consumer data based on buying history. "Users must have confidence that their... privacy is inviolate (Hamilton, 1997, p. 44). The virtual grocers were especially concerned about consumers' perception on how else the data might be used. Bridgett at Tesco argues, "You can't simply talk to somebody knowing what products they buy because that is an invasion of their privacy and it's a wrongful use of data unless you've actually asked permission ... be very, very sensitive." Privacy issues are discussed in section 2.3.6.

Consumers potentially had *higher expectations* of e-food virtual retailers after they had multiple repeat orders with them. This is related to the fact that consumers understand that with electronic media e-food retailer are automatically collecting purchase data. Consumers then expect virtual retailers to use that data to provide a higher level of service. Examples mentioned were a) make product recommendations, and b) express concern if the consumer misses a shop in their regular shopping cycle.

As consumer order from e-food retailers they begin to establish an expected service level. When the consumer encounters *unfavorable surprises* related to the service it can impact future orders which is related to gaps in expectations versus implementation (Berry and Parasuraman, 1991). HomeGrocer explained that since consumers selected the delivery slot *as the last step* in the order entry process it became an issue when their preferred slot was

not available due to delivery capacity problems. Tesco was considering moving the delivery slot selection to the beginning of the order process. "If you're going to disappoint the customer you better do it up front and not take them through a load of pain and then disappoint them as well."

Virtual retailers eventually place *electronic advertisements* on their website. HomeGrocer and Tesco expressed concern about presenting ads to the consumer for products of no interest. Before Tesco placed advertisements on their website they "were a bit nervous of it because we really don't want to slow the service down and equally it's not going to be personalized in the first stage." Page loading speed issues were discussed in section 2.3.5.1. By the time of the second interview, Tesco had experimented with placing advertisements on their website. The first ad they placed was for hair shampoo and a bald consumer complained. So *unpersonalized* advertisements were still a concern.

One interesting observation Higgins shared demonstrated the immature level of knowledge that *advertisers had on web advertising* in these early days. "Now, interestingly enough, they still have this aisle perception like in the real world. So they're saying, well, on the end of the [on-line] aisle I'd like 'buy our beans'." Tesco had sold the advertisers what they requested, however Tesco understood that the advertisers would eventually request slotting- (advertisers requesting that products be displayed at the top of product search).

Trust is related to the issue of buying from an unknown retailer and the related security issues of sending credit card information over the Internet. A Department of Commerce (1998) study predicted that as consumers gain a better understanding of the safeguards related to security in electronic commerce that security issues would no longer be an inhibitor. HomeGrocer relates that the *trust issue of security* goes away with repeat orders, "when someone sees one of our trucks rolling around, even if they're not yet a customer, pretty well any concerns about credit card issues are no longer a problem." The physical evidence of the delivery trucks inspires trust that they are dealing with a reliable retailer. However, since Tesco had an established brand with their brick stores the delivery trucks reaffirmed the brand instead of assisting in establishing it. Trust issues relating to brand are discussed in section 2.3.1.

6.2.3.3 Traditional Retail Facilitators For Repeat

Forrester recommends that to entice repeat purchases: recent buyers should be sent targeted offers, frequent shoppers should be given extra incentives to return, and customers should be rewarded based on their profitability (McQuivey et al, 1998b). To address this, there are seven traditional facilitators discussed by the cases for repeat and not trial orders: 1) *deliver quality products/service* (product), 2) *personalized offerings* (promotion, participation), 3) *loyalty program* (promotion, price), 4) *reward good consumers* (promotion), 5) *coupons* (promotion), 6) *reminder notice* (promotion), and 7) *excitement in shopping* (promotion). The two traditional retail trial orders facilitators previously discussed, *return policy* and *promotion*, also apply to repeat orders.

It is important for an e-food retailer to provide *quality food products and quality service* to obtain repeat orders. Sirohi et al (1998, p. 223) state supermarket "store loyalty intentions, measured by intent to continue shopping, intent to increase purchase and intent to recommend the store, depend on service quality and merchandise quality perception." Waiter.Com projects that there is no reason for consumers to go elsewhere as long as they are doing a good job and providing the restaurants that people like. Tesco has realized a good retention rate since they "are providing a good service" and identical food that the brick consumers receive. HomeGrocer pride themselves on providing *superior produce* over what the consumer could obtain in most supermarkets. Both of the virtual grocers have a return policy that essentially makes the order right to the consumers' satisfaction.

Adelberg alleges that "one of the great things about the Internet is this whole mass customization. I mean, this is the Holy Grail, the fact that on a large scale you can give people what they want." The retailer could market to consumers based on knowledge of the type of previous purchases. Personalization could be targeted at a consumer segment such as working women or an individual level. As discussed in section 2.3.7, a personalized offering is something a virtual retailer can implement after the first order with historical purchase data. Personalized virtual marketing can improve consumer retention and provide higher satisfaction (Bloch and Segev, 1997; Pine et al, 1995).

Cybermeals asserts that one of the important things a virtual retailer should do is to "make the site relevant to each user, where they are and what they need and what they do." Tesco

has considered "doing personalization next because it seems the most appropriate thing for the consumer in terms of leading them on to their next order." For example, they would like to remove the pet food section for people without pets. The virtual retailer wants to use the virtual media to offer a superior buying experience to the consumer (Eighmey and McCord, 1998).

Food retailers can use the information they collect to increase the value (and cost) of their product to consumers. Before the advent of database technologies, it was too people intensive to gather and maintain customer preference data. By collecting the customer transaction data a retailer can deliver more personalized and consistent service for future transactions. Technology is an enabler to collect and analyze data. There is also an advantage of economies of scale since as retailers learn about consumers' wants and desires they can predict and make suggestions for other consumers with similar attributes.

Loyalty is a significant contributor to profitability therefore retailers seek approaches to motivate consumer loyalty. This also links to the virtual order cycle as a way to keep consumers motivated to stay active buyers.

There are two aspects of a *loyalty program* that the e-food retailers utilized. The first approach was the classic 'gets rewards based on the dollar amount you order' program. The second approach was consumers were loyal due to excellence in e-food product and service. Both Tesco and Waiter.Com utilized the former approach and HomeGrocer and Cybermeals followed the second. Historically, grocers have set up loyalty card programs as discussed in Chapter 3.

East and Hogg (1997) state that a loyalty program has goals to 1) encourage more sales per consumer and 2) attract new consumers. The goal of the virtual retailers was to have loyal consumers that could make repeat purchases as discussed in the virtual order cycle. Loyalty programs are one mechanism that impacts this area.

Waiter.Com has a loyalty program, called Waiter Points, where consumers earn points toward free food with any food order. The goal was to eventually offer rewards based on

event tickets (movies, theater). Waiter.Com also rewards consumers who refer their service to new consumers.

Tesco has extended their existing loyalty program to Tesco Direct consumers. However, Bridgett asserts that "I don't think these [Tesco Direct] customers are turned on by loyalty cards, so I'm wondering what effect that will have." In fact, they have found that many Tesco Direct consumers *don't bother to register for a Tesco Loyalty card.*

HomeGrocer points out that most loyalty programs were created so that retailers' could track what their consumers purchased [in the brick world]. If they were to set up a loyalty program, "It would really be a loyalty program, as opposed to please tell us who you are so we know what you are buying from us so we can do something with the information we have in these terabytes of memory here." Deering stated "with a 5 % [margin] business our preference is not to do loyalty based on discounts." Deering also commented that once you start a loyalty program it is almost impossible to remove it. So that is another reason they want to "think it out, test it out, and then do something."

Cybermeals also decided not to have a loyalty program. "Essentially our notion at the time was that the [more] service products that we had and the more content, in the sense of restaurants [that were signed up], that we had, the more value we brought to our customers. And that we were going to create loyalty out of doing that, using a technological advantage, rather than a 'me too' environment, trying to compete on giveaways." Additionally based on the revenue they would receive from the restaurants for orders "that did not leave a lot of room for loyalty systems."

HomeGrocer does not have a loyalty program. They prefer "to surprise them, catch them unawares so that they're getting a benefit without having to perform... then you have not set expectations for the future but you have gone out and caught them unaware, which is the best time for a positive experience."

As HomeGrocer has found, virtual retailers should be cautious in implementing loyalty programs because once you announce and implement one, it is extremely hard to take it away. However, it is of value to have loyal consumers since they generate higher revenues

and are willing to pay higher prices (Peppers and Rogers, 1997). Loyalty programs are discussed in section 2.3.7.

There was mixed opinion of the value of coupons in virtual retailing. "*Coupons* and price discounts... foster adverse selection, do little or nothing to inspire loyalty in new customers, and actually discourage it in old ones" (Reichheld and Teal, 1996, p. 83). Tesco planned to accept coupons but HomeGrocer did not. HomeGrocer asserts that couponing is counterproductive. They felt that coupons did not "really build loyalty". Their focus is to "offer everyday low pricing" and superior produce. However, since Tesco is focused on making the virtual shopping experience as similar to their brick experiences as possible, they feel that they must accept coupons. Tesco was accepting coupons on an informal basis, when their consumers requested it, because of their customer friendly focus.

Just as in traditional retailing, virtual retailers sometimes need to remind consumers to buy. Waiter.Com felt these virtual email reminders were an important part of a consumer retention program. They felt that the consumer had invested considerable effort in learning the order process therefore, "it is really worthwhile to give them opportunities to stay around... So what we do is we send a lot of email follow-up letters. Every time after the first order, there's a personal email that goes out: How did it go? Anything that could be better? We [send emails] when they don't order for a certain amount of time... We send out emails reminding them of their Waiter Points and reminding them of any new restaurants that have come on-line."

Waiter.Com has considered "for your fifth order you get some prize or bonus. Because once someone has gone through and done five orders then they have gotten used to our system and they use it a lot." They also had promotion for consumers who had not ordered for a certain period of time. Some promotions offered a gift certificate if the consumer placed an order by a certain date. "Anything to get them back on to the ordering procedure."

McQuivey et al (1998b), a Forrester report, concluded that some retailers had found that promotions kept their consumer coming back to their site. One virtual retailer rotated the specific products they promoted, as do traditional retailers, so consumers would over time

become more familiar with the product set. Product rotation also keeps the site fresh, as an aspect of physical evidence.

An aspect of facilitators related to physical evidence, which encourages repeat orders, is to *add excitement or interest to the shopping experience*. Higgins at Tesco argues that a virtual grocer needs to keep the consumer interested in the virtual shop. "I suppose it is like in a store. You want to keep your store a bit spicier that your competitors." Cybermeals feels there is value in presenting "intellectually stimulating" content in some way. Smith of Cybermeals provided examples of how it could be entertaining to learn how to order off a French menu or to see Baked Alaska in flames on-line.

In concurrence, Kotler (1999) recommends that to attract repeat visits, a company's web page should be appealing, contain relevant information, and be kept current. Weekly news and features are also attractions. A website that provides services that consumers cannot get from competitors builds customer loyalty (Garner, 1999). This also relates back to Porter's (1985) point on the value of differentiation.

6.2.3.4 Technology Facilitators For Repeat

There were three new technology facilitators for repeat orders: 1) *saved order list* (participation), 2) *substitution policy* (process), and 3) *order in advance* (process). One future facilitator discussed was the use of a *non-PC based ordering* appliance. Five other technology facilitators also applied to trial orders: *simplify user interface, search tools, order any time of day, order offline,* and *customer service assist via phone*.

It is important to reduce the amount of effort the customer must expend in respecifying the items they want to purchase. If a retailer can minimize the reordering effort it provides a benefit, saving time, to the consumer. It also raises the value of the retailer to the consumer, which drives loyalty. "You should never require your customer to tell you the same thing twice. The enterprise can make it irresistibly convenient for a customer to continue doing business only if it actually remembers what each customer has specified individually" (Peppers and Rogers, 1997, p. 139).

Consumers expect repeat orders to get easier and faster as discussed in section 2.3.5. At Tesco "every time you order, we build a *personal history shopping list* so that you don't need to go back [like the first shop] and search." By *reducing search costs* consumers were able to minimize the time it took to shop on repeat orders. Tesco discovered that consumers usually found the Tesco generated buying history based list to be sufficient since most people shop from about 200 items within a range of 20,000 to 30,000 offered. The Tesco generated list keeps building up as the shopper selects new items to purchase. The Tesco list was tied to the store based ordering system so if the product was not available in the fulfilling brick store then Tesco would delete it from the list. Consumers could delete items that they do not plan to purchase again.

A personalized list is customized order entry that is generated as part of *participation.* "Customization is also becoming important in service industries, where product differentiation holds the key for attracting and retaining customers... Service firms are more people-oriented and customers tend to participate actively in the service process" (Kalakota and Whinston, 1996, p. 426). Each e-food retailer would generate a unique historical purchase list for their consumers.

HomeGrocer says that a consumer's list can be generated from just one previous order. They discovered that the second shop was faster since 25 to 60% of the items ordered had also been on the first order. This meant that consumers *gained immediate value* with a saved list. "So now they are saving time" which is tied to desires of consumer demographics discussed in section 3.1.1. However, if the first order only contained a few items, the consumer would not save significant time with the second order.

While using saved lists was an improvement in time savings over the first order, the virtual grocers felt that they still needed to focus on improvement. Tesco claimed the repeat shopping time could be as low as five minutes. HomeGrocer estimated that it took 30 minutes on the second shop and 20 to 25 minutes on the third shop. Their goal was to get the repeat shop to 15 to 20 minutes, which included signing onto the ISP, going to the website, and ordering. Deering equated this to the brick shop of driving to store, parking the car, shopping, checking out, and returning home.

The virtual meal retailers also offered the saved order function so that favorite meals could quickly be reordered. Cybermeals allowed consumers to save three different addresses (e.g. home, work, and other) and five different meals for each address. "A lot of people used our reorder function so that it became very efficient for them to order from us, essentially recall a meal and just order it up... It's just a handful of clicks and dinner is ordered." Reordering from a saved list is an important component for facilitation within the virtual order cycle. The value of reordering using a saved list was discussed in section 2.3.7.

Within the ordering list, the e-food retailers allowed their consumers to *specify more details about the products* they wanted e.g. *green* bananas. Higgins explained that Tesco originally felt that this function would be important to consumers and potentially remove an inhibitor to ordering virtually. However, they discovered that consumers would use it initially and then stop after a few orders.

Waiter.Com related that "the [saved] order has all the information stored in there- all your specialties, any comments you have, light on this, heavy on that." When a consumer selected a saved order they could process a repeat order in 15 to 20 seconds using a Waiter.Com bookmark. Waiter.Com discovered that after offering this personalization feature, that they had a "big bump in retention and repeat usage. Every statistic improved... average order size, all this stuff." Customization and personalization (e.g. order lists) (Alba et al, 1997) are effective for customer retention (Wilder, 1998).

Tesco also allows the consumer to specify a *substitution policy* for items not available in the store. These substitution rules range from- substitute freely, which allows Tesco to do whatever they think is best for the entire order, to if you do not have the right product then do not substitute. Additionally you can specify substitutions on an order or individual product basis such as different brand/ same size or different size/ same brand.

There are sometimes advantages to be able to *order ahead.* Tesco could receive an order three or four weeks in advance from consumers that were going on vacation and wanted the groceries delivered just after they returned. HomeGrocer offers delivery up to a few weeks in advance. This sets up a *time shift from selecting product to receiving products* which differs from the Brick shopping experience which couples the two.

Waiter.Com and Cybermeals found that the *ordering ahead feature* was important for business group meals, especially for popular days such as Fridays. This allowed restaurant partners to make staffing decisions in advance to handle peak loads.

In the future there might be *alternative ways to order groceries that are non-PC based.* This could potentially open up virtual shopping to a wider range of consumers that do not have a PC. Tesco had developed a prototype for a hand held scanner; PDA type based grocery-ordering appliance. Consumers would scan selected grocery items from a product in their pantry or catalog of bar codes downloaded from a PC. Higgins claims that while the prototype is still too expensive to deploy, he thinks "the [consumer] demand is there."

6.2.4 Facilitators Applied to the Virtual Order Cycle

The facilitators discussed are applied to the virtual order cycle in Table 6.3.

TABLE 6.3 Facilitators to Progress to Next Stage of Order Cycle

Order Stage	**Business Process Facilitators to Progress to Next Stage**
To Order 1	• Promotions to make consumer aware of the virtual retailer's service and locate retailer's website. • Ease of use of website to locate desired products to purchase. • Availability of Customer Service by phone to assist with first order. • Assist the consumer to pre-build first order.
To Order 2 to (H-1) H= hooked order	• Ease of Use of order entry. • Ability to make repeat orders using personalized saved order list. • Fast speed to transact repeat orders. • Availability of Customer Service by phone to assist with repeat orders. • Extra personalized communication from virtual retailer.
To Order H to n H= hooked order	• Draws to the website. • On-line Promotions. • Speed to transact repeat orders. • Ability to make repeat orders using personalized saved order list. • Extra personalized communication from virtual retailer.

An excellent summarization is provided by Higgins. "I think if you say that I am replacing my [brick] shopping because this [virtual] way is going to be convenient... [However,] If at the end of the day, it is harder work and more stressful then you will just go back to your original [brick] shop."

6.3 LOCAL E-COMMERCE

This section discusses an additional model of E-Commerce that emerged from the case analysis called *Local E-Commerce*. Local E-Commerce is a subset of the E-Commerce Marketspace as illustrated in Figure 6.4. As will be further defined, local e-commerce pertains to e-commerce restricted to consumers located within a specific geographical area.

FIGURE 6.4 Local E-Commerce as a Subset of E-Commerce Marketspace

The hypothesis of Local E-Commerce as a unique category of Electronic Commerce emerged from the interview at Waiter.Com. The discovery of a new category of E-Commerce was a surprise finding of this research. As described in Chapter 4, this theory was tested against the subsequent case interviews using the grounded theory approach. As a result Local E-commerce was discovered to pertain to all four e-food retailers. E-Commerce will be defined in Sections 6.3.1 and 6.3.2. Other types of E-Commerce models are compared and contrasted with Local E-Commerce in Section 6.3.3. Growth models of Local E-Commerce that were discovered are discussed in Sections 6.3.4.

6.3.1 Definition

Local E-Commerce is a strategy path a virtual retailer can choose to exploit within the E-Commerce marketspace. Porter claims (1996, p. 68) "a strategy is the creation of a unique and valuable position, involving a set of activities." These activities relate to specific business process steps that will be described.

Local e-commerce consists of purchase of physical goods or services (food, dry cleaning services) over the Internet for a geographically restricted group of consumers. Local E-Commerce requires virtual order entry like other types of Business to Consumer E-Commerce. However, *there are geographic restrictions of where orders can be accepted from based on where consumers acquire the product*, not the location of the PC where the order was placed.

It is primarily in the three Business Process steps of order entry, order fulfillment and consumer acquisition of product and services, that Local E-Commerce can be recognized. If 1) consumers place their orders on-line (a requirement for E-Commerce) and 2) the criteria in Table 6.4 are met, then the virtual retailer is a participant in Local E-Commerce.

TABLE 6.4 Business Process Indicators for Local E-Commerce

BUSINESS PROCESS	LOCAL E-COMMERCE INDICATORS
Order Entry (based on consumer acquisition location, not location of PC where order was placed)	-Is there a specified geographic boundary (fixed or implied restriction) for order acceptance?
Order Fulfillment	-Is local infrastructure (retailers or partner) utilized as part of order fulfillment?
Consumer Acquisition of Product (physical goods) or Service: Delivery/ Pickup/ Consumer Uses on Site (one or more of these)	DELIVERY: -Are delivery firms localized? Are there restricted distances between place of order fulfillment and delivery location? -Does product quality require that it is delivered within a short window of time (and optionally require a specialized delivery vehicle)? PICK-UP: -Is local pick-up an option from product fulfillment location (restaurant) or designated local surrogate sites (petrol station)? ON- SITE "USE": -Can consumers, after virtually pre-ordering their products or services, go to place of order fulfillment and use service there (eat food at restaurant, use gym equipment at reserved time)?

All the e-food virtual retailers, represented by the cases, focused on a specific local market or a collection of local markets. The Webster Dictionary (1972, p. 313) defines local as "occurring in or particular to a specified place."

Local markets are usually thought of as pertaining to traditional retailers such as grocers described in section 3.2.1. In fact one of the characteristics of a traditional supermarket is a geographically bound specified trading area (Goldman, 1975-1976). This point is supported by East and Hogg (1997, p. 57) "supermarket use is heavily dependent on the

accessibility of the store" and Traill (1997, p. 401) "food retailing (and catering)... has to be situated near to consumers." Since (traditional market) food is perishable it dictates a *local market* (Keh and Park, 1997).

E-food also dictates a local market. Malone et al (1987) describe how an aspect of some products is *time-specificity*. This relates to e-food since there is a dependency on the product reaching the consumer within a specific period of time so that the food will not spoil. Therefore, time specificity of product is an attribute of some local e-commerce products. However, local e-commerce can also include non-time specificity *local* products or services such as order and delivery of dry cleaning service and video rental with delivery. On the other hand, it could be argued that since the consumers that order these local services expect them delivered at a specific date or time that there is a time specificity aspect to them even though they do not spoil.

Local E-Commerce is an *aspect of Place* as discussed in section 2.3.4. E-Food brings the store to the consumer, the ultimate convenience. As per Kotler (1997b) there is correlation between Place and convenience. In Local E-Commerce the market focus is within a specific geographic radius due to *restrictions related to the consumer acquisition method.* It is true E-Commerce in that the product order is placed over the Internet.

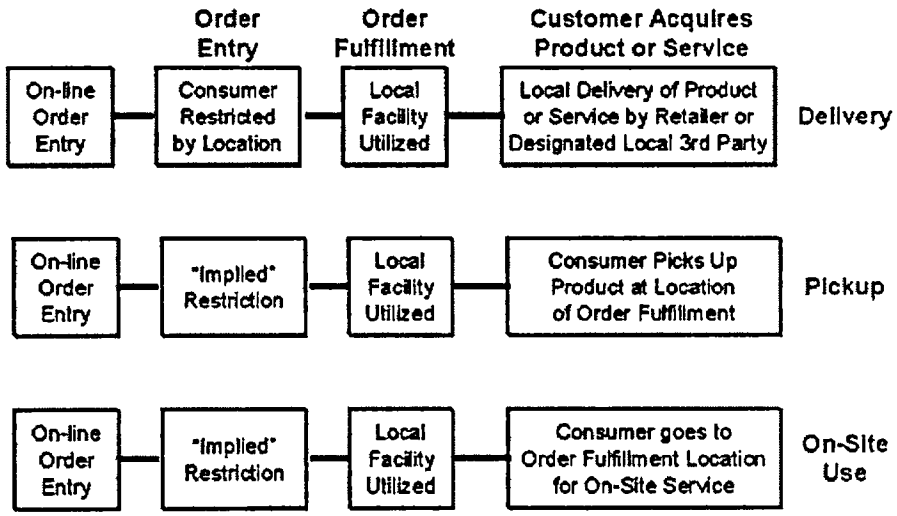
It is interesting to note that in 1967, Dommermuth and Cundiff (1967, p. 36), projected that for categories of products there is a diminishing desire to leisurely shop but to quickly purchase. They argued that there was potential for "a catalogue purchasing service conducted on a location basis in an urban area, offering fast delivery and ease of ordering." Local E-commerce utilizes the technology of the Internet to fulfill on their projection of location basis convenience shopping.

6.3.2 Indicators of Local E-Commerce

The four cases implementing e-food spoke of their local market. Cybermeals spoke of *geographic boundaries* on their market. "Ultimately this is a localized market." Adelberg of Waiter.Com actually called it "Local E-Commerce". "We like to think of it as local E-Commerce. [Amazon] is just regular sort of E-Commerce, just mail-order... When I say 'local' I mean within a certain physical geography. Because people spend, actually the

statistic is 70 to 80% of the money they spend is within five or ten miles of their home. So this is a whole range of stuff that they're sort of consuming in that area and so it's trying to help them to get a better deal, get more information, and get more bang for their buck that they spend in that area." To summarize, Figure 6.5 represents the indicators presented in the previous section.

FIGURE 6.5 Three Indicators of Local E-Commerce



These three conditions are necessary for Local E-Commerce. Tesco, HomeGrocer, Waiter.Com, and Cybermeals all met these criteria. Table 6.5 compares the cases to the Local E-Commerce criteria.

TABLE 6.5 Cross Case Comparison of Local E-Commerce for E-Food Retailers

BUSINESS PROCESS	HomeGrocer	Tesco	Waiter.Com	Cybermeals
Order Entry	Restricts by zip codes	Restricts by catchment area for each store	Geographic restriction, primarily within the Bay area	In specific cities in the USA
Order Fulfillment	Local warehouse for inventory, picking	Local store for inventory, picking	Local restaurants for meal preparation	Local restaurants for meal preparation
Consumer Acquires Product or Services	-primarily local delivery -optional pick up at their HQ warehouse	Local delivery only	-pick-up at restaurant -some limitations on local delivery -consumer can consume pre-ordered food on restaurant premise	-pick-up at restaurant -some limitations on local delivery -consumer can consume pre-ordered food on restaurant premise

Local E-Commerce retailers that offered home delivery place restrictions on the consumers that they accepted on a geographic basis. One of the first indicators was that *they only accepted orders from consumers within specific local geographic locations*. (In the virtual grocers' case this was based on distance from the *local* grocery fulfillment center to the *local* consumers' home.)

For example, for each new pilot store Tesco would define the limitations of the delivery area. When a consumer entered their website they would be asked to enter their home address. According to Higgins the consumer would receive a message in response that said "yes you can shop or no you cannot". Indicators such as this are a strong indication that the retailer might be part of Local E-Commerce. Tesco obtained reports from the Customer Registration System that tracked the request to shop that were denied.

There was an *implied restriction* for meal pickup based on the distance the consumer was willing to drive. (These implied restrictions are similar to the distances a consumer is willing to travel to shop at a traditional grocery store as per section 3.2.1). The restrictions on meal delivery were based on where the restaurant or designated delivery services were willing to drive. If consumers of the Virtual Meal Retailers wanted delivery they would be presented with restaurants that would deliver to their location. For Waiter.Com the presentation of restaurants was based on the zip code of the consumer's delivery area. Cybermeals used sophisticated GPS (satellite based) technology to display only the restaurants that could and would deliver to the consumer.

The e-food retailers selected locations based on Internet penetration density as described in Chapter 5. Consumers who own or have access to Internet connected PC's, as of the timeframe of this research, were typically of high socio-economic demographics. Early adopters of the Internet will typically have a higher income level and demand personalized services (Kotler, 1997a). Since local e-commerce is associated with specific geographic areas, it would follow that geographies with high Internet penetration should be the target areas for local e-commerce services. Over time, as diffusion of the Internet occurs, more locations will be candidates for local e-commerce.

The E-food retailers' implementation of Local E-Commerce included both: 1) fulfillment by virtual retailer in-house or 2) intermediary role. The virtual grocers' implementations were totally *in-house*. The Virtual Meal Retailers were in the *intermediary role* for Local E-Commerce. They had selected brokering of local meals as their service. They matched *local* consumers with *local* meal providers. Local Meal Providers that participated had a local physical restaurant. The difference between an intermediary and in-house local virtual retailers, as revealed by the cases, was in their implementation of order fulfillment and consumer acquisition steps of the Business Process Model.

Not all virtual grocers participate in Local E-Commerce. An example is NetGrocer based in New Jersey. Their inventory includes typical grocery store product lines but excludes perishable items. Their orders are sent via a mail service, without local geographic restrictions. E-commerce via mail is discussed in the next section.

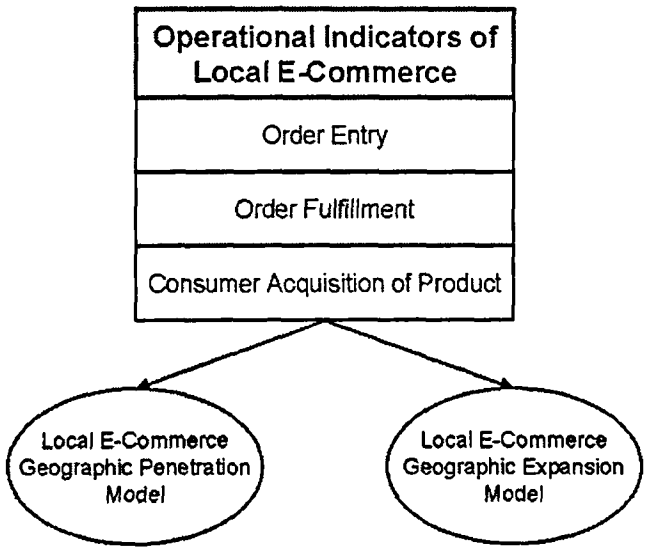
Local e-commerce can apply to other products and services that restrict their market to a local geography. A local flower shop could set up a local e-commerce operation. As discussed by Waiter.Com, any local facility that have items that can be reserved by time over the Internet are candidates for local e-commerce. Golf tee times and reservation of gym equipment are examples where the consumer would travel to the facility to acquire the service. A local video rental delivery service (Kozmo.com) is an example of local e-commerce delivery service. Another example of a non-case local e-commerce retailer is HomeDelivery.com located in New York City. HomeDelivery.com is an intermediary that provides a range of local services to local consumers such as purchasing food and dry cleaning service. "They allow local retailers to list their services on Home Delivery's site.

HomeDelivery.com handles on line site promotion and order entry. Local retailers completes the transaction which includes delivery to the consumer" (Hanover, 1998, p. 168).

To summarize, the following four items further characterize Local E-Commerce. These concepts are demonstrated by the cases. They are summarized in Figure 6.6:

1. **Local E-Commerce has special characteristics that make it a unique subset of E-Commerce.**
2. **Both intermediaries and in-house virtual retailers can implement Local E-Commerce.**
3. **Indicators for Local E-Commerce can be found in three of the Business Process Steps.**
4. **There are two distinct growth models for Local E-Commerce Retailers: Local E-Commerce Geographic Penetration Model and Local E-Commerce Geographic Expansion Model.**

FIGURE 6.6 Local E-Commerce Business Process Step Indicators and Growth Models



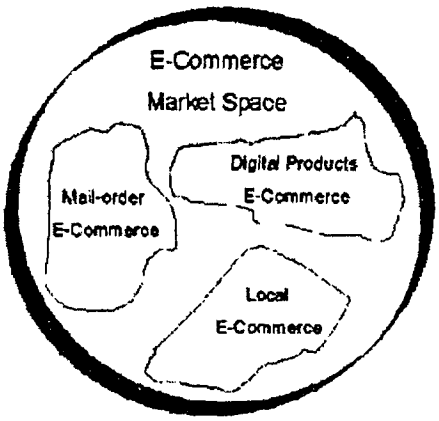
To summarize, the core characteristics for e-food Local E-Commerce are: order entry is on-line, there is a physical product (groceries, meals), a physical place is required for order fulfillment, and one of the three consumer acquisition methods described is utilized. Perishable products are suited to Local E-Commerce. If the perishability of the product can be reduced by the use of a specialized shipping container then it can be part of mail order

E-Commerce. Ready-to-eat meals are part of Local E-Commerce since they have a very short lifetime even with a specialized container. .

6.3.3 Local E-Commerce Comparison: Key Business Processes

Now that the model of Local E-Commerce has been defined and explained, it will be compared and contrasted to other E-Commerce models described in the literature to further illustrate its differences from them. Figure 6.7 positions Local E-Commerce relative to other E-Commerce models.

FIGURE 6.7 E-Commerce Models



A discussion of E-Commerce product categories in the literature was reviewed in Section 2.3.1. Product and service characteristics are an important factor in E-Commerce (Strader and Shaw, 1997). Product types include digital information, physical goods and service related (Bakos, 1998; Peterson et al, 1997). Current literature describes categories of E-Commerce that include 1) digital products sent electronically to consumers or 2) physical products mailed to consumers (Bakos, 1998; Whinston et al, 1997).

To be considered part of E-Commerce, the order has to be placed on-line. Distribution methods differ. The digital product is delivered electronically to the consumer. The physical product is shipped to the consumer by mail or other transport. The 1) *digital product* or 2) *physical product sent by mail* categories of E-Commerce imply a *global market.* This reflects many of the e-commerce firms discussed in the literature. Refer to Table 6.6 for category comparison.

TABLE 6.6 E-Commerce Categories

E-Commerce Category	**Product Type**	**Consumer Acquisition Method**	**Geographic Market Focus**
Digital E-Commerce	Digital	Electronically	National or Global
Mail Order E-Commerce	Physical	Mail Service	National or Global
Local E-Commerce	Physical	Local, not mailed	Local

Bakos (1998) argues that geography is becoming less important with the advent of E-Commerce. This may be true for products that are distributed electronically and products that are transported over distance by mail services. However, for the subset of E-Commerce that this research is defining as Local E-Commerce, geography plays a very important role.

Tesco described how their food product offerings differed on a regional basis (black pudding) and a store basis, which reflected the desired products of that specific local catchment area. To support this point, Traill (1997) states that food consumption trends differ between consumers in different countries, even when they belong to the same lifestyle segments. Therefore it could be argued that the more the products and services are tied to consumption or use within a locality, the greater the opportunity for local e-commerce for those product sets.

Angelides (1997) argues that their image and not their geographic location will identify companies on the web. However, as was suggested in section 2.3.5, a website needs to communicate with the consumer in their own language (Knoppers, 1998). Local e-commerce retailers will naturally present their products and services on the website in the target region's language. Whereas most virtual retailers' websites typically use the English language (Palumbo and Herbig, 1998). Local website image is especially important for Europe, as a collection of local markets, with their cultural and language differences (Business Europe, 1998). It could be concluded that local e-commerce is well suited for Europe in areas with high Internet density.

Pritchard (1999) discusses a reference to the globalness and localness of corporate (non-commerce) websites. He states that with the Internet, space is a factor of the relation of the consumer's computer and cyberspace, which has no reference to physical distance. In a

discussion of corporate brands, he claims that corporate websites have a dilemma in exploiting the global reach of the technology while promoting the brand to the local consumer. Therefore he recommends both global and local message content related to the Brand on the website. Local e-commerce is concerned with the local Brand of the company and the local content of the website.

It would be expected that Local E-Commerce retailers would have a deeper knowledge of their local geographic marketplace than globally focused E-Commerce retailers that happen to acquire consumers in the same area would. This local knowledge could include local community events, activities, and products and services of interest to the consumers resident in that area. There is a distinct market for the virtual retailer who seeks to focus on the local community marketspace.

However, Porter (1997) claims that when a company can access anything from a distance then location is no longer a competitive advantage. Since virtual retailers can reach consumers in all geographies it could be argued that the local e-commerce retailer could not sustain a competitive advantage. Hypothetically, if globally focused e-commerce retailers could purchase local information and put it on their website would that level the playing field with local e-commerce retailers? It could be argued that local e-commerce retailers have a defensible position since not only do they have local knowledge but also *they have local services with a local Brand.* The virtual grocers spoke of the major local logistics and infrastructure that they had to put in place to offer their service. The virtual meal retailers as intermediaries had discussed the effort to sign up local participants for their site. There is a major difference between a website with local information and another with local products and services. Therefore it can be argued that local e-commerce is defensible.

The following Table 6.7 contrast Mail order E-Commerce and Digital Product E-Commerce with Local E-Commerce in respect to the three key business processes steps described for Local E-Commerce.

TABLE 6.7 Categories of E-Commerce

Product Type	**Digital Product**	**Physical Product**	**Physical Product**	**Physical Product**	**Physical Product**	**Service**	**Service**
Distribution	Email Product	Distance Delivery: Federal Express type, or post office	Local delivery: in-house or local delivery services	Local pick-up	Consumer goes to physical place at reserved time, to use service (restaurant meal)	Consumer goes to physical place at reserved time, (use gym equipment, golf tee times)	Service retailer goes to consumer location or designated place to perform service (mow lawn, wash car)
Retailer Restricts Orders By Geography Related to Acquisition Location	No	No	Yes	Yes	Implied restriction, consumer must be willing to travel to the specified physical place	Implied restriction, consumer must be willing to travel to the specified physical place (could travel long distance for a golf tee time)	Yes
Local Infra-structure Required For Order Fulfillment	No	No	Yes, in-house or partner	Yes, in-house or partner	Yes, in-house or partner	Yes, in-house or partner	No
E-Commerce Category	Digital product (sent digitally) E-Comm.	Mail order E-Comm.	Local E-Comm.	Local E-Comm.	Local E-Comm.	Local E-Comm.	Local E-Comm.

Another difference between the global and local virtual markets is the consumer acquisition method. The driving force for e-food logistics for all the grocers and some cases of the Virtual Meal Providers was delivery. A local delivery infrastructure that transported food was an additional cost to the retailer. For food products the high cost of transportation would be a barrier to very long-distance trade due to perishability and

bulkiness of products (Traill, 1997). The e-food retailers' transportation costs included hiring in-house drivers or outsourced delivery services. Additionally, the virtual grocers had purchased a fleet of temperature controlled vans which added to this transportation cost.

Food has to be consumed or received by the consumer within a limited time frame. For a hot meal, it is a shorter time span than for groceries. Many of the groceries must be stored in a temperature controlled holding area or vans. Supermarkets are experts on many aspects of transportation and inventory logistics. Therefore, some of this expertise could be transferable in developing efficient delivery systems to transport goods to the consumer within the e-food operation. However, door-to-door delivery is different in granularity than the logistics of taking food from depots to various stores.

A food aspect of mail order E-Commerce could be ready-to-heat meals in specialized containers that extend the perishability of the food. *Mail-order E-Commerce does not have specific geographic boundaries*. For example, Amazon.com does not restrict orders by geographic location. They might set up regional distribution centers to speed up the delivery process but local infrastructure is not required. Consumer pick-up also is not an option for mail order E-Commerce because of the infrastructure and local personnel required to support it.

6.3.4 Local E-Commerce Expansion Models

"The expectation of an entrepreneurial innovation is initial acceptance of the service concept followed by increasing customer demand. The need to expand a successful innovative service is often thrust upon the owner by the pressure of market potential and the desire to protect the service concept from competitors by building barriers to entry" (Fitzsimmons and Fitzsimmons, 1994, p. 329). Factors for expansion, in the e-food marketspace, include the location and quantity of geographic sites to participate in and the breadth of the product line or service.

The e-food businesses started with a single service (food: meals or groceries) in a single location. As described in the pervious chapter, the e-food retailers carefully selected the geographic area into which they would market. They required a high Internet density

within the specific local area. This aspect, along with the growth models to be discussed in this section, supports the case of Local E-Commerce.

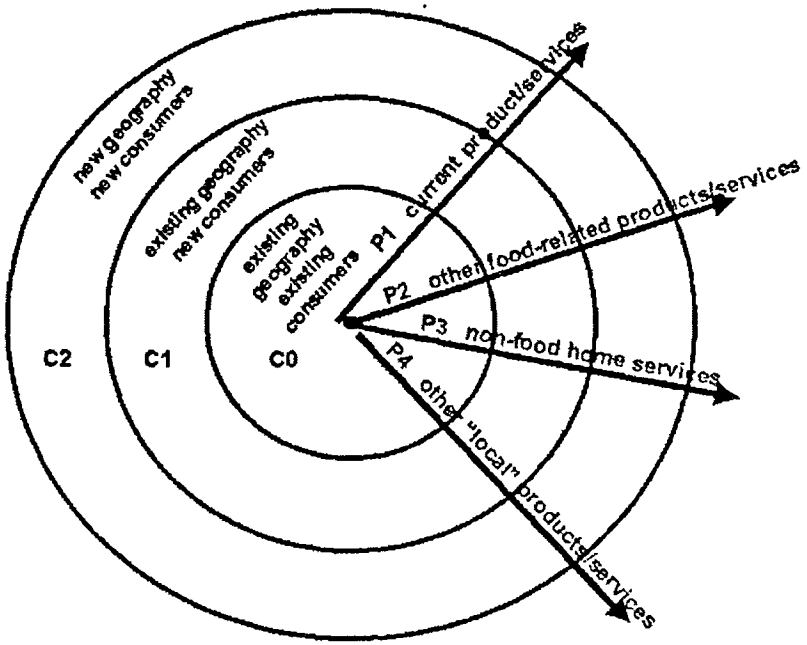
Section 6.3.4.1 describes all the growth options discussed by the cases. The cases' growth plans then are categorized into one of two types of expansion models for Local E-Commerce presented in Section 6.3.4.2 and 6.3.4.3: the *Local E-Commerce Geographic **Penetration** Model* and the *Local E-Commerce Geographic **Expansion** Model.* Intermediaries or non-intermediary virtual retailers of local markets can participate in either growth approach as will be described. Additionally, two of the cases described potential growth plans in the mail order E-Commerce marketspace as discussed in 6.3.4.5.

6.3.4.1 E-Food Expansion Model

The e-food retailers described plans for product and market expansion considerations. During the interviews, a chart representing potential growth expansion plans was shown and discussed. Ansoff recommended a way of diversification. This chart was based on Ansoff's product/market expansion model discussed in section 2.3.3. The chart was modified through the series of interviews. This grounded theory approach was described in Chapter 4. The growth axis related to expansion of products and services and the circles corresponded to expansion of the consumer base within specific geographies.

The final representation of the e-food retailers considerations for expansion as described by the cases is displayed in Figure 6.8 where "C" represents consumer expansion and "P" represents product and services expansion. C0 and C1 relate to Ansoff's current market and C2 relates to the new markets. P1 corresponds to Ansoff's current product grid while P2, P3, P4 are areas of new products.

FIGURE 6.8 E-Food Expansion Model



C0: The inner circle represents *existing consumers within the existing geography.* One aspect of Local E-Commerce growth is to market the existing services to existing consumers in the current geography. Goals include more frequent orders and increased total revenue per existing consumers.

C1: The second circle represents *new consumers within the existing geography.* Growth in this segment utilizes existing local physical infrastructure and partner service base. Goals are to generate more revenue within the existing geography through consumer acquisition.

C2: The third circle represents *new consumers in new geographies.* Growth in this segment requires setting up *local* physical infrastructure or securing *local* service partners whom have *local* physical sites. Goals are to generate more revenue through consumer acquisition.

To reiterate a point made in Chapter 2 that discussed the innovation adoption process, "An innovative product should be targeted at the segment that needs it most, and at the

innovators and early adopters within that segment, rather than the mass market" (Brown, 1992, p. 70). Therefore the new consumers targeted in C1 and C2 should focus on the busy time starved, cash rich consumers discussed by the cases and the working women described in Chapter 3.

P1: This axis represents the *current food product set with related extensions*. For the Virtual Grocers it is the expansion of current grocery product line including corresponding product sizes. For the Virtual Meal Providers is the current set of restaurant meal providers.

This axis also includes an expansion within the current product set. For the grocers, it could be adding more sizes of existing products, such as now offer the 16 ounce size of baked beans for a specific brand or extension within a product lines such as more brands of wines. It also includes expansion into other types of grocery food lines such as ready-to-heat meals. For the Virtual Meal Providers expansion in this category is adding more restaurants that reside within the current geography.

P2: This axis represents an *expansion within the existing related industry segment- food*, but into a complementary service or product set. For example, it could be virtual grocers now providing ready-to-eat meals or setting up reservations at restaurants for consumers. For the Virtual Meal Providers it could be expansion into ready-to-heat meals product line or into virtual groceries either in-house or via a partner.

As described in Chapter 3, grocers are expanding into ready-to-heat, ready-to-eat foods, and catering (Food Marketing Institute, 1998a), in response to the needs of the time-pressed consumers (Kahn and McAlister, 1997; Abass, 1996; McGovern, 1998). This places grocers in competition with restaurants (Keh and Park, 1997).

P3: This axis represents an *expansion into products and services beyond food but within the home services categories*. The home services are provided on a local basis. Examples of expansion into this area could be dry cleaning pickup and delivery or videotape rental. This category seeks to add convenience or save time for the busy consumer by outsourcing household chores or typical errands. Streamline of Boston is an example of a virtual

grocer who has expanded along this path. Traditional grocers have added in-store services of film processing, video rental and financial services (Keh and Park, 1997). The e-food retailers could also expand into these services. If their approach is in-house then they will need to solve the new logistic processes. If outsourced then they need to monitor the quality and reliably of the process.

P4: This final axis *expands beyond food or home services but is still focused into local community products or services.* Three examples are presented. 1) *Local plan ahead services*: This could include on-line reservations for golf tee times at a local golf course or reservations for specific equipment at a local gym. 2) *Local plan ahead events:* This would encompass on-line reservations to local classes or events. Examples are tickets to local movies for a specific show at a specific time or on-line reservations for local classes or seminars such as a local wine course, cooking school, and art class or computer class. 3) *Local products:* Products inventoried locally and available for consumer acquisition through one of the three methods defined in the local e-commerce model. Perishable products within a local environment are good candidates for Local E-Commerce.

As e-food retailers expand their products and services they can choose to perform them in-house or out-sourced. However, as a firm outsources or enters into strategic partnerships, it will likely encounter a new set of potential competitors (Quinn et al, 1990). The e-food retailers must continue to analyze the competitive landscape as they expand their product range.

The cases discussed their expansion plans in reference to the above model. The following discussion applies the Ansoff influenced model against the four local e-food retailers' commerce cases' expansion plans.

Waiter.Com was currently focused on expansion in P1, adding more restaurants within their current geography. They were focused on consumers in C0 and C1, current **local** consumers ordering more frequently and adding consumers within the existing geography. Waiter.Com also discussed potential plans for adding services as per P2, P3, and P4.

Waiter.Com described why their primary focus was on expanding the number of restaurants within their existing **local** geography, the P1 axis. "*You do a better job if you have more restaurants in an area and more customers in an area rather than being spread out.* It's more efficient for us and then the restaurants are happier because they get more orders... It's better to get more money from fewer customers than less money from a lot of customers. It's just easier to manage." A potential P2 product expansion they considered was partnering with Peapod virtual grocer to cross reference food orders, meals and groceries.

Waiter.Com explained some of their reasons for expanding via a P3 or P4 product extension approach rather than geographic expansion. "***We're a local business.*** Because everything that we focus on mainly is sort of local. This is all a **local** service, I mean, that seems to be *our point of differentiation.*" Waiter.Com felt that focusing locally was a competitive positioning against firms with a strong virtual brand such as Amazon.com. They also stated another strength was "Once you get to a certain point and you have a lot of people locally then you become almost like the local newspaper or the local media and you have what we call *steerage power.*" They could steer consumers to specific restaurants or promotional offerings. "So once you go deep in a market, you definitely have the ability to steer people in." To add business to existing retail partners, Waiter.Com would remind consumers of current product and services available that they might be interested in based on the consumers buying history.

Waiter.Com planned to use relationship marketing in product expansion, P3 and P4. "One of the things we thought about is if you have **a local area** where you have a *relationship with a lot of people* because you've built it up though the restaurant and the food, think about the other services that they can do in that area- the car wash or the car service or the dry-cleaning or the movie theater, the video rental store- and if there is some way to deal in the information side of that." They planned to identify and develop future services of value to their consumers based on past purchases and known demographic data. Streamline of Boston had a model based on all the services they could do for the consumers within a specific geographic area.

P4 product expansion plans could include: "We're in the *'order ahead' business* more that we're into anything else. What are the things you like to order ahead for and have it delivered to you?" They considered the value of on-line reservation of gym equipment time slots, golf tee time, or tickets to local events to their consumers. Overall, they envision their product services segment as in the "making life easier business. So it's how we can make people's lives better, easier, faster."

Waiter.Com had considered C2, new geographic expansion. They were considering expanding into other California markets from their San Francisco base. The selection of markets would be based on demographic factors discussed in Chapter 5. Expansion into new markets required signing up *local* restaurants and *local* consumers.

HomeGrocer said that their first goal was in the area of C0, to increase the frequency and size of orders from their existing *local* consumers. As discussed earlier, they wanted to be the primary shop with a repeat frequency of seven to ten days. They still expected consumers to pick up their incidental groceries at local brick grocery stores. Having superior produce quality over the brick grocers was however a differentiator that would retain consumers and encourage repeat sales.

For product expansion, P1, they planned to expand their current product line of 8,000 items to 12,000 items. Some of these new products represented more ready-to-heat meals which would be valued by time starved consumers described in Chapter 5. HomeGrocer stated we "definitely are going more and more towards meals."

Their geographic expansion into new areas, C2, was focused on the West Coast including Oregon and California. Expansion into these geographies would require a new **local** warehouse, a **local** fleet of delivery trucks and sign up of **local** consumers.

The focus of Cybermeals business expansion plans were in C0, C1, C2 and P1. All product and services plans discussed were related to their current food services. They had no plans outside their current restaurant meal product line. The first area they focused on was C0, "more products to the same customers." The second area of focus was, C1 and C2 more new consumers in each *local* geography of focus. They claimed, "this is a customer

acquisition game in the early days, bottom line be damned... Every customer in almost every industry is up for grabs!" Their C2 "geographic expansion" was into other major cities and college towns in the USA.

Cybermeals also planned to grow within their existing local geography, P1, by adding more restaurants. Extension of product and services, P2, were adding on the dine out function (restaurant reservations), and expanding the catering or group meals function. "Our plan was to support all the functions for meal providers in the top three categories: ready-to-eat, ready-to-heat and ready-to-cook."

Tesco Direct described expansion plans in C0, C1, C2, P1, P2, P3, and P4. However, their focus was on growing their grocery delivery services into other cities that had existing Tesco stores, C2, as well as adding consumers in existing pilot locations, C1. Tesco spoke of expansion for virtual groceries by **local** catchment areas, C2. "We're going to expand the catchment areas, it's going to extend market share, and it's going to extend share of wallet." (Note that in 1999 Tesco announced that they would roll out Tesco Direct throughout the UK. Consumers for this service will continue to be accepted *based on where they reside in relation to store fulfillment locations*, as previously described).

Bridgett at Tesco discussed some potential product growth plans in the P2 food product area based on skills they had gained in perfection of logistics and delivery. "So we are now very interested in the whole take-away food market because that is a growth market."

Tesco has to balance their expansion plans on the impact of their other channel of brick stores, which is different, from the other three virtual only cases. This is related to the previous discussion of cannibalism. Higgins says there is a concern about how the London stock market analyst would perceive the increase of virtual grocery shopping and the decrease of Tesco brick stores. He projected that over time the brick stores could have a large back area devoted to home delivery and a smaller retail area focused on the in-store shopper.

6.3.4.2 Local E-Commerce Growth Perspective

Building upon Keen's (1988) Model for Reach and Range, a model for E-Commerce reach and range was developed that applies to Business to Consumer Virtual Retailers as per Table 6.8. In the case of E-Commerce, *Reach* refers to the consumers, within their related geographies, that have access to the virtual retailer's services. *Range* pertains to the categories of products or services that are available via a virtual order. The model was shown in Table 6.8 which is also *another way of presenting the concepts represented by Ansoff and the e-food expansion model* presented in Table 2.1. Ansoff's product category equates to the Keen's range axis and Ansoff's market category relates to Keen's reach axis.

TABLE 6.8 Reach And Range Framework For E-Commerce

RANGE: (of products and services)

REACH:	Core Products/ Services= 1	Expansion within core products/ services=2	Expand (higher family level) related industry product/ service line=3	Expand into unrelated product / service line=4
Existing Consumers/ Existing Geography=E	E1	E2	E3	E4
New Consumers/ Existing Geography=N	N1	N2	N3	N4
New Consumers/ New Geography=G	G1	G2	G3	G4

RANGE: Bakos (1998) suggests that sellers in electronic markets should seek to differentiate their products. One way for E-Commerce retailers to differentiate themselves is by the collection of local services and products they provide to their consumers. Business expansion along the Range axis can be similar for the three different types of E-Commerce models. Levels one through four represent the progression of product and services range expansion.

REACH: Local E-Commerce retailers and the other E-Commerce models of mail order and digital products differ in how they implement Reach expansion. A key difference discussed was that in Local E-Commerce local physical infrastructure was put in place for order fulfillment or local partners with local infrastructure were secured.

6.3.4.3 Local E-Commerce Geographic Penetration Model

The *Local E-Commerce Geographic Penetration Model* is one of the two growth models for Local E-Commerce represented in Figure 6.9. Expansion for this approach is characterized by going deeper within a specific geographic area. Two aspects can represent this growth. One aspect of growth is adding more consumers within this specified geography. Second, by expanding the products or services either in-house or as an intermediary by adding local partner service or product providers.

Waiter.Com follows this growth model. Waiter.Com plans to offer many services of which the first one is e-food. Their focus is to *go deep* within their current geography with additional products and services instead of expanding into other geographies. Waiter.Com plans to focus their growth within their current local geographic "Bay" area, which consists of cities and towns in the San Francisco and San Jose area.

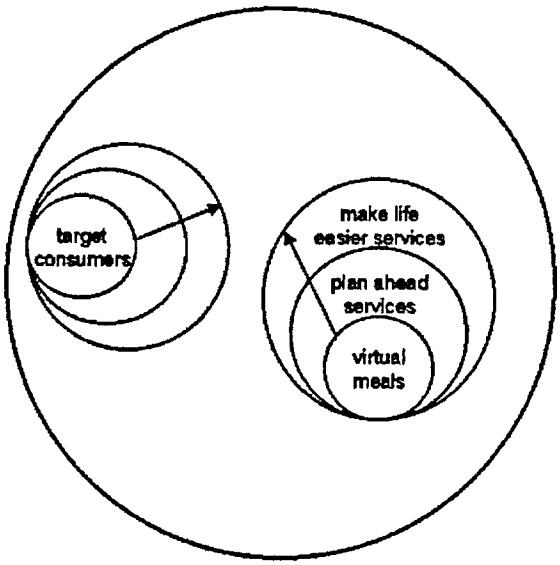
Waiter.Com as an intermediary with a Local E-Commerce Geographic Penetration focus, analyzed both the needs of local consumers and the pool of local retailers available in their selected local geography. Then Waiter.Com could then select the next business opportunity to exploit. Waiter.Com discussed the potential service of reservations of gym equipment for specific times. So there is an implied restriction for location via order entry- how far consumers are willing to travel. There is local infrastructure involved for fulfillment and the consumer travels to point of service to consume on-site.

Waiter.Com's service expansion is based on their knowledge of their consumers in addition to their familiarity with the businesses in that local area. They have discovered so far that *businesses that already take orders* for food *over the phone* have an affinity for participating in their service. Perhaps Waiter.Com might focus on locating other types of businesses, in their local community, that also take orders over the phone for a service expansion area. It would be a natural next step; as Waiter.Com said, they are in the *plan ahead business.*

For Waiter.Com to be successful with a geographic penetration growth strategy for Local E-Commerce they will have to have to emphasize their local presence – associate their

brand and image with the community- such as sponsor local sports teams, etc. The Waiter.Com growth model is presented in Figure 6.9.

FIGURE 6.9 Waiter.Com Expansion



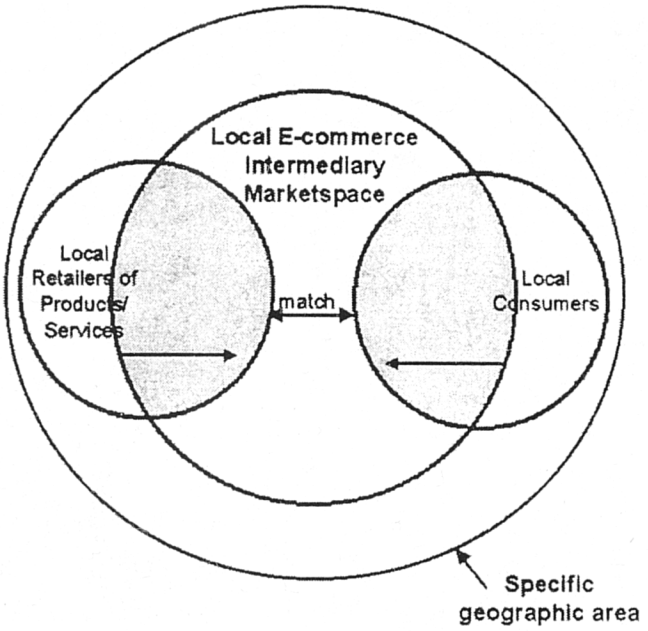
Virtual Intermediary retailer in California Bay area

An aspect of the Local E-Commerce Geographic Penetration Model, when implemented by intermediaries, is that each of the partner local retailers that the e-commerce intermediary retailer virtually represents, will have a specified and potentially different geographic area of service. Therefore, there is a specified overall local geographic area that the intermediary virtual retailer covers for Local E-Commerce. Additionally, each of their local partner retailers can specify a subset of geographic service area within the intermediary virtual retailer's geographic reach. It can be different for each partner. From the consumer's perspective, each individual home address, neighborhoods or business building, could have a different set of services that are virtually locally available. Refer to Figure 6.10

This approach is consistent with Quelch and Klein's (1996, p. 66) argument, "There are new opportunities for businesses to serve primarily as market makers, assisting buyers and sellers in locating one another, in negotiating terms of trade, and in executing secure transactions."

Additionally, "Internet marketplaces are... fostering new types of intermediaries that create value by aggregating services and products that traditionally were offered by separate industries" (Bakos, 1998, p. 38).

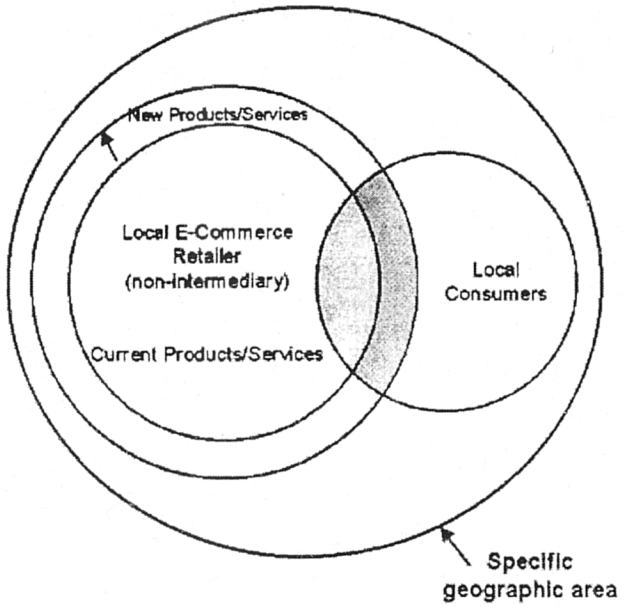
FIGURE 6.10 Intermediary Growth within Local E-Commerce Geographic Penetration Model



In Figure 6.10 the large circle represents the fixed boundary of the local geographic area. The Local Retailers circle represents the potential group of existing retailers resident in the geographic area that are potential for the intermediary virtual retailer to recruit. The shaded section indicates the (e.g. restaurants) retailers that are currently participating with the intermediary virtual retailer. The local consumer circle represents the pool of consumers that live or work in the local geographic area. The shaded area represents the current consumers of the virtual intermediary.

The Geographic Penetration Model is not restricted to Local E-Commerce Intermediaries. It also applies to in-house virtual retailers as represented in Figure 6.11.

FIGURE 6.11 Non-Intermediary Growth within Local E-Commerce Geographic Expansion Model



Growth of non-intermediary virtual retailers for Local E-Commerce Geographic Penetration Model is represented in Figure 6.11. The inner circles are adjoining since it is a non-intermediary approach. The outer circle represents the boundary of the local geographic area. The shaded area represents the current local consumers of the virtual retailer. The consumer circle will shift left to overlap the product circle as more consumers in that geography are acquired. The product/services circle will expand as product lines are expanded for current consumers in the geography.

6.3.4.4 Local E-Commerce Geographic Expansion Model

HomeGrocer, Tesco Direct, and Cybermeals offer a specific service of e-food within a local market. They plan to add consumers within their current geographic area to reach a certain penetration. They plan to replicate this same service in other cities. This model of a *collection of local geographic markets* is called *Local E-Commerce Geographic Expansion* and is illustrated in Figures 6.12 and 6.13.

Tesco, HomeGrocer and Cybermeals had a two step growth process. First, by getting higher penetration for *existing services* within their geographic area (consumer acquisition focus rather than product/service expansion- a subset of local e-commerce geographic penetration); and second, by going to new geographies (local e-commerce geographic expansion).

The HomeGrocer current expansion approach is to have a target saturation point for the percentage of consumers they plan to attain within a specific geography. If the goal is X% of consumers for Geography area Z, then at some point, perhaps at (X-Y)% HomeGrocer would start the planning process to replicate logistics in the next target geography.

Then they will clone the logistical operations in the next city. Growth into new geographic areas, for the intermediary virtual retailers would include signing up local restaurant partners in the new location, as in the Cybermeals' model. HomeGrocer's expansion into new geographies would include setting up local infrastructure such as securing a warehouse, purchase trucks for local delivery, and hiring local employees drivers and pickers, etc.

Local E-Commerce Geographic Expansion will usually be via non-connecting geographies, such as cities, segments of cities, or regions. This type of growth is illustrated by a collection of non-connecting circles. Local Markets are represented by these growth clusters. Growth is in clusters as illustrated in Figure 6.12.

Tesco is growing by catchment areas associated with specific stores. These catchment areas correspond to the small cluster circles. Inside the small circles are the consumers within a specific catchment area. Over time, as there is expansion into adjoining Tesco catchments, this could be represented with two small circles with dots in them that could overlap or merge together for these adjoining geographies. So there would be many small circles as they grow the service over the UK but there would potentially be white space between the circles. Also, as they go to outlying geographic areas that are remote, where there is sparse population then there will also be a lot of white space.

FIGURE 6.12 Local E-Commerce Geographic Expansion Model

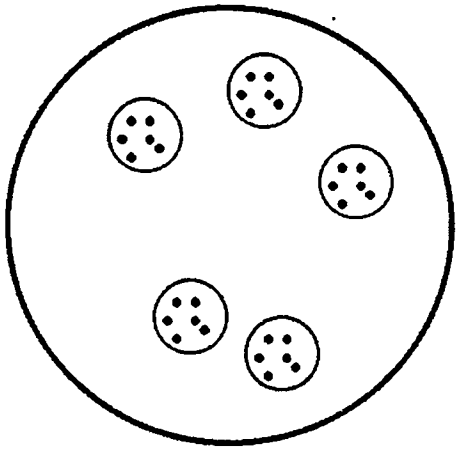
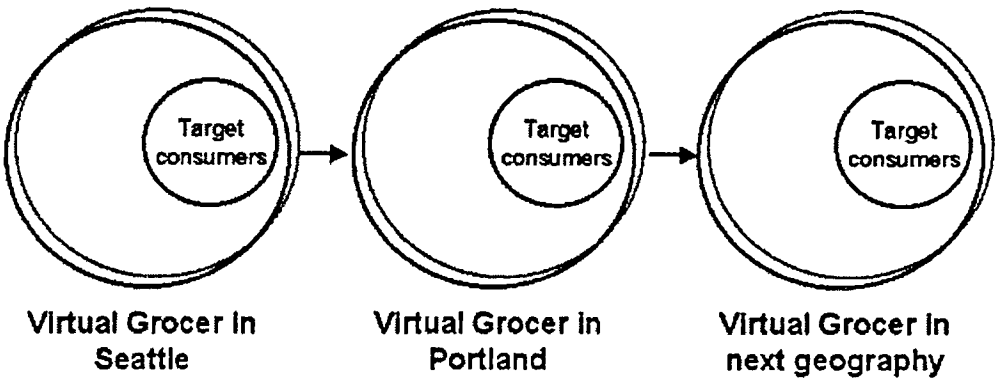


Figure 6.13 represents HomeGrocer's planned geographic expansion growth.

FIGURE 6.13 HomeGrocer Expansion

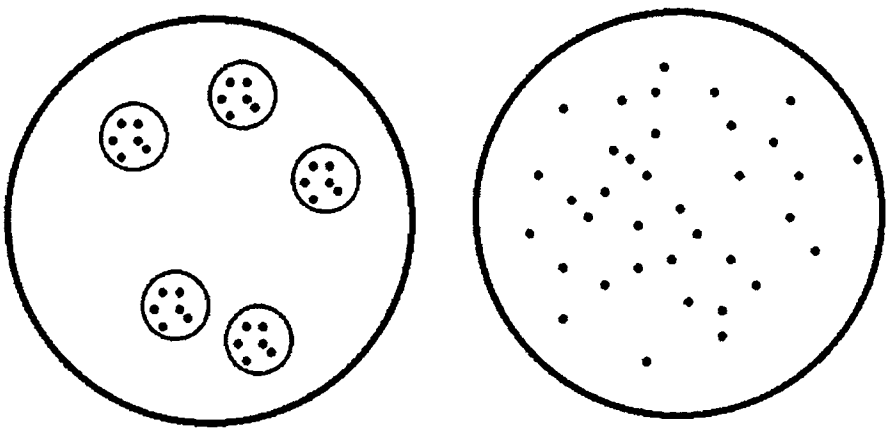


6.3.4.5 Contrast of Local E-Commerce with Expansion Models

There are differences between expansion of the mail order and electronic product virtual retailers and the expansion of Local E-Commerce retailers as depicted in Figure 6.14. Since digital and mail order E-Commerce can be anywhere in the world where items can be electronically or physically shipped, the entire world is a potential market. The market for such business is the consumers with Internet access anywhere in the world regardless of geography, taking into account international mailing restrictions.

The small dots represent current virtual consumers. The E-Commerce marketspace for the right circle does not have any restrictions in accepting consumers therefore the consumer dots may appear anywhere within the circle (world). The consumer dots on the left circle are contained within distinct Local E-Commerce geographic areas (smaller circles). Refer to Figure 6.14.

FIGURE 6.14 E-Commerce Growth Model Comparison



Local E-Commerce Geographic Expansion Model

Growth for Mail Order or Virtual Product E-Commerce

For the other two subsets of E-Commerce local infrastructure is not required. The items being sold do not have local significance so anyone in the world can view the web page and order the item and then simply have a longer shipping time if very far away. Regional or country distribution centers could be used to reduce delivery time but local infrastructure is not required.

"Basic lessons of marketing strategy... [include] the importance of defining and understanding the customer, the essential efficiency of market segmentation and targeting, and the life-or-death importance of product positioning and the value proposition... Customers in the electronic marketplace expect that value proposition to be tailored to them personally" (Webster, 1996, p. 156). The E-Food retailer needs to stay focused on marketing plans to reach the designated demographic groups they are focused to grow. The virtual retailers should also evolve to personalized marketing as soon as they are technically able.

6.4 CHAPTER SUMMARY

This chapter presented three perspectives of cross case analysis of e-food. Two original findings, the Virtual Order Cycle and Local E-Commerce were discussed and are summarized below.

VIRTUAL ORDER CYCLE SUMMARY

The order entry process, which begins when a consumer has arrived on the e-food retailers website, was discussed in this chapter. Order Entry is a significant business process since this is the step where the consumer actually selects the product to purchase from the e-food retailer. There is a clear hurdle for the consumer to make their first on-line purchase. The consumer has to learn how to locate products to purchase them. This is a challenge, especially for the many technology illiterate consumers that are emerging. E-food retailers are implementing programs to assist with the *trial order* purchase.

Consistent *repeat orders* determine the success of an e-food retailer. It is important and cost effective to retain existing consumers. It is also critical that the consumers purchase on a regular basis. These virtual retailers are tracking the frequency of the orders and implementing programs to encourage the consumers to purchase within a specific time cycle.

An important discovery was the cyclic nature of the *virtual order cycle*. The first stage was placing the first order. The next stage was the second order and subsequent orders until 'hooked'. The final stage was the order beyond the 'hooked' stage. The virtual retailers expected that consumers would progress from one stage to the next. However, if consumers ordered infrequently, then they would backside to a lower level. Even consumers who had attained 'hooked' status could backslide back to a first order mentality with lack of frequent orders.

The virtual retailers found that generally between three and five orders consumers had learned the interface and were now regular users. HomeGrocer was investigating if there are ways to get them to H (hooked) in a quicker fashion. They felt strongly that *an acceleration* in ordering frequency needed to occur in ordering. Therefore, the e-food

virtual retailers were focused on providing incentives for consumers to order food on a regular basis.

There are different tools the e-food retailer can use at each stage to progress the consumer to the next level. The virtual retailers were identifying inhibitors to the first order so that facilitators could be put in place to address them. There were two categories of facilitators and inhibitors: 1) traditional retail which were similar to the brick retail world and 2) technical inhibitors related to ordering in the virtual world. Retailers needed to implement an appropriate facilitator to address a particular category of inhibitor.

Technologically illiterate consumers had a greater need for handholding to get through the order stage. Therefore, it might be significant that non-technical consumers might be more motivated to shop with the e-food retailer if provided appropriate technology based facilitators, while a technically conversant consumer might be more motivated by the traditional facilitators.

LOCAL E-COMMERCE SUMMARY

As presented in this chapter, the categorization of E-Commerce now includes a new category called Local E-Commerce. This adds to the literature of E-Commerce models. The following summarizes arguments in support of Local E-Commerce. Local E-Commerce requires that the product be ordered virtually. Specific indicators are found in the Order Entry, Order Fulfillment, and Consumer Acquisition of Product steps of the Business Process Model.

Order Entry: Is there a specified geographic boundary (fixed or implied restriction) for order acceptance base on the location of where the consumer will acquire the product or service? If yes, then this can be interpreted as a possible candidate for Local E-Commerce. The location of the PC where the consumer places their order is not a factor.

Order Fulfillment: Is local infrastructure (retailer or partner) utilized as part of order fulfillment? If yes, then this can be interpreted as a possible candidate for Local E-Commerce. Examples include local inventory storage, local fleet of delivery vans, and local employees or partners utilized in order fulfillment.

Consumer Acquisition of Product or Service: There are three options for this step: delivery, consumer pick-up, and on-site use. Any of these three methods of acquisition is an indicator of Local E-Commerce as described. *Delivery*: Are delivery firms localized? Are there restricted distances between place of order fulfillment and delivery location? Does product quality require that it is delivered within a short window of time? *Pick-Up*: Is local pick-up an option from product fulfillment location or designated local surrogate site? *On-Site Use*: Can consumers virtually order the product/ service in advance, and then go to place of order fulfillment and use the service or product there?

There are two growth expansion models that are specific to Local E-Commerce retailers. They are *Local E-Commerce Geographic Penetration Model* as represented by Waiter.Com. This approach focuses on going deep, by adding products or services, within a limited geographic area. The second model is the *Local E-Commerce Geographic Expansion Model*, represented by Tesco, HomeGrocer, and Cybermeals. It requires setting up local logistics in new geographies prior to opening up the new market. Logistic examples include setting up local inventory facilities, hiring local employees, or securing local partners with local facilities. Growth is in clusters to new geographic areas with each cluster having the specified or implied restrictions of accepting consumers as described previously.

In summary, the concepts of Local E-Commerce arose initially at Waiter.Com but applied to all four e-food retailers. While the cases were heavily focused on getting their current operations and logistics correct, they were considering avenues to acquire more consumers and expand the product and services they provide. The combination of the indicators of Local E-Commerce within the Business Process Model steps as described along with the two distinct expansion models supports the argument of this as a unique category of E-Commerce.

7 CONCLUSIONS AND FUTURE RESEARCH

7 CONCLUSIONS AND FUTURE RESEARCH

This chapter contains a review of the main findings. Limitations of the research are described. The chapter concludes with suggestions for further research in this emerging world of business to consumer e-commerce.

7.1 SUMMARY OF MAIN FINDINGS

The grounded theory case study methodology generated much original material of considerable interest to those involved with research in e-commerce. However, this section summarizes the core findings of the research. The two key findings were the Local E-Commerce Model and the Virtual Order Cycle.

7.1.1 Local E-Commerce Model

A surprising but important discovery was a new category of e-commerce know as "Local E-Commerce". This category of E-Commerce adds to the literature. Refer to Figure 7.1 for a graphical representation of the collection of e-commerce categories.

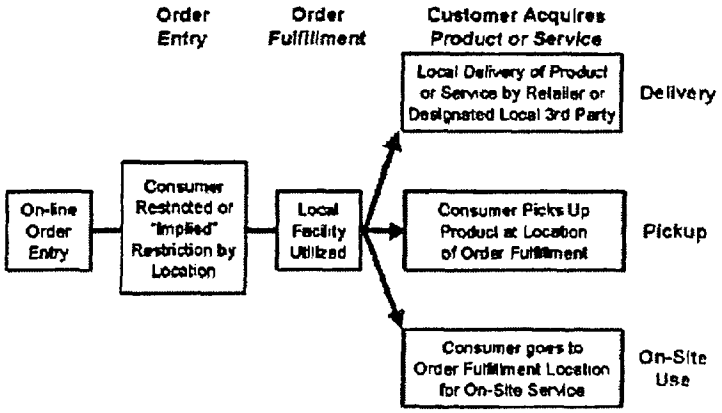
FIGURE 7.1 E-Commerce Models

Local E-Commerce is defined as a category of Business to Consumer E-Commerce, where a consumer electronically orders the products/services and the following three conditions are met. Local E-Commerce: 1) has bound geographic limits for service (specified or implied), 2) requires local infrastructure as part of order-fulfillment (virtual retailer or designated partner), and 3) involves one or more of the following: allows local pick-up or

on-site use of pre-ordered product/service from local order fulfillment location and/or uses a localized delivery operation.

In the case of e-food, the product quality requires that it is delivered within a short window of time or in temperature controlled trucks which contributes to the local nature of this virtual industry. Refer to Figure 7.2.

FIGURE 7.2 Three Variants of Local E-Commerce



As discussed in section 6.3.4, Local E-Commerce implies one of two unique growth models: the Local E-Commerce Geographic Penetration Model or the Local E-Commerce Geographic Expansion Model. Local E-Commerce retailers, in both growth paths, need to have a strong knowledge of the local community.

The *Local E-Commerce **Geographic Penetration** Model*, as represented by Waiter.Com, focuses on a specific local geographic area for business and grows by expanding the products and services they offer to an increasing group of consumers within that marketspace. The virtual retailers focusing on this growth path study the needs and requirements of these local consumers and offer the local products and services consumers desire either through in-house means or via local partners.

The Local *E-Commerce **Geographic Expansion** Model*, as represented by Tesco, HomeGrocer, and Cybermeals, focuses on providing products and services within a collection of specific local geographic areas. These Virtual Retailers expand by adding new local geographic areas and growing the number of consumers within each "bound" geographic area. Each new geographic area requires setting up local logistics such as

setting up a local (inventory) facility or securing local partners with local facilities, and hiring local employee or partners. *Local* E-Commerce by definition requires different logistics and makes it unique from *mail-order* e-commerce and *digital product* e-commerce.

In sum, this finding challenges the simplistic view that, in business to consumer e-commerce, a product or service is either delivered on-line or can be physically delivered anywhere by public or private mail service. More complex factors influence consumers' perception and use of local markets as discussed in section 6.3's –Local E-commerce.

7.1.2 E-Food Virtual Order Cycle Model

The E-Food Virtual Order Cycle Model as presented in Figure 7.3, graphically displays the order stages of the consumer steps from first order through the multiple stages of repeat orders. As discussed in section 6.2, there is series of steps that a consumer must progress through from first order to become a loyal consumer in e-food. An e-food retailer should be cognizant of the steps and how to motivate or assist the consumer to move to the next stage.

The stages are summarized below:

Order 0: The stage a consumer is in before they have placed the first order.

Order 1: This is the trial or first order. The cases referred to this stage as a major hurdle for the consumers. The consumer must understand that the e-food virtual retailer has an offer, locate the website, and navigate the site to place the first order.

Order 2 to (H-1): The cases described how the consumer needed to place a certain number of orders until they felt comfortable ordering virtually or until they were "hooked". This stage includes the second order through the order just before they are "hooked". In this stage the consumers first begin to order using lists that contain historical orders thereby speeding the order transaction time and providing ease of use.

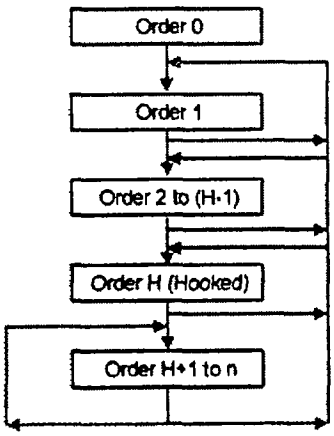
Order H: After a certain number of orders have been entered, the consumer is now trained or "hooked". This "hooked order number" varied by case but it was in the range of three to five orders.

Order H to n: Loyal virtual consumers have reached and surpassed order H by one or more orders. They are now comfortable with virtual ordering and continue with the service as long as the retailer's value proposition remains relevant. The goal for the e-food virtual retailers was for consumers that had reached this stage to now order on some regular basis.

A very important conclusion is that once a consumer reaches each plateau they can continue to move to the next stage or they can fall back to a previous step, especially if they do not order frequently enough. Other findings were, if there was a long lapse in ordering a consumer could fall back to "first order mentality" even if they had progressed beyond "H". The e-food retailers found that if the e-food website was not used frequently the consumer had to recall or relearn how to navigate the site.

The e-food retailers were seeking ways to motivate the consumer to order more frequently to get to order "H" more quickly. Additionally, they were analyzing how to encourage the consumer to continue to order within a specific frequency so that the consumer would stay at level *Order H +1 to n* and would not backslide.

FIGURE 7.3 E-Food Virtual Order Cycle Model



7.2 LIMITATIONS OF RESEARCH

As with any research project there were limitations. One limitation of this thesis was that it looks at the status of these virtual retailers within the early days of business to consumer e-commerce, which is rapidly evolving and changing. Another limitation was that the research was only focused in one industry, e-food. While this was a valid approach it was only partially possible to cross-check the comments of the interview respondents.

The limitations of utilizing the case study approach, as discussed in section 4.1.4, include: the respondents were not willing to provide all information requested during the interview e.g. when it was proprietary in nature; the results were biased to the interviewed participants' perspective; and the researcher's interpretation of the data. There were only five cases in the study due to time, distance, and travel cost constraints. Since the case interviews were conducted within a seven-month period, they only reflected data from a particular point in time in the development of e-commerce.

Attempts were made to overcome these limitations by comparing the findings with literature and other data sources, e.g. consultants' reports, government reports, business news articles, and industry consortia such as the Food Marketing Institute. Additionally the respondents were requested to provide further information when the data needed clarification. First-hand observations of the fulfillment process of virtual grocery retailing provided information that verified previous data provided by the respondents.

There were limitations to the research based on the 7P framework utilized to analyze the cases. The 7P framework, a service marketing approach, is just one of many marketing frameworks. As discussed in Chapter 2, researchers such as Dutta and Segev (1999) utilized the 4P framework as the basis of their e-commerce analysis and chose to add a C for customer relationship to the 4P framework.

Other valid marketing frameworks include: a competition perspective, a product mix perspective, a global perspective, a pricing perspective, and an advertising and promotion channel perspective. Additionally e-food analysis from the virtual retailers' perspective was chosen for this research. Another valid approach is an e-food analysis from just the consumers' perspective, which would include interviews or surveys of e-food consumers.

A comparison or gap analysis of e-food using the 7Ps or other marketing frameworks contrasting the perspectives of e-food retailers and e-food consumers could present interesting findings.

Additionally, business to consumer e-commerce is much broader than just service marketing. While the 7P framework is valid and has been utilized by many researches as discussed in Chapter 2, there are also other equally valid approaches applicable to e-commerce. Some of these alternative approaches include: 1) a technical analysis such as an in-depth website design perspective; 2) an accounting point of view; and 3) an operation and services management analysis. These other perspectives are valid for future research, which is the topic of the next section.

If this research were to be done again, with the knowledge of hindsight, it would have been better to select a different pilot case than McDonalds. Since McDonalds did not progress into an e-commerce adoption phase during the pilot their value to this research was limited. The research proceeded down many tangent paths during the pilot phase including a network focus and an electronic interface focus. While these areas were very interesting, it took time to pursue these paths, which were not utilized in this research. If additional e-food retailers were interviewed the approach would be to focus on the questions relating to the 7Ps and seek to validate or offer new insights related to the two key findings of this research. It would also be interesting to return to the four e-food retailers to compare and contrast their current views with their past views related to this research since the are area of business to consumer e-commerce continues to develop.

7.3 FUTURE RESEARCH

Since e-commerce is still is the early stages of development there is ample opportunity for more research in this field. Suggestions for future research follow.

There are important areas of research in the area of order entry. In what ways can a virtual retailer assist the consumer with the first order so that this major hurdle is surmounted? Frequency of ordering was of great concern to the e-food retailers. What is the range of order frequency rates that have a higher propensity for repeat orders and create loyal consumers?

An interesting area of research was posed by discussions with Adelberg of Waiter.Com related to retailer assistance in moving the consumer from first order to becoming a loyal consumer e.g. order level "H" (refer to virtual order cycle). Waiter.Com was concerned that if they provided too much assistance thereby making it too easy for consumers to achieve level "H" would the consumers be as loyal as the first group that gained the skill of learning how to do virtual order entry without special assistance from the virtual retailer? One way of examining this issue is to set up two groups, provide extra assistance to one group and let the other remain a control group. Track the time it takes to get to order "H", the number of orders it takes to order "H", the % of consumers of that group that get to order "H", and the % that remain as consumers for a longer time period, such as a year.

Another area of research is related to the degree that current e-commerce "early adopters" care about loyalty programs. Would they be virtual consumers without them? Will loyalty schemes perhaps apply more to the e-commerce "followers"? Tesco had a loyalty program for their virtual consumers since they already had one in place for their brick consumers. Bridgett commented that Tesco had found that most of their existing virtual consumers did not bother to use their Tesco loyalty number on-line. Therefore she predicted that perhaps virtual consumers were not motivated to order by this type of program. Or could it be that just these early adopters are not motivated by virtual based loyalty programs but mainstream virtual consumers might be? This is an important research project since there is a cost associated with setting up and maintaining loyalty programs. Typically, once loyalty programs are announced they cannot easily be removed. This would extend previous research on loyalty programs as discussed in section 3.2.1.

Researchers are beginning to understand what products consumers are purchasing over the Internet. A detailed examination of the progression of applications that a consumer goes though would be of value. For example, is email always the first application? If they are an e-food consumer do they purchase food before they purchase non-food items? When do they start electronic banking, before or after purchase transactions? Is this progression series the same for USA and UK virtual consumers?

There are a number of operations management areas of investigation that relate to the order fulfillment and delivery of the virtual grocers. Research areas include what is the most efficient way to set up logistics so that the goal of same day delivery can be achieved? Tesco spoke of a potential one hour order as a delivery goal. Is that achievable? At what cost for the retailer? Would this short delivery window be a premium service or a competitive necessity? How would the e-food retailers deal with the problems of peak load of delivery?

There are many areas of relating to competition that would be of value to research. Waiter.Com felt that in these early days of e-commerce that there was minimal competition since there was so much opportunity within the marketspace. It would be of value to examine if there are first mover advantages in e-food and if they are sustainable. Cybermeals felt that they had an advantage since they used phones to transmit orders to the restaurant rather than requiring them to have a fax machine. However, Waiter.Com had not found it a problem to require fax machines of their partner restaurants, since faxes are inexpensive and provide the advantage of a printed order. This area of first mover advantage, in e-food and electronic commerce, deserves more investigation.

Do Local E-Commerce retailers have a competitive advantage over Mail-Order E-Commerce retailers who retail in the established local geographic area? The concept of "local" e-commerce is worthy of further research. What other industries does it apply to? Are there other characteristics of "local" e-commerce? Further investigation on "local" e-commerce growth models could be important.

One point to note is that currently the Local E-Commerce implementations offered by the e-food retailers offer only fixed priced products. There is no reason that auctions (variable pricing) cannot play a role in Local E-Commerce, e.g. by the virtual grocers auctioning special wines. The virtual meal providers could auction off a dinner with a famous chef to be prepared at a restaurant or at a consumer's home. Auctions could be announced in advance and could be a draw to that e-food retailers' website. This is an important emerging trend in the area of e-commerce. On-line auctions were not used for groceries or meals at the time of this research but in 1999 had emerged for groceries in the USA via Priceline.com. This is an area worthy of future research in e-food and Local E-Commerce.

This would build on the literature of variable pricing of goods in the marketspace, as per section 2.3.2.

There are interesting organizational implications when a traditional brick retailers adds a virtual channel. A scenario could be that executives from the traditional brick retailing side are "king" but as the virtual channel is understood and successful the power might shift to executives on the virtual team. This could lead to internal politics and conflict. This is an interesting area of study as to how a firm handles the conflict and sets up an infrastructure where both channels can succeed. This is applicable to study in the area of e-food or other industries that add virtual channels.

In summary there are many interesting areas for further research. They above research suggestions address some of the open questions that virtual retailers are seeking:
1.How do I offer more convenience to consumers through my virtual services?
2. How can I offer better value and higher quality with my services?
3. How can I simplify the order process for trial and repeat orders?
4. How should I expand my products and services?
5. How can I squeeze time between order and delivery?
6.How can I offer a truly superior service that ensures consumer loyalty?
7. How do I balance privacy issues with exploitation of data mining used to provide superior service to the consumer?

7.4 CHAPTER SUMMARY

This Chapter presented an overview of the key findings generated through research on the 7Ps and e-food. Limitations of the research were explained. The chapter closed with suggestions for further research.

In conclusion, this thesis has contributed to the body of knowledge of business to consumer e-commerce in the following areas. The virtual order cycle contributes a new view of understanding the Internet based order process. A new category of e-commerce has been proposed called "Local" E-Commerce. These models build on existing e-commerce and marketing literature and add new insights.

APPENDIX A: NUDIST DATABASE

The attached NUDIST database is divided into the following sections as per Table A.1.

TABLE A.1 Overview of NUDIST Database

Node	Title	Description
1	Chapters	This represents an initial outline for the thesis.
2	Framework	This contains the key framework categories that emerged from the NUDIST analysis.
3	Reference	This represents the initial broad set of topic areas for the literature search.
4	Tesco	This is the framework that emerged the coding of the Tesco interviews.
5	HomeGrocer	This is the framework that emerged the coding of the HomeGrocer interview.
6	McDonalds	This the framework that emerged from coding of the McDonalds multi-case interview.
7	Waiter.Com	This is the framework that emerged from coding of the Waiter.Com interview.
8	Cybermeals	This is the framework that emerged from coding of the Cybermeals interview.
9	NewWaiter	This represent a new framework from re-coding the Waiter.Com interview. Since Waiter.Com was the original case that was coded, after gaining more coding experience the decision was to re-code Waiter.Com rather than prune and re-shape the original tree.

The following is a NUDIST database listing with all nodes and sub-nodes.

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(2 6 1 1 3 1 3)     /FRAMEWORK/Business Processes/Marketing/Marketspace/Demographics/Home/Retired
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(4 6 3 5) /TESCO/TESCO Direct/Logistics/Mine customer data
(4 6 3 6) /TESCO/TESCO Direct/Logistics/Capacity
(4 6 3 7) /TESCO/TESCO Direct/Logistics/Logistic challenges
(4 6 3 8) /TESCO/TESCO Direct/Logistics/Future Logistics
(4 6 3 9) /TESCO/TESCO Direct/Logistics/Electronic interface
(4 6 3 9 1) /TESCO/TESCO Direct/Logistics/Electronic interface/Feedback
(4 6 3 9 2) /TESCO/TESCO Direct/Logistics/Electronic interface/Two way communication
(4 6 3 9 3) /TESCO/TESCO Direct/Logistics/Electronic interface/Retailer initiated
(4 6 3 10) /TESCO/TESCO Direct/Logistics/Barrier to success
(4 6 3 10 1) /TESCO/TESCO Direct/Logistics/Barrier to success/Scalable
(4 6 3 11) /TESCO/TESCO Direct/Logistics/Customer Service and Human Interface
(4 6 3 12) /TESCO/TESCO Direct/Logistics/I. T.
(4 6 3 13) /TESCO/TESCO Direct/Logistics/Productivity
(4 6 4) /TESCO/TESCO Direct/Scope
(4 6 4 4) /TESCO/TESCO Direct/Scope/New Business
(4 6 4 4 1) /TESCO/TESCO Direct/Scope/New Business /ISP
(4 6 5) /TESCO/TESCO Direct/CA and Competition
(4 6 5 1) /TESCO/TESCO Direct/CA and Competition/competitive advantage
(4 6 5 1 1) /TESCO/TESCO Direct/CA and Competition/competitive advantage/Store as asset
(4 6 5 2) /TESCO/TESCO Direct/CA and Competition/sharing
(4 6 5 3) /TESCO/TESCO Direct/CA and Competition/Partners
(4 6 5 4) /TESCO/TESCO Direct/CA and Competition/Barrier to entry
(4 6 5 5) /TESCO/TESCO Direct/CA and Competition/Ready to eat competitors
(4 6 5 6) /TESCO/TESCO Direct/CA and Competition/Virtual competition
(4 6 5 7) /TESCO/TESCO Direct/CA and Competition/UK Grocers
(4 6 5 8) /TESCO/TESCO Direct/CA and Competition/Other Grocers
(4 6 6) /TESCO/TESCO Direct/Impact on Grocery
(4 6 7) /TESCO/TESCO Direct/Critical Success factors
(4 6 8) /TESCO/TESCO Direct/Pilot and strategy
(4 6 9) /TESCO/TESCO Direct/Market home delivery
(4 7) /TESCO/Future

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(4 7 2)      /TESCO/Future/Industry Future
(4 7 3)      /TESCO/Future/Home Services
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(5 2)        /HOMEGROCER.COM/Business Scope
(5 2 1)      /HOMEGROCER.COM/Business Scope/Brand or image
(5 2 2)      /HOMEGROCER.COM/Business Scope/Business Model
(5 2 3)      /HOMEGROCER.COM/Business Scope/Goals
(5 2 4)      /HOMEGROCER.COM/Business Scope/What learned
(5 2 10)     /HOMEGROCER.COM/Business Scope/How started
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(5 3 1)      /HOMEGROCER.COM/Consumer and Segmentation/Profile
(5 3 2)      /HOMEGROCER.COM/Consumer and Segmentation/Best consumer
(5 3 3)      /HOMEGROCER.COM/Consumer and Segmentation/Lifestyle attitudes
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(5 3 6)      /HOMEGROCER.COM/Consumer and Segmentation/Who the shopper is
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(5 8 2 5)    /HOMEGROCER.COM/Business Processes/Selling/Correct Inventory
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(5 8 3 7)    /HOMEGROCER.COM/Business Processes/Order Entry/EH repeat hooked orders
(5 8 3 7 1)  /HOMEGROCER.COM/Business Processes/Order Entry/EH repeat hooked orders/EH Inhibitors
(5 8 3 8)    /HOMEGROCER.COM/Business Processes/Order Entry/Delivery slots
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(5 8 3 11)   /HOMEGROCER.COM/Business Processes/Order Entry/Speed of entry
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(5 8 3 14)   /HOMEGROCER.COM/Business Processes/Order Entry/Advertising
(5 8 3 15)   /HOMEGROCER.COM/Business Processes/Order Entry/Promotions
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(5 8 6 3)    /HOMEGROCER.COM/Business Processes/Delivery/Driver
(5 8 6 4)    /HOMEGROCER.COM/Business Processes/Delivery/Delivery to other
(5 8 6 7)    /HOMEGROCER.COM/Business Processes/Delivery/Pick up
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(5 8 8)      /HOMEGROCER.COM/Business Processes/Update V P
(5 8 9)      /HOMEGROCER.COM/Business Processes/Capacity issues
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(5 8 15)     /HOMEGROCER.COM/Business Processes/Logistic challenge
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(5 11 2)     /HOMEGROCER.COM/Partner and Competition/Partners future
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(5 11 8)     /HOMEGROCER.COM/Partner and Competition/Steerage power
(5 11 9)     /HOMEGROCER.COM/Partner and Competition/Local knowledge
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(5 12)       /HOMEGROCER.COM/Future evolution
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(5 12 2)     /HOMEGROCER.COM/Future evolution/Food Industy evolution
(5 12 3)     /HOMEGROCER.COM/Future evolution/Home services evolution
(5 12 4)     /HOMEGROCER.COM/Future evolution/EC evolution
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(6 2 2)      /MCDONALDS/Business Factors/Goals
(6 2 3)      /MCDONALDS/Business Factors/Image or Brand
(6 2 4)      /MCDONALDS/Business Factors/Decision criteria
(6 2 5)      /MCDONALDS/Business Factors/Politics and Org
(6 2 6)      /MCDONALDS/Business Factors/Attempt for standards
(6 2 7)      /MCDONALDS/Business Factors/Products today
(6 3)        /MCDONALDS/Consumer Interfaces
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(8 9 10) /CYBERDEALS/Partner and Competition/Competitive Advantage
(8 9 11) /CYBERDEALS/Partner and Competition/Barrier to entry
(8 10) /CYBERDEALS/Future evolution
(8 10 1) /CYBERDEALS/Future evolution/CH evolution
(8 10 2) /CYBERDEALS/Future evolution/Food Industry evolution
(8 10 3) /CYBERDEALS/Future evolution/Home services evolution
(8 10 4) /CYBERDEALS/Future evolution/EC evolution
(9) /NewWaiter
(9 1) /NewWaiter/Quotes
(9 2) /NewWaiter/Business Factors
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(9 2 1 1) /NewWaiter/Business Factors/Waiter's Brand and image/Others Brand
(9 2 2) /NewWaiter/Business Factors/Business Model
(9 2 2 1) /NewWaiter/Business Factors/Business Model/Other Models
(9 2 3) /NewWaiter/Business Factors/Goals
(9 2 4) /NewWaiter/Business Factors/Lessons Learned
(9 2 5) /NewWaiter/Business Factors/Why started
(9 2 6) /NewWaiter/Business Factors/Services Products
(9 2 7) /NewWaiter/Business Factors/Critical success factors
(9 2 7 1) /NewWaiter/Business Factors/Critical success factors/Scalable solution
(9 2 8) /NewWaiter/Business Factors/Inpact to Brick side of business
(9 3) /NewWaiter/Consumer and Segmentation
(9 3 1) /NewWaiter/Consumer and Segmentation/Profile
(9 3 2) /NewWaiter/Consumer and Segmentation/Best Consumer
(9 3 3) /NewWaiter/Consumer and Segmentation/Lifestyles Attitudes Trends
(9 3 5) /NewWaiter/Consumer and Segmentation/Understand consumer
(9 3 6) /NewWaiter/Consumer and Segmentation/Who the shopper is
(9 3 7) /NewWaiter/Consumer and Segmentation/Business group orders
(9 3 8) /NewWaiter/Consumer and Segmentation/Increasing expectation
(9 4) /NewWaiter/Benefits and Inhibitors
(9 4 1) /NewWaiter/Benefits and Inhibitors /Waiter Benefits
(9 4 2) /NewWaiter/Benefits and Inhibitors /Waiter inhibitors
(9 4 3) /NewWaiter/Benefits and Inhibitors /Consumer Benefits
(9 4 4) /NewWaiter/Benefits and Inhibitors /Consumer Inhibitors
(9 4 4 4) /NewWaiter/Benefits and Inhibitors /Consumer Inhibitors/Security and privacy
(9 4 5) /NewWaiter/Benefits and Inhibitors /Restaurant Benefits
(9 4 6) /NewWaiter/Benefits and Inhibitors /Restaurant Inhibitors
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(9 5 1 4) /NewWaiter/Consumer Interface/ECI/Fax
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(9 5 2 2) /NewWaiter/Consumer Interface/Human/Restaurant employee
(9 5 2 3) /NewWaiter/Consumer Interface/Human/Delivery firm employee
(9 5 2 4) /NewWaiter/Consumer Interface/Human/HI Inhibitors
(9 5 3) /NewWaiter/Consumer Interface/Combo
(9 5 4) /NewWaiter/Consumer Interface/Feedback
(9 5 5) /NewWaiter/Consumer Interface/Retailer Initiated
(9 6) /NewWaiter/Business Processes
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(9 6 1 2) /NewWaiter/Business Processes/Market Planning/Internet Access
(9 6 1 3) /NewWaiter/Business Processes/Market Planning/Potential Market plans
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(9 6 1 4 1) /NewWaiter/Business Processes/Market Planning/Restraunt/Select Restrurants
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(9 6 1 5) /NewWaiter/Business Processes/Market Planning/Research surveys
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(9 6 2 3 3) /NewWaiter/Business Processes/Selling/Web functions/Registration
(9 6 2 3 4) /NewWaiter/Business Processes/Selling/Web functions/Entertainment aspect
(9 6 2 3 5) /NewWaiter/Business Processes/Selling/Web functions/Community of Interest
(9 6 2 4) /NewWaiter/Business Processes/Selling/Aquire consumers
(9 6 2 5) /NewWaiter/Business Processes/Selling/Retain consumers
(9 6 2 6) /NewWaiter/Business Processes/Selling/Product line
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(9 6 3 7) /NewWaiter/Business Processes/Order Entry/RH repeat booked orders
(9 6 3 7 1) /NewWaiter/Business Processes/Order Entry/RH repeat booked orders/RH inhibitors
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(9 6 3 9) /NewWaiter/Business Processes/Order Entry/Search methods
(9 6 3 10) /NewWaiter/Business Processes/Order Entry/Ease of Use
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(9 6 3 12) /NewWaiter/Business Processes/Order Entry/Accuracy of order
(9 6 3 13) /NewWaiter/Business Processes/Order Entry/Personalization and lists
(9 6 3 15) /NewWaiter/Business Processes/Order Entry/Advance ordering
(9 6 3 16) /NewWaiter/Business Processes/Order Entry/Loyalty programs
(9 6 3 17) /NewWaiter/Business Processes/Order Entry/Advertising
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(9 6 5 2) /NewWaiter/Business Processes/Order Fulfilling/Substitutions
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(9 6 5 7) /NewWaiter/Business Processes/Order Fulfilling/Inventory
(9 6 5 8) /NewWaiter/Business Processes/Order Fulfilling/Productivity
(9 6 5 9) /NewWaiter/Business Processes/Order Fulfilling/Grocery extra stuff
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(9 6 6 1) /NewWaiter/Business Processes/Delivery/Delivered to consumer home
(9 6 6 2) /NewWaiter/Business Processes/Delivery/Delivered to alternate location
(9 6 6 3) /NewWaiter/Business Processes/Delivery/Pick up
(9 6 6 4) /NewWaiter/Business Processes/Delivery/Trucks
(9 6 6 5) /NewWaiter/Business Processes/Delivery/Drivers
(9 6 6 6) /NewWaiter/Business Processes/Delivery/Issues
(9 6 7) /NewWaiter/Business Processes/Customer Service
(9 6 8) /NewWaiter/Business Processes/Update V P
(9 6 9) /NewWaiter/Business Processes/Capacity issues
(9 6 10) /NewWaiter/Business Processes/Cost

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(9 6 13)            /NewWaiter/Business Processes/Pilot Issues
(9 6 14)            /NewWaiter/Business Processes/Databases
(9 7)               /NewWaiter/I T
(9 8)               /NewWaiter/Partner and Competition
(9 8 1)             /NewWaiter/Partner and Competition/Partner today
(9 8 2)             /NewWaiter/Partner and Competition/Partner future
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(9 8 4 1)           /NewWaiter/Partner and Competition/Brick competition/Brick grocer
(9 8 4 2)           /NewWaiter/Partner and Competition/Brick competition/Brick meals
(9 8 4 3)           /NewWaiter/Partner and Competition/Brick competition/General competition
(9 8 5)             /NewWaiter/Partner and Competition/Become a Bank
(9 8 6)             /NewWaiter/Partner and Competition/Supplier
(9 8 7)             /NewWaiter/Partner and Competition/Grocery today
(9 8 9)             /NewWaiter/Partner and Competition/Competitive Advantage
(9 8 9 7)           /NewWaiter/Partner and Competition/Competitive Advantage/Steerage Power
(9 8 9 8)           /NewWaiter/Partner and Competition/Competitive Advantage/Local Market Knowledge
(9 8 9 11)          /NewWaiter/Partner and Competition/Competitive Advantage/Brick store asset
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(9 9)               /NewWaiter/Future Evolution
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(9 9 1 1)           /NewWaiter/Future Evolution/Waiter evolution/Future plans considered
(9 9 1 2)           /NewWaiter/Future Evolution/Waiter evolution/Go deeper
(9 9 1 3)           /NewWaiter/Future Evolution/Waiter evolution/New ideas to try
(9 9 1 4)           /NewWaiter/Future Evolution/Waiter evolution/Ways to expand business
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(9 9 2 8)           /NewWaiter/Future Evolution/Food industry evolution /Chef  express
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(9 9 6)             /NewWaiter/Future Evolution/Office Depot
(9 9 7)             /NewWaiter/Future Evolution/AOL
(9 9 8)             /NewWaiter/Future Evolution/The Gap
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(9 9 10)            /NewWaiter/Future Evolution/On Sale
(D)                 //Document Annotations
(F)                 //Free Nodes
(T)                 //Text Searches
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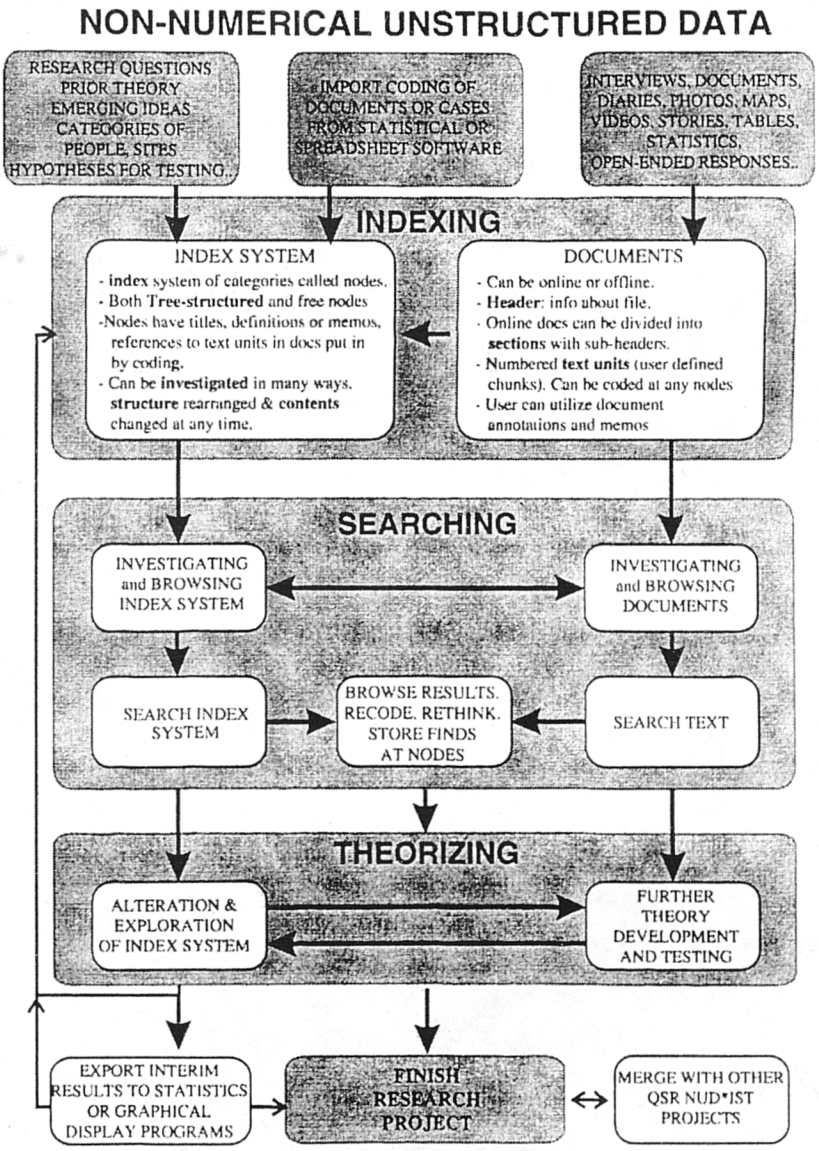
(T 31)              //Text Searches/TextSearch222
(T 32)              //Text Searches/TextSearch224
(T 33)              //Text Searches/TextSearch223
(T 34)              //Text Searches/TextSearch225
(T 35)              //Text Searches/TextSearch227
(I)                 //Index Searches
(C)                 //Node Clipboard - 'Data Mining'
```

NUDIST Overview

NUDIST is a computer software package that can be used as a tool of analysis for qualitative research projects. NUDIST is "designed to aid users in handling non-numerical and unstructured data in qualitative analysis, by supporting processes of coding data in an index system, searching text or searching patterns of coding and theorizing about the data" (QSR NUDIST User Guide, 1997, p. 2). NUDIST facilitates understanding the relationships of ideas and concepts within the case data by allowing the researcher to assign case information to categories within a hierarchical structure. Figure A.1, from the NUDIST Users Guide, displays the various functions.

FIGURE A.1 Functions of NUDIST



NUDIST

NUDIST has been evaluated and utilized by other researchers (MacMillan and McLachlan, 1999; Barry, 1998; Yerbury and Parker, 1998). Barry (1998, p. 8) states that NUDIST's

strength is its "structured organization, its project management functions and its sophisticated searching". Additionally, Barry found NUDIST is a useful tool in gathering data together and conceptual development. Similarly, MacMillan and McLachlan (1999, p. 149) claim that NUDIST's advantages are its "ability to handle large data sets and to perform coding functions and text searches." They also discovered weaknesses, which are discussed later.

Data Organization and Analysis

Case data was organized into a tree structure. The tree's branches and leaves reflected the cases' response to the interview questions. Building the tree for each case was part of the theory development. There are two key sections in the NUDIST database: the Document System and the Index System.

The Document System contained the complete text of the e-food case interviews; one file for each case. First the audio taped interview was transcribed into a Microsoft Word file. The file was then imported into the NUDIST database and was then ready for analysis.

The Index System represented a view or categorization of the data of the Document System. This Index System consisted of nodes or idea containers, which could be envisioned as parts of a structured tree. A process of *coding* was applied to each e-food file, which consisted of categorizing and assigning subsections of the case data into idea nodes. A coding objective was to take the raw material, e.g. the case interview transcripts, and through the process of data categorization to develop new insights of the data.

DEVELOPING THEMES AND CATEGORIES OF ANALYSIS

This section includes examples of analysis via coding of the e-food cases. Easterby-Smith et al (1991, p. 108) project that "grounded theory provides a more open approach to data analysis which is particularly good for dealing with transcripts. It recognizes that the large amount of non-standard data produced by qualitative studies make data analysis ... With qualitative data... the structure used has first to be derived from the data. This means systematically analyzing it so as to tease out themes, patterns, and categories." The process of coding creates a tree structure organized by categories and themes.

Coding the case implies creating a NUDIST tree structure that contains the concepts being researched. There were several approaches to coding the cases. One approach was to separate the process into two distinct steps: 1) pre-define branches and leave categories based on the first multi-case questionnaire followed by 2) coding -assigning sections of the cases (phrases, sentences or paragraphs) to this preset tree. An alternative approach was to simultaneously set up tree nodes and assign data as the case transcripts were analyzed. A combination of both approaches was used to analyze the five cases for the reasons explained below. Changes in approaches related to an increased understanding of how to use the NUDIST tool and a deeper understanding of the relationship of the concepts within the case data.

Data was analyzed within a case and between cases. Data analysis involves "identifying patterns in the case study reports" (Poon and Swatman, 1999, p. 11). One example of patterns that were analyzed was those of inhibitors and facilitators for e-food. Cross-case comparisons view the data in many different ways (Eisenhart, 1989). Patterns were consolidated into node categories.

Trees could be displayed or printed. However, a NUDIST limitation was that only part of the tree could be displayed at a time and the full name of the nodes was not printed. MacMillan and McLachlan (1999) also noted these limitations.

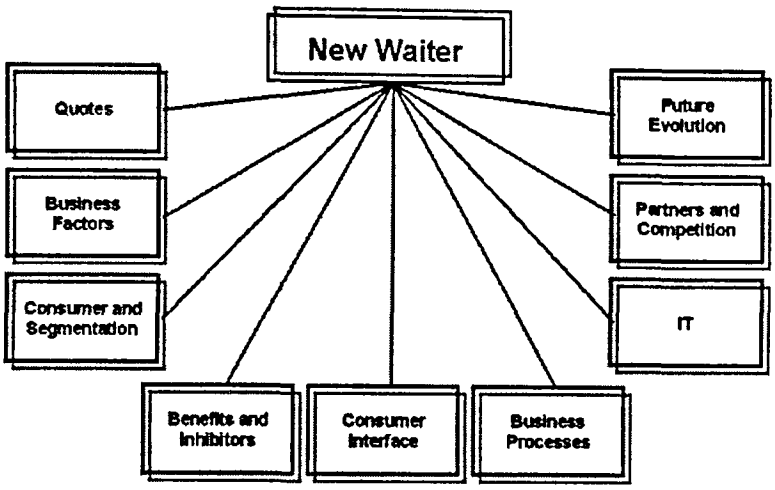
Waiter.Com was the first case coded into NUDIST. The approach for Waiter.Com was to completely pre-build all the branch and leaf nodes based on the interview questionnaire and then code the text into these pre-arranged categories. As the coding progressed, new tree nodes not reflected in the initial nodes were created as needed. Using this approach, some leaf nodes contained data while other nodes remained empty or had sparse entries.

As a better understanding of the tool emerged it was determined that this approach was not efficient due to the empty nodes. Therefore, when the next case, Tesco, was coded just the higher level branches were pre-coded and the leaves emerged based on content analysis. Having just "filled" nodes worked better for later analysis steps. However, the disadvantage was that it was harder to do cross case analysis. Therefore, the approach that eventually evolved was to pre-set the core branch nodes and utilize key leaf nodes that evolved from previously coded cases while allowing new ideas or nodes to evolve.

As part of the analysis process, NUDIST generated printout of each case transcript (which added line numbers down the side of the page) were used in conjunction with interactive sessions exploring ideas with the NUDIST database. For example, in writing the section on the virtual order entry process I searched on the word "order" in NUDIST for each case. As it located each instance of that word and the line number, I would cross reference with the case transcript to read about orders within context. Therefore it was an interactive process working jointly with the transcripts and NUDIST searches. Note that one function of NUDIST enables the combination of searches and reading interviews within context, however I discovered it was more efficient to use NUDIST for the searches and the also use paper transcripts.

MacMillan and McLachlan (1999) also found that NUDIST was useful in the early stages as a tool to define and organize categories, however they found it less useful as an analysis tool and preferred to go back and work with their source data. An example of a NUDIST weakness they discuss is that they realized that they were spending more time organizing categories than examining the data. In some instances as the text was segmented into categories they felt it decontextualized the data. This separation caused the data to lose the specific context that it emerged from. Additionally, they found revising the data within nodes problematic and time consuming, which I concur with.

As I gained experience with the NUDIST tool I decided to make major organizational changes to my original Waiter.Com NUDIST tree. However, this proved cumbersome. Therefore, I re-coded Waiter.Com using the original transcript into a new tree called "NewWaiter" which was the file used for the multi-case analysis. Refer to appendix J to view the two Waiter.Com NUDIST files.



OVERALL FRAMEWORK

An overall Framework tree was constructed by analyzing all the case trees that ex objective of this collective tree was to capture the important ideas and concepts o

The creation of the Framework tree was a beneficial analysis step even though th content was empty. The value was in deciding what nodes should be included or their relationship to other tree nodes. Additionally, the naming of the nodes in the tree was important. For example the Waiter.Com tree Node 9.9 was named Futur That node corresponded to the Framework tree Node 2.9 Business Expansion. Bu Expansion and its associated leaves reflected a more focused node, with a deeper understanding of this area as discussed by the cases and supported by the literatur Ansoff (1957).

When writing the analysis chapters, individual case trees were compared to the Fr tree structure. The original plan was to actually copy all similar node data of all t Framework tree so that most printouts would be from the Framework tree. Howe too unmanageable to accomplish this in NUDIST. MacMillan and McLachlan (1 found that moving data between categories was problematic and cumbersome. Th would print out data contained in specific common NUDIST branches, e.g. "Con Segmentation", and place these different case printouts side by side for analysis.

Nevertheless, the process of comparing individual case trees node categories to the framework tree plus comparing and contrasting the stored node data among case trees were useful steps of analysis. The overall analysis was an iterative process that used the NUDIST trees and also going back to the original transcripts that related to the area being analyzed.

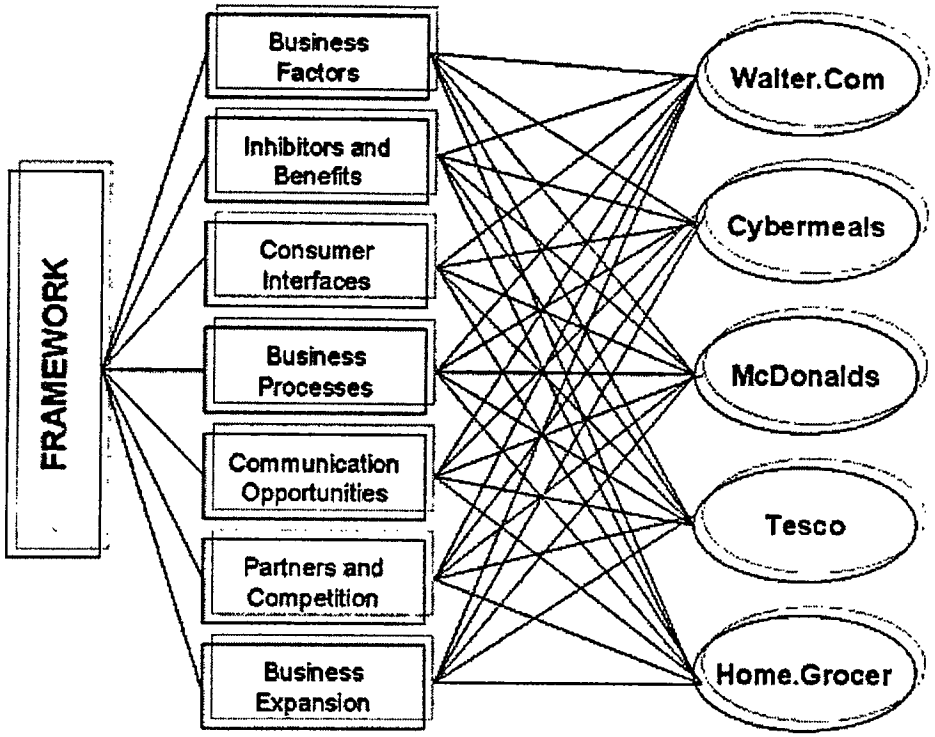
"Analysis amounts to systematically grouping and summarizing the description, and providing a coherent organizing framework that encapsulates and explains" (Holstein and Gubrium, 1995, p. 79). Figure A.3 displays the final NUDIST framework that emerged from the collective case analysis.

NUDIST ANALYSIS

The objective of the researcher is to develop a theory that accounts for much of the relevant behavior (Glaser and Strauss, 1967). Once the data from the cases were coded into NUDIST trees, the examination for similarities and differences could be made. Most cases had common branches and many had common leaves. The analysis of the data in the trees provided the input to Chapters 5 and 6 of the thesis.

Based on the framework of trees, tables were set up that compared the data in a meaningful way. Some of these tables have been included within the analysis chapters. As the data in the trees were re-examined further re-organization of the trees was fine-tuned.

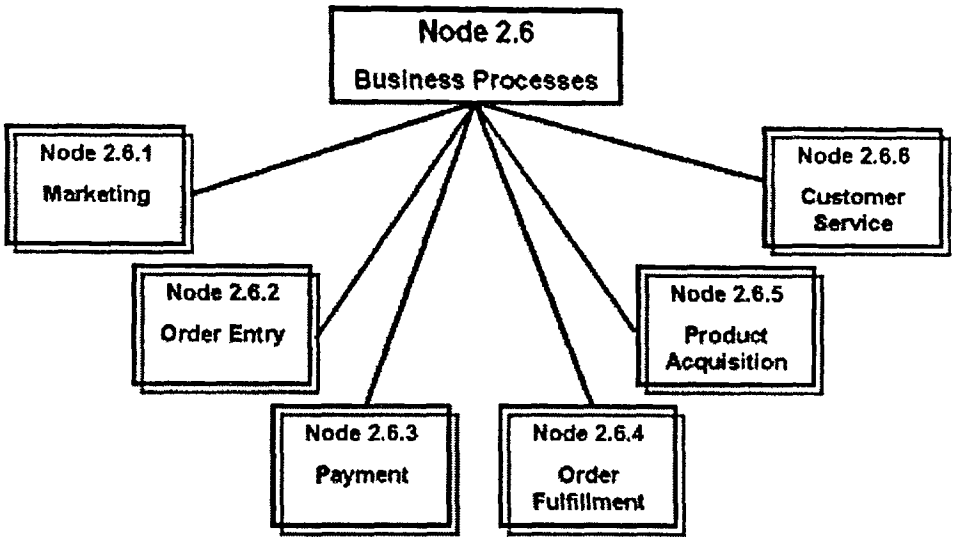
FIGURE A.3 Relationship of Case Trees to Framework



The original focus of the research included only the front-end Business Process steps. However, it was discovered during the case interviews and subsequent NUDIST analysis that the whole set of Business Process steps was critical to the success of an e-food retailer. Moreover, Tesco and McDonalds found adding a virtual component to an existing retail establishment required additional considerations. "It is widely acknowledged today that technology cannot be introduced in organizations without considering the impact on organizational process, the corporate culture, incentive, and reward systems" (Bloch and Segev, 1997, p. 57). Therefore an enhanced Business Process framework developed in NUDIST as displayed in figure A.4.

This tree represents the six steps that emerged from case analysis. The main branches of this Business Process tree are marketing, order entry, payment, order fulfillment, product acquisition, and customer service. The thesis structure reflected the NUDIST framework.

FIGURE A.4 NUDIST Framework for Business Processes



LINKING CONCEPTS AND SHAPING TREES

NUDIST was used to link connected concepts together. Initially, data from the cases was coded into this hierarchical organization based on the structure of the case questions. Parent "root/ branch" are main categories while child "leaves" are related sub-categories. Trees could be multi-levels of depth or width based upon the coding analysis of the data. Ideas could be related vertically and horizontally within the tree structure. Nodes were named to reflect ideas about the data copied into the container. The coding process essentially copied selected parts of the transcript into a specific node. The same data was sometimes copied into multiple nodes if it supported multiple concepts. Related sub concepts were associated with the higher level nodes.

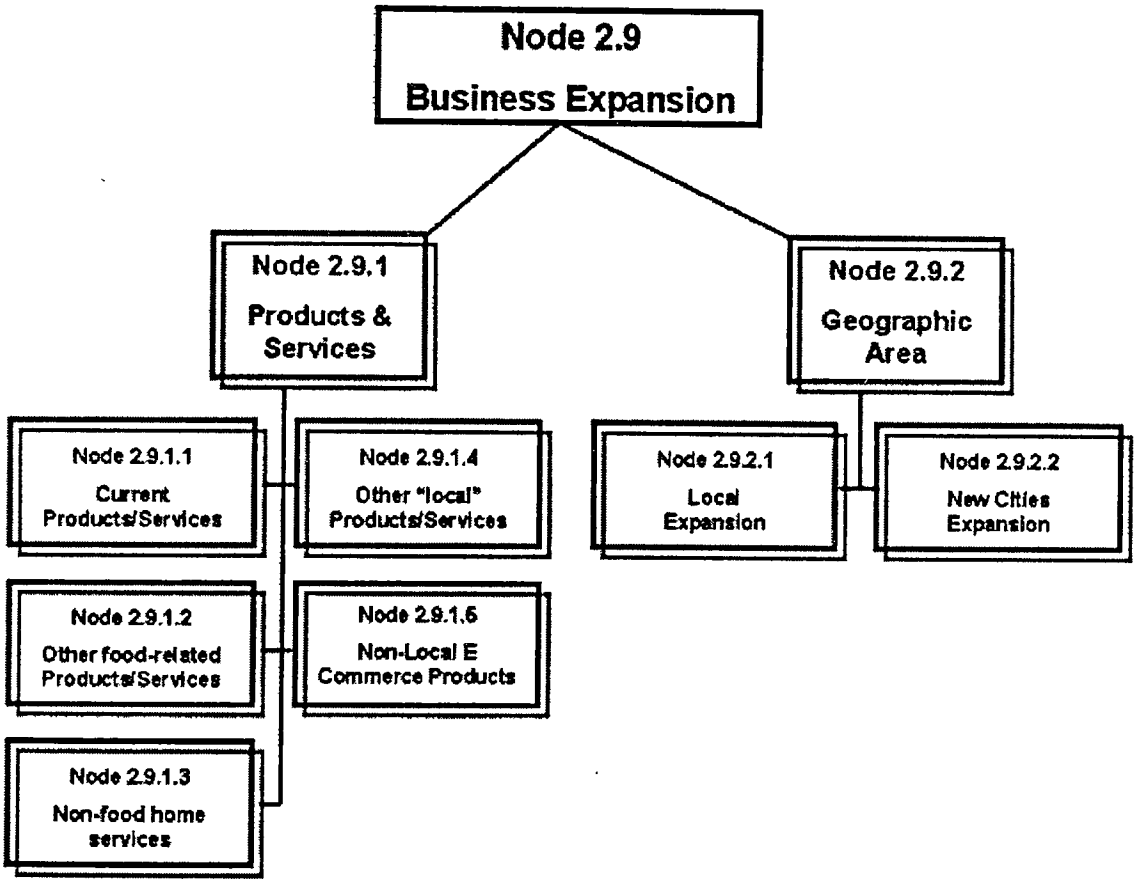
As ideas about the data changed or new insights were revealed through analysis, the trees were rearranged to form new trees, which reflected the new view of the data. This flexibility of NUDIST for tree pruning or re-shaping assisted with providing a better understanding of the data and node relationships.

NUDIST AND NEW FINDINGS

One of the most important findings of this research, the concept of Local E-commerce, will be discussed in Chapter 6. The associated framework tree for this area is displayed in Figure A.5. This tree section originally focused on the scope of the case's current products and services offerings versus the future. However, as part of this discussion the geographic limitations of

their market were described and then captured in this tree as a separate branch. As the related nodes emerged and the common theme of geographic limitations for an e-commerce market was repeated in the various case trees, this concept was validated. The notion of two different growth models were captured and contained in two nodes: local expansion and new city expansion.

FIGURE A.5 Business Expansion NUDIST Tree Framework



Another tool of NUDIST that assisted with new findings was a search engine, which allowed searches of the documents index data to seek patterns and themes among the case data. This was also used in the construction and testing of new theories. For example, after the concept of local e-commerce emerged through coding of Waiter.Com, a search in the other trees for the word "local" assisted in finding other related discussion that was then coded into an appropriate node.

In sum, NUDIST was a useful tool in categorizing the data, and developing insights and category relationships. However, the tool had limitations and took much time to master.

APPENDIX B: *FINAL* MULTI CASE INTERVIEW QUESTIONS

This is the final set of interview questions as used with the last case, as of February 1999. Questions were modified, added, or deleted, using the grounded theory approach, from the initial multi-case interview. However, the core research area stayed the same. The three areas of evolution from the initial multicase interview questions were 1) an expanded section was organized around the Business Processes, 2) many of the questions in the Business Process section were moved there from one of the Virtual Retailing sections, and 3) the order of the questions was changed to reflect the way most of the interviews progressed.

At the end of this appendix a table indicating the derivation of the questions can be found.

Research Question Areas:

1. Core Products and Services
2. Business and Brand
3. Customers
4. Virtual Retailing Strategy
5. Virtual Business Processes
6. Virtual Retailing Benefits and Inhibitors
7. In-Store Retailing (if applicable)
8. Partnerships With Other Businesses
9. Competition
10. Information Technology

This list of categories was shown to the interviewee as a guide to the scope of the interview questions. The following questions were for the use of the interviewer and were not shown to the interviewee. Minor edits have been made to the questions to present them in the appendix.

CORE PRODUCTS/ SERVICES- Section 1

1.1 What are your core products and services today? (key markets)

1.2 Do you expect them to change? (main drivers)

1.3 What is the geographic area of your market(s)?

1.4 What criteria will you use in deciding when to offer new products/ services? or increase geographic coverage? – more on growth covered later.

1.5 One categorization of food is: ready-to-eat, ready-to-heat, (raw ingredients): minimal cooking, complex cooking: a) are there any other categories that you would add b) which categories are you in today? Future?

BUSINESS AND BRAND - Section 2

2.1 Could you please describe your business key goals

2.2 How would you describe your Brand?

2.3 What is the key value proposition you offer to your customers?

2.4 Are there key things that you want to be know by your customers (image)?

If have a brick channel

2.5 Are there business organizational issues that impact you implementing e-commerce?

2.6 What is the impact of corporate culture on your projects?

CUSTOMERS – Section 3

3.1 Who are your customers?

3.2 How do you segment (categorize) them?

3.3 How did you select the geography for your business? e.g. high access to Internet

3.4 Do your customers have to use the Internet to access your service?

3.5 Do they access your service from home or business?

3.6 Are your current customers comfortable using Internet technology? Other technology (e.g. use a phone, fax, ATM, VCR, etc.)

3.7 Are there customers you want to reach that don't have a PC with Internet access in their home? How will you reach them?

3.8 Do you know which customer segments provide the most revenue to the business today and why?

3.9 Which group do you expect to provide the most revenue in the future and why?

3.10 Do your customers perceive acquiring your product a chore or entertainment?

3.11 Do you offer (market) different types of products/ services to these segments? If not, do you plan to?

3.12 Do you offer (reward) different service levels to your best customers? (special checkout lines, special privileges, rewards)

3.13 Are your customers also businesses like nursing homes or hospitals, restaurants?

3.14 What about people who are elderly, home bound that social services might assist with shopping, are you linked with them?

3.15 What do you see as your customers' changing lifestyles and how might it impact your future business plans?

VIRTUAL RETAILING STRATEGY- Part 4

STRATEGIC FOCUS

4.1 What is your virtual retailing strategy?

4.2 What is the content area of your web site? Future?

4.3 How do you evaluate web site effectiveness?

If have Brick Channel

4.4 What are the current paths / links that you offer to your customers to acquire your products or services both in-store and remotely?

4.5 Are you in pilot mode or production of your virtual retailing plans?

4.6 Do you treat investments in e-commerce differently to any other areas of the business?

VIRTUAL BUSINESS PROCESSES: -Section 5

THE FOLLOWING CHART WAS SHOWN DURING THE NEXT GROUP OF QUESTIONS RELATING TO THE BUSINESS PROCESS STEPS: This is part of an enhanced section of questions that focus on the business processes.

Virtual Business Processes

Processes	Interface	Feedback	Benefits	Inhibitors
Value Proposition Off-line Market On-line Market Web info the offer				
Order Entry First Order 2 to H Hooked H + n				
Payment				
Order Fulfill				
Delivery/ Pickup				
Customer Service				
New Services				

VIRTUAL BUSINESS PROCESSES

5.1 Value Proposition-

5.1.1How do you find your customers?

5.1.2 Where do you advertise?

5.1.3 What motivates them to place the first order?

5.1.4 Do you track a look to book ratio?

5.1.5 What is the value in your web page to customers even if no order placed e.g. view menu's, recipes, nutritional value, etc.?

5.1.6 Do you have two way communication with customers at this stage?

5.1.7 Why would your customers want to order groceries/ meals this way vs. go to store?

5.1.8 Do you ask them on web page what other types of services do they want?

5.1.9 Have your consumers mentioned any unpleasant surprises?

5.2 Order Entry-

5.2.1 What are the methods for ordering: internet only or also phone and fax and also for future? How cost effective are the non-internet order methods? Do you plan to continue them?

5.2.2 Do you motivate them to order via Internet?

5.2.3 Do you limit the number of delivery slots per week? What kind of choices? e.g. is this limitation the number of trucks and drivers or are there other?

5.2.4 Is there a premium service (preferred delivery slots or shorter delivery windows) with a higher charges-today and future?

5.2.5 Can consumers create a personal order list that is saved? Multiple lists?

5.2.6 Do you create a list with what they have ordered historically? What other personalized type of service can you provide?

5.2.7 What is the biggest inhibitor to the first order?

5.2.8 In which order is the consumer trained or hooked (h)? orders before (h)?

5.2.9 How do you retain customers who have reached (h)?

5.2.10 What are the inhibitors and programs to address them for each order stage? How do you take advantage of electronic media to accomplish this?

5.2.11 Do you have a customer loyalty program? Describe. How do you communicate how many points they have and how and where can they redeem points (with them only or with partners and can they earn points with a partner to redeem at their virtual store)? Do you send them monthly points?

5.2.12 How do you accomplish ease of use in ordering?

5.2.13 What types of customer communications are there at this stage? e.g. (is there something else you want to order, what other services would you like, what do you spend time on that you wish that you didn't).

5.2.14 Do you have capacity limitations at this stage?

5.2.15 Is there two way communication?

5.2.16 Do you make a profit on an order yet?

5.2.17 Would you rather your customer order a larger order or more often?

5.2.18 Do your customers order perishables also (if grocer)?

5.2.19 Do you offer ready to heat meals (grocer and meals retailer), ready to eat meals (grocer)?

5.2.10 What product is your best seller?

5.2.11 Do you see a trend in industry to pre-assembled meals?

5.2.12 Do you initiate communication with them during the order- trade up or other customers like you suggest product they might like to buy?(Amazon Model)

5.2.13 Do you initiate communication with your customers when you have not heard from them lately?

5.2.14 How do you inform them about new products or new services?

5.2.15 Do you survey your customers or have focus groups?

5.2.16 Any surprises or things you did not expect?

5.2.17 Is the order entry electronic only or can an employee assist on request?

5.2.18 Do you need to train your customers to make an order? Have you tried anything novel to assist with first order? e.g. (shopping mall demo booth)

5.2.19 What are your substitution policy options and have they changed with experience?

5.2.20 Do you have advertising yet and is it personalized e.g. no pet ads if have no pets and future?

5.2.21 What is the potential value of the data you are collecting about customers (to producers)?

5.2.22 What issues of security and privacy have been expressed by your consumers?

5.2.23 Do you know who in the household orders the groceries/ meals?

5.2.24 What time of day most orders arrive? Which days? Are orders available 24 x7?

5.3 **Payment**

5.3.1 When and how does payment take place? Do you plan to change this?

5.3.2 What type of payment media do you accept?

5.3.3 Have your customers expressed any concerns about Internet security issues?

5.3.4 Do you have plans for other types of electronic payments in the future (e.g. smart cards, mobile payment systems)?

5.4 **Order Fulfillment**

MEALS:

5.4.1 How do you transmit your order to partner restaurants? What technology, other options considered. Describe.

GROCERS:

5.4.2 Do you use a warehouse or pick from store and why? What are the tradeoffs and issues? What about the future?

5.4.3Explain picking process: What type of picking list is used? Type of scanners used by pickers? Order of the pick?

5.4.4 Trolley used by pickers? One or multi-pick?

5.4.5 How do your pickers implement your substitution policy?

5.4.6 What's unique about handling perishable products?

5.4.7 How are the orders staged until loaded onto trucks?

5.4.8 Checkout process, check for accuracy?

5.4.9 Capacity limitations of trucks?

5.4.10 What's the hardest part of Order Fulfillment? What is the most costly part to fulfill?

5.4.11 When are prices locked in: at order or when picked?

5.4.12 Any surprises in order fulfillment?

5.5 **Customer Obtains Product or Service**

5.5.1 What options offered: delivery vs. pick-up? What % of customers select each method? In-house delivery or outsource? If outsource, any concerns?

5.5.2 Is delivery offered to home and /or business?

5.5.3 Have you considered delivery to other locations (e.g. gasoline station)?

5.5.4 What were the issues in setting up a delivery process?

5.5.5 If outsourced, what are the issues?

5.5.6 (Grocers) on average how many deliveries per truck?

5.5.7 Does customer have to be home?

5.5.8 Customer interactions with employees/ partner this stage?

5.6 **Customer Service**:

5.6.1 How do you handle problems with orders or other concerns?

5.6.2 What if they don't like substitution provided (grocers)?

5.6.3 Is communication of customer service via net or phone?

5.6.4 Is Customer Service just after the sale or part of every transaction process?

5.6.5 What types of transactions can your customers interface with an employee today? Future?

5.6.6 Are there ways to improve the employee customer transaction?

5.6.7 How do your customer segments feel about interfacing with an electronic (web) interface? Why?

5.7 Completing the loop- re-invent/updating the value proposition:

5.7.1 Do you mine customer data today and how? Future?

5.7.2 What about creating communities of interest based on data?

5.7.3 Value added services in food – recipes, nutritional value, allergies (don't show any food that contains peanuts or show all vegetarian or this type of ethic food – e.g. Chinese)?

5.7.4 A significant value of electronic retailing as we have discussed is the value of the data on the customers that you can capture. Lets discuss that as it relates to customer service. e.g. every customer could have a different perception of what good customer service could be e.g. in and out-of-store fast, early notice on specials, offer my favorite special Purdue chicken as a reward for frequent shopping) How might you personalize your transactions with your customers? What range of services might your customer want that you would be willing to offer? Would it make for happier customers? Would it be difficult to implement? What is the value? Would you be willing to ask your customer what they prefer? How to implement?

5.7.5 What else would you like to know about your customer that you don't know, e.g. such as where PC is located in the house or what other online services they use such as home banking? What would be the value of that information?

5.8 Growth

5.8.1 How will you grow your business- *product and service* perspective?

5.8.2 Will you expand into other food services/ products?

5.8.3 Will you expand into home services?

5.8.4 Other industries?

5.8.5 Will you expand your business *geographically*? How?

5.8.6 Would you add new services to existing customer first or offer same services in new geographies and why?

5.8.7 E-Commerce typically implies a global market, based on your implementation do you have a local market or a collection of local markets? Explain.

SECTION 6 VIRTUAL RETAILING BENEFITS AND INHIBITORS

The following charts were shown to the interviewee. Note that the Inhibitor and Benefits lists have been updated as each interview progressed, per grounded theory.

CUSTOMER BENEFITS

More personalized service (customized)

Better price

Save time

Convenience

Better product (fresh food) e.g. higher quality

Entertainment factor

Reward loyalty (frequent buyer)

Better customer service (friendly, accurate order, etc)

Wider selection of products

Meets other customer needs (not related to core products/services- linkages to other services)

Community Benefit- make product recommendations based on what similar customers prefer

Additional information available about product/ services

More Relevant Content

Speed to Transact (use historic order information)

More Accurate Transaction

More hours available (7 by 24)

Not concerned with English language skills of human interface

Potentially multi-lingual

CUSTOMER INHIBITORS

Ease of use of technology

Privacy

Security (payment)

Customers technology literacy

Consumer has to learn how to interface and transact with the virtual retailer

RETAILER BENEFITS

Obtain customers' purchase data

Serve more customers in a given time

Consistent offer of tradeup

Offer other products for sales that are not on store premise (wider selection of products)

Safety and security – less cash on hand or employees carry no cash

Set up the next sale

Easily provide additional data on product or service

Can provide an enhanced service

Transaction Efficiency

Potentially lower cost of interface (over human)

Potentially larger base of consumers

RETAILER INHIBITORS

Cost to implement

Corporate culture

Corporate Management

Perceived as Risk

Infrastructure to support not in Place

Concern how ECI fits with Brand and Image of service (if brick counterpart)

Time and effort to implement

VIRTUAL RETAILING BENEFITS AND INHIBITORS - Section 6

SHOW BENEFIT AND INHIBITOR CHARTS

6.1 What are the consumer's benefits to virtual retailing? Prioritize? Future?

6.2 What are the consumer's inhibitors to virtual retailing? Prioritize? Future?

6.3 What are the retailer's benefits to virtual retailing? Prioritize? Future?

6.4 What are the retailer's inhibitors to virtual retailing? Prioritize? Future?

IN-STORE ELECTRONIC RETAILING -Part 7

If Also Have Brick Channel

7.1 Describe the in-store alternative for your customers to acquire the same product they can order virtually?

There were a set of questions used in the pilot to explore electronic consumer devices. As the focus of the research changed to virtual retailing these questions were not used with later cases.

PARTNERSHIPS WITH OTHER BUSINESSES- Part 8

8.1 Who do you have business alliances/ partnerships today? Why?
Do you partner with other home on-line LOCAL services such as banking?
Or on-line newspapers? Partner with ISP?

8.2 What kind of alliances/ partnerships do you envision for the future?

8.3 Do you have electronic linkages to any of your partners?

8.4 How can customer service be enhanced by electronic links to partners?

8.5 Are there any specific electronic linkages with your partners that would be of value to your customer? Why?

8.6 Partner with loyalty reward partner like movie theater and advertise there also?

8.7 Do you share customer information with your business partners?

8.8 Would your customers have privacy concerns with you sharing your customer information?

COMPETITION- Part 9

GROCERS:

9.1 Who are the grocers with physical store in this area? Who is the largest, do they offer home delivery, and is it via an online service?

9.2 Are there other on-line grocers that compete in this area?

9.3 Which do you consider the main competitor and why?

ALL:

9.4 Does any substitute product(s)/ services currently pose a threat in your market(s)?

9.5 Do you expect that to change?

9.6 What is the key value you offer your customers (what differentiates your company from your competitors)

9.7 What restrains potential competitors from entering your markets today? Do you expect this to change?

9.8 Are there any aspects of customer service that are prerequisite to servicing your market?

9.9 Who are your key competitors today? Future?

9.10 Do they segment their customers the same way that you do?

9.11 What industries will you be in 5 years?

9.12 Who might be new competitors in these new industries areas?

9.13 Do you expect competitions to emerge from other industries that you do not directly compete with before?

9.14 Do you expect competitors to emerge from different parts of the world especially in virtual retailing? (e.g. every business can look similar on a web page)

9.15 Can Company size work for you in implementing electronic retailing?

9.16 Can company size work against you in electronic retailing?

9.17 How fast can you adapt to what the competition is doing?

9.18 How do you feel electronic evolution will impact your industry? Other industries?

9.19 What is your vision for what is possible in terms of innovative use of electronic retailing in your industry? Other industries?

9.20 Do you outsource areas where you have a competitive advantage? If so is that a concern?

9.21 If you outsource then who owns or has access to the customer data (purchase history)? Do you only obtain competitive advantage if you own the interface, the connecting network, the customer data, the application software? In the future?

9.22 How sustainable is competitive advantage in electronic retailing?

9.23 Wild card: Do you think these technologies can cause a blurring of the prepared food (QSR) and grocery retail industry? (e.g. if customers are too busy to grocery shop (growth of grocery delivery) then perhaps they are too busy to cook – grocery stores shift to prepared meals or partially prepared meals – all delivered to your home?)

If Brick channel

9.24 In what ways does your brick channel compete with your virtual channel?

INFORMATION TECHNOLOGY -Part 10

10.1 Are you using technology innovatively?

For Those with Brick Channel

10.2 What are the factors in your business that influence investments in IT (Internet projects, infrastructure) today? In the future?

10.3 Are there any special considerations for IT projects that customers would interface with? In the future?

10.4 Do other departments (such as marketing) have an understanding of what technology (Internet) is available, how it can be exploited and what it means to the corporate vision and competitiveness in the marketplace?

10.5 Do you consider your company a leader or follower when it comes to IT investments?

DERIVATION OF QUESTIONS

Many of the questions derived from general business books and literature. Chapter 2 and 3 covers specific literature sources that are important to this research and influenced the questions. Grounded theory generated some of the questions as ideas emerged from one case and caused new questions to be asked of subsequent cases.

For each of the question sections the general sources that were used are listed. Grounded theory generated questions will be noted.

SECTION	DERIVATION
1 Core Products and Services	Murdick et al (1990), Rachman (1975), Fitzsimmons and Fitzsimmons (1994), Kotler (1994), Keh and Park (1997) Grounded theory question: 1.5
2 Business and Brand	Kotler (1994), Drucker (1985), Booms and Bitner (1981)
3 Customers	Heikkila et al (1998), Jukka et al (1998), Hoffman et al (1996), Miller (1996), Peppers and Rogers (1997), Kutz (1998), Keh and Park (1997), Zeithaml (1985), Food Marketing Institute (1997a), Feldman (1981)
4 Virtual Retailing Strategy	Strader and Shaw (1997), Porter (1996)
5 Virtual Business Processes (also see Table 2.2)	5.1: Kotler (1997b), Wilkie (1994), Schuster and Sporn (1998), Jarvenpaa and Todd (1996-1997), Keh (1997), Gehrke and Turban (1999) 5.2: Kalakota and Whinston (1996, 1997), Food Marketing Institute (1998a), Wang et al (1998), Sampler (1998), Bakos (1998), Schuster and Sporn (1998) 5.3: Kalakota and Whinston (1996) 5.4: Kalakota and Whinston (1996), Murdick et al (1990) 5.5: Kalakota and Whinston (1996, 1997), Murdick et al (1990), Gould (1998), Bakos (1998) 5.6: Parasuraman (1991), Jarvenpaa and Todd (1996-1997) 5.7: Reichheld and Teal (1996), Parasuraman (1991), Armstrong and Hagel (1996), Hagel and Rayport (1997), Jukka et al (1998), Schuster and Sporn (1998), Keh and Park (1997), Pine et al (1995) 5.8: Ansoff (1957), Keh and Park (1997)

	Grounded theory questions: 5.2.3, 5.2.7, 5.2.8, 5.2.9, 5.2.10, 5.2.12, , 5.2.17, 5.2.18, 5.4.1, 5.4.11, 5.6.4, 5.8.5, 5.8.6, 5.8.7
6 Virtual Retailing Benefits and Inhibitors	Jarvenpaa and Todd (1996-1997), Thachenkary et al (1997), Kalakota and Whinston (1997) Grounded theory questions: the list was modified by each case
7 In-Store Retailing	Rachman (1975), Parker and Gulliford (1996)
8 Partnerships With Other Businesses	Glazer (1991), Rhodes and Carter (1998), Porter (1985)
9 Competition	Porter (1985), Angelides (1997), Alba et al (1997), Porter and Millar (1985)
10 Information Technology	Kalakota and Whinston (1996), Appel (1972), Keh (1998), Keen (1988)

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