User Acceptance of the Intranet in Restaurant Franchise Systems: An Empirical Study

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Dissertation submitted to the Faculty of the
Virginia Polytechnic Institute and State University
in partial fulfillment of the requirements for the degree of

Doctor of Philosophy
In
Hospitality and Tourism Management

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December 12, 2006
Blacksburg, Virginia

Keywords: Intranet, Technology Acceptance Model (TAM), Franchise, Restaurant, Regression Analysis

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ABSTRACT

This research study examined the acceptance of the intranet in restaurant franchise systems. The widely accepted Technology Acceptance Model (TAM) developed by Davis (1986, 1989) was the basis for this study. TAM is an excellent model to predict information technology (IT) usage and is based on the Theory of Reasoned Action (TRA). Therefore, TAM was adopted in this study of intranet acceptance. Furthermore, this study attempted to see if the earlier results of TAM are still valid. The original model was modified to include one external variable, franchise support. Data were collected from franchise restaurant systems throughout the United States, excluding Alaska and Hawaii. Of 3,500 questionnaires distributed to individual users of intranet, 161 contained usable responses. The results of regression analysis confirm that TAM is valid for additional applications such as evaluating the intranet in restaurant franchise systems.

DEDICATIONS

I would like to dedicate this work to my family. You all have provided me with unconditional love, patience, encouragement, and support. Thank you for believing in me during my study at Virginia Polytechnic Institute and State University. And thanks to God for strength, love, and guidance.

ACKNOWLEDGEMENT

There are a number of people who I wish to acknowledge for their contribution to this study. My first and foremost thanks goes to Dr. Mahmood A. Khan. Your presence in education has been an integral part for me to complete my degree. My appreciation is extended to other members of my advisory committee: Dr. Suzanne K. Murrmann, Dr. James E. Littlefield, Dr. Candice E. Clemenz, and Dr. Hyung-il Jung. Your time, advice, and insights were invaluable during my research. I would like to express my appreciation to the individuals who participated in the survey. I am glad I had the good fortune of friendship from fellow graduate students throughout my studies at Virginia Polytechnic Institute and State University.

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CHAPTER I

INTRODUCTION

1.1 Introduction

Information technology (IT) offers the potential for substantially improving performance (Curley, 1984; Edelman, 1981; Sharda, Barr, & McDonnell, 1988). Performance gains, however, are often obstructed by users' unwillingness to accept and use available systems (Bowen, 1986; Young, 1984). Understanding why people accept or reject computer technology has proven to be one of the most challenging issues facing information systems (IS) research (Swanson, 1988). Many organizations have invested heavily in computer-based tools and information systems to support organizational decision-making, planning, and communication processes as well as to compete globally (Davis, Bagozzi, & Warshaw, 1989). According to Haynes and Thies (1991), management of technology plays a key role when considering productivity enhancement. The use of high technology can be seen on factory floors as computer driven robots replace human labor in an effort to become more productive. However, end-users are often unwilling to use existing computer systems that are designed to generate significant performance gains (Alavi & Henderson, 1981; Nickerson, 1981; Swanson, 1988; Wang, Wang, Lin, & Tang, 2003). Low usage of installed systems has been identified as a major factor underlying the productivity paradox surrounding lackluster returns from organizational investments in information technology (Sichel, 1997). Therefore, it is necessary for system developers to understand end-user requirements to meet demand in system usage in order to foster the adoption and effective usage of new systems.

1.2 Statement of the Problem

There is relatively little literature available that discusses in detail the use of the intranet by franchise systems. Most of the literature that is available takes the form of

short articles in publications aimed at the franchise industry rather than academic research (Dixon & Quinn, 2004). The lack of theoretical and empirical research on the intranet in this area limits the understanding of its influences on restaurant franchise systems. Given the intranet's increased popularity, understanding its acceptance in restaurant franchise systems would be greatly beneficial.

A franchise system can be described as a continuing relationship in which the franchisor provides the franchisee with a licensed privilege to do business, along with assisting in organizing, training, merchandising, and management. In return for the above mentioned services, the franchisor receives a percentage of sales from the franchisee (Kostecka, 1983). Communication is the key ingredient in the formation of any important relationship (Harris, 1993; Kreps, 1990; Treadgold, 1990), but in the franchisor-franchisee relationships it is a critical element, and can mean the difference between the success and failure of a system (Allen, 1994; Bergler, 1991; Germann, 2003; Grueneberg, 2004; Haneborg, 2003; Romaniello, 2003). Good communication between the franchisor and all franchisees is essential to the system's success. Franchisors and franchisees must continually be in contact to survive in a competitive environment by utilizing a variety of communication methods (Bergler, 1991).

Franchise companies were seeking a more sophisticated means of communication, and intranet systems designed specifically to suit their needs (Vilchis, 2001). Communication becomes a challenge when there is the need to inform several franchisees across the nation on a daily basis. Although telephones, fax machines and U.S. mail still have their place within the franchise industry, faster, more efficient means of communications, such as intranets, have greatly complemented these tools (Esterson, 1998). Most franchise companies utilize their intranet system as a communications tool via topic-oriented group discussion forums (online chats) and secure Web mail designed to record delivery and receipt of critical messages. With an intranet chat room or group discussion forums, franchisees can network with dozens or hundreds of other franchisees every day online, not just annually at the convention. They post and refine ideas in addition to asking questions and receiving answers from other (Rogers & Bennett, 2005).

A franchise company's intranet becomes the primary resource whenever it is needed for information on training, marketing materials and operations manuals (Fisher, 2002; Foley, 2005).

Basically, with a PC and an Internet connection, intranet systems have turned once cumbersome and expensive tasks into simple procedures that leave franchisors and franchisees free to focus on the central aspects of their business (Vilchis, 2001). With an intranet system, franchisees can quickly and easily gain instant access to current business tips, pricing information, ad campaigns and announcements from management (Berta, 2001; Seideman, 1996). An intranet system saves franchisors thousands of dollars in printing, mailing, shipping, travel, long-distance telephone and fax costs (Loyel, 2004; Rubinstein, 1997). Previously, a slight change to an operations manual meant resending the corrected page to every franchisee in the mail, then following-up with phone calls to ensure receipt. With an intranet, the change is posted simultaneously to everybody in the franchise system, with automated electronic notification, instant access and the ability to track work that is received and the notification read (Vilchis, 2001).

1.3 Objective of the Study

The problem of low usage can be found in many different types of information technology (IT) application that includes intranet of a business. The intranet has emerged as the mainstream communication channel between businesses (B2B), and it is becoming more sophisticated by providing an alternative way for individuals to satisfy their needs, whether work-related or business-related. The intranet is a computer-mediated environment that allows users to overcome some of the problems/barriers of traditional media: accessibility, bottlenecks, interaction and identification (D'Ambra & Rice, 2001; Rice, 1987).

Franchisors are building intranet systems to help them achieve their objectives by assisting their franchisees in performing their jobs better by providing the necessary administrative framework, information, and guidelines in conducting their businesses. With this trend, it is easy to point out that intranet usage will gain more importance in the

franchised business systems. In this context, an understanding of the predictors of intranet usage could serve a multitude of stakeholders by helping them recognize how to promote that usage. However, studies addressing the development and maintenance of an effective intranet system as well as how to evaluate an existing intranet system for effectiveness are sparse in the hospitality industry literature.

In other words, research on the application side of the intranet from the user's perspective has been relatively quiet. With this argument, this study is to investigate user acceptance of intranet by adopting a widely used model that is known as the Technology Acceptance Model (TAM) (Davis, 1986, 1989). The main focus of the investigation is on the relationship between the level of intranet acceptance by users in restaurant franchise systems and five antecedents: franchise support, perceived usefulness of the intranet, perceived ease of use of the intranet, attitude toward using the intranet, and behavioral intentions to use the intranet.

1.4 Justification of the Study

There are few definitions of intranet available and those definitions vary frequently. However, most include a description of an intranet as a network based on the transmission control protocol/internet protocol (TCP/IP) belonging to an organization, which is located within its firewall and is accessible only by that organization's members. This definition would include e-mail, though in many cases the term intranet is only used to refer to the system of storing and accessing data via the World Wide Web (WWW) browsers (Horton, Buck, Waterson, & Clegg, 2001). Hinrichs (1997, p.5) predicted that "intranets are going to cut costs, increase productivity, streamline business processes, improve quality … improve human resources, strategically align your organizational infrastructure, and help you emerge as a learning organization involved in principle-centered self improvement."

Explaining user acceptance of new technology is often described as one of the most mature research areas in the contemporary information systems (IS) literature (Hu, Chau, Sheng, & Tam, 1999). Davis (1986, 1989) introduced the Technology Acceptance

Model (TAM) to explain and predict computer usage behavior. TAM can be used to evaluate systems very early in their development, or to assess user reactions to systems on a trial basis (Davis et al., 1989). Technology adoption studies frequently adopt usage as a measure of success (Szajna, 1993), though others have employed alternative measures of success, an example being user satisfaction (McKeen, Guimeraes, & Wetherbe, 1994; Miller & Doyle, 1987). The concept of success will have a different meaning to each organization in which an intranet is being used. However, system usage can be seen as an element of success that would be an important issue to everyone. The establishment of an appropriate level of system usage is a necessary step towards seeing the benefits that can be expected from an established intranet system. Therefore, this study is concerned with intranet usage although usage is clearly not the same as system success.

1.5 Research Question

The Technology Acceptance Model (TAM) was conceived to explain and predict the individual's acceptance of information technology (IT). User's beliefs – perceived usefulness and perceived ease of use – determine the attitudes toward using the system. Behavioral intention to use, in turn, is determined by these attitudes toward using the system. Behavioral intentions to use lead to actual system use. Previous research has demonstrated the validity of this model across a wide variety of corporate ITs (Adams, Nelson, & Todd, 1992; Chin & Todd, 1995; Doll, Hendrickson, & Deng, 1998; Mathieson, 1991; Moon & Kim, 2001; Segars & Grover, 1993). The purpose of this study is to extend the Technology Acceptance Model (TAM) (Davis, 1986, 1989) in the intranet context. In addition, it examines antecedents of intranet acceptance. Therefore, these research questions were developed as follows:

1) Can the Technology Acceptance Model (TAM) explain the user acceptance of the intranet in restaurant franchise systems?
2) What are the significant antecedents of the acceptance of intranet in restaurant franchise systems?

1.6 Technology Acceptance Theory

Significant progress has been made over the past years in explaining and predicting user acceptance of information technology at work. In particular, substantial theoretical and empirical support has accumulated in favor of the Technology Acceptance Model (TAM) developed by Davis (1986, 1989). Numerous empirical studies have found that TAM consistently explains a substantial proportion of the variance (typically about 40%) in usage intentions and behavior (Davis et al., 1989; Taylor & Todd, 1995a; Venkatesh & Davis, 2000), and that TAM compares favorably with alternative models such as the Theory of Reasoned Action (TRA) and the Theory of Planned Behavior (TPB) (Gentry & Calantone, 2002; Venkatesh, 1999). TAM has become well established as a robust, powerful, and parsimonious model for predicting user acceptance (Venkatesh & Davis, 2000).

The base theory for this research on intranet acceptance is the Technology Acceptance Model (TAM) developed by Davis (1986, 1989). Davis (1989) has shown that TAM can explain the usage of information technology. He applied Ajzen and Fishbein's (1980) theory about reasoned action to illustrate beliefs influence on attitudes which, in turn, lead to intentions, and therefore generating behaviors. Davis (1989) thus conceived that TAM's belief-attitude-intention-behavior relationship predicts user acceptance of information technology (IT). He further asserted that perceived usefulness and ease of use represent the beliefs that lead to such acceptance. Perceived usefulness is the degree to which a person believes a particular information system would enhance his or her job performance (i.e., by reducing the time to accomplish a task or providing timely information). Perceived ease of use is the degree to which a person believes that using a particular system would be effortless (Davis, 1989). Two other constructs in TAM are: attitude towards use and behavioral intentions to use. Attitude towards use is the user's evaluation of the desirability of employing a particular information systems application. Behavioral intention to use is a measure of the likelihood a person will employ the application (Ajzen & Fishbein, 1980). TAM's dependent variable is actual

usage which has typically been a self-reported measure of time or frequency of employing the application.

1.7 Theoretical Model Development

Information systems (IS) research has long studied how and why individuals adopt new information technologies (Venkatesh, Morris, Davis, & Davis, 2003). Within this broad area of inquiry, there have been several streams of research. One stream of research focuses on individual acceptance of technology by using intention or usage as a dependent variable (Compeau & Higgins, 1995; Davis et al., 1989). Other streams have focused on implementation success at the organizational level (Leonard-Barton & Deschamps, 1988) and task-technology fit (Goodhue, 1995; Goodhue & Thompson, 1995), among others. While each of these streams makes important and unique contributions to the literature on user acceptance of information technology, the goal here is to examine the influences of the intranet in restaurant franchise systems. Figure 1.1 presents the basic conceptual framework underlying the class of models explaining individual acceptance of intranet that forms the basis of this research.

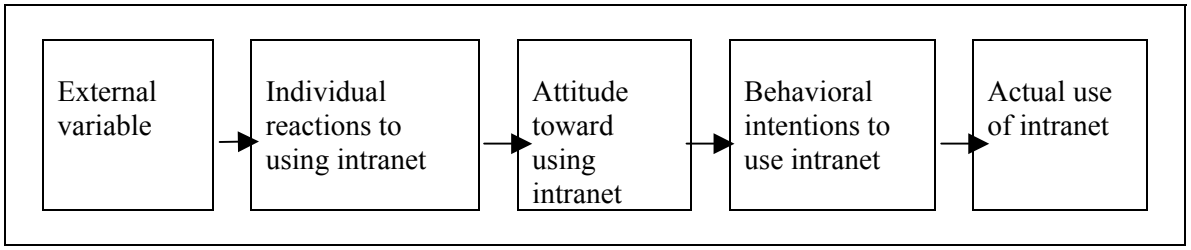

Figure 1.1 Basic Concept Underlying User Acceptance Model of Intranet

1.8 Significance of the Study

In the past decades, perceived ease of use and perceived usefulness constructs have been considered important in determining the individuals' acceptance and use of information technology (IT) (Keil, Beranek, & Konsynski, 1995; Malhotra & Galletta,

1999; Moon & Kim, 2001). These variables are fundamental salient beliefs (motivational factors) comprising the Technology Acceptance Model (TAM) (Davis et al., 1989). Information systems (IS) researchers have investigated and replicated these two constructs and agreed that they are valid in predicting the individual's acceptance of various corporate information technologies (Adams et al., 1992; Chin & Todd, 1995; Doll et al., 1998; Hendrickson, Massey & Cronan, 1993; Igbaria, Guimaraes, & Davis, 1995; Mathieson, 1991; Segars & Grover, 1993; Straub, Limayem, & Karahanna, 1995; Subramanian, 1994). However, depending on the specific technology context, additional explanatory variables may be needed beyond the ease of use and usefulness constructs. Davis (1986, 1989) himself argued that future technology acceptance research needs to address how other variables affect usefulness, ease of use, and user acceptance. Factors contributing to the acceptance of a new information technology are likely to vary with the technology, target users, and context. Research on the acceptance of intranet systems will enhance understanding of the individual user beliefs or motives to use intranet and to show how these factors affect user's acceptance of the use of an intranet.

Acceptance is one of the crucial keys to successful information technology choice and use (Borthick, 1988). This study examines user's acceptance of intranet in restaurant franchise systems. The Technology Acceptance Model (TAM) (Davis, 1986, 1989) provided a theoretical base for examining factors contributing toward intranet acceptance in organizations. Although the Technology of Acceptance Model (TAM) was derived from the Theory of Reasoned Action (TRA) model, both models were found to predict intentions and usage satisfactorily. However, TAM is much simpler and easier to use and also a more powerful model of the determinants of user acceptance of computer technology than TRA (Igbaria, Zinatelli, Cragg, & Cavaye, 1997). In addition, TAM attitudinal determinants outperformed TRA's with a much larger set of measures. The theoretical insights of TAM thus provide a strong basis from which to examine factors contributing towards user's acceptance of intranet.

Prior research on technology acceptance and information systems (IS) implementation demonstrates that there are various exogenous controllable factors that

influence technology acceptance (Adams et al., 1991; Davis et al., 1989; DeLone, 1988; DeLone & McLean, 1992; Igbaria, 1993; Igbaria et al., 1995a; Mathieson, 1991; Montazemi, 1988; Moore & Benbasat, 1991; Raymond, 1988; Soh, Yap, & Raman, 1992; Straub et al., 1995; Szajna, 1996; Taylor & Todd, 1995b; Thompson, Higgins, & Howell, 1991; Thong, Yap, & Raman, 1996). An example of external variables included in past TAM research that affected ease of use and usefulness are short-term usage and long-term usage (Chau, 1996); computer self-efficacy (Fenech, 1998); social presence/information richness (Gefen & Straub, 1997; Straub et al., 1995); intraorganizational factors, extraorganizational factors, personal computing acceptance (Igbaria et al., 1997); computer self-efficacy, computer experience, organizational support (Igbaria & Iivari, 1995); intrinsic involvement, prior use (Jackson, Chow, & Leitch, 1997); situational involvement, social presence, physical assessibility and support (Karahanna & Straub, 1999); perceived utilities, perceived ease of adoption (Phillips, Calantone, & Lee, 1994); cognitive influence process, social influence (Venkatesh & Davis, 2000). These external variables have been used in previous research as an extension to the technology acceptance model. This study included one external variable, franchise support. Management support (organizational support) was introduced in Igbaria's (1993) study on microcomputer user's acceptance. This external variable will be explained in Chapter II of this study.

Thus, this study adopts the Technology Acceptance Model (TAM) with perceived usefulness (U), perceived ease of use (EOU), attitude toward using (A), behavioral intention to use (BI), and actual system usage (Usage) from the original model. In addition, management support is introduced in this study.

1.9 Definition of Terms

Intranet is defined as a private network that is contained within an enterprise (whatis.com, n.d.). A franchise system is defined as a legal agreement in which an owner (franchisor) agrees to grant rights or privileges (license) to someone else (franchisee) to sell the products or services under specific conditions (Khan, 1999). In this study, intranet

in the franchise system is defined as the franchise network which utilizes internet-based technology to communicate and share information with its franchisees.

Management Support refers to the perceived level of general support offered by top management in organizations (Igbaria, 1993). *Franchise support (FS),* in this study, is defined as the strength of user's beliefs with general support offered by the franchise system.

Perceived Usefulness is defined as the degree to which a person believes that using a particular system would enhance his or her job performance (Davis, 1989; Davis et al., 1989). *Perceived usefulness of an intranet (UI)* is defined as the strength of user's belief that using an intranet would enhance his or her work performance in this study.

Perceived Ease of Use is defined as the degree to which a person believes that using a particular system would be free of effort (Davis, 1989; Davis et al., 1989). *Perceived ease of use of an intranet (EOUI)* is defined as the strength of user's belief that interacting with an intranet would be free of effort in this study.

Attitude Toward Using is defined as an individual's positive or negative feelings (evaluative affect) about performing the target behavior (Davis et al., 1989; Fishbein & Ajzen, 1975). *Attitude toward using an intranet (AI)* is defined as the strength of the user's feeling of favorableness toward the intranet system usage in this study.

Behavioral Intention to Use is a measure of the strength of one's intention to perform a specified behavior (Davis et al., 1989; Fishbein & Ajzen, 1975). *Behavioral intentions to use an intranet (BII)* is defined as the strength of the user's willingness to use the intranet system in this study.

Actual System Usage refers to a self-reported measure of time or frequency of employing the application (Ajzen & Fishbein, 1980). *Actual use of an intranet (AUI)* is defined as the current intranet use in this study.

1.10 Organization of the Study

This study consists of five chapters. Chapter I presented the background of the problem, objective of the study, justification of the study, theory to be used in the study,

research questions, definition of terms used in the study, and organization of the study. Chapter II summarizes the literature related to user acceptance and usage of systems. In addition, the review of related literature in franchise systems and intranet are provided. Chapter III presents the methodology for this study, research questions and hypotheses, research design, survey procedures and statistical techniques to be used in the study. Chapter IV presents the data analysis and interpretation of the results and findings of the study. Chapter V presents the summary and conclusions, as well as, recommendations for future research.

CHAPTER II

REVIEW OF THE LITERATURE

2.1 Introduction

This chapter provides an overview of the Technology Acceptance Model (TAM) developed by Davis (1986, 1989). The Technology Acceptance Model (TAM) is the base theory for this research on user acceptance of intranet in the restaurant franchise systems. In addition, the review of literature related in franchise systems, intranet, and intranet in franchise systems are provided.

2.2 Technology Acceptance Model (TAM)

The purpose of the Technology Acceptance Model (TAM) is to explain and predict user acceptance of information systems (IS). Davis (1986) adapted Ajzen and Fishbein's (1980) Theory of Reasoned Action (TRA) to reproduce intentions to accept information technology. TAM explains the causal links between beliefs (usefulness and ease of use of an IS) and user's attitudes, intentions and actual usage of the system. Usage has been studied as a phenomenon of interest in its own right (Davis, 1989; Davis et al., 1989; Hartwick & Barki, 1994; Mathieson, 1991; Moore & Benbasat, 1991; Thompson et al., 1991).

As a key dependent variable in the information technology (IT) research literature, usage is of increasing theoretical interest. It is also of increasing practical importance as the usage of IT becomes more pervasive. From a pragmatic point of view, understanding the determinants of IT usage should help ensure effective deployment of IT resources in an organization (Taylor & Todd, 1995a). Such usage is a necessary condition for ensuring productivity payoffs from IT investments (Davis, 1989; Mathieson, 1991). According to Straub, Keil, and Brenner (1997), TAM is widely regarded as a relatively

robust theoretical model for explaining IT use. From a practitioner perspective, TAM is useful for predicting whether or not users will adopt new information technologies.

Acceptance is a key to successful software choice and use (Borthick, 1988). TAM attempts to test and predict why people accept or reject information technology. Previous researchers identified two determinants that are crucial to understanding user acceptance. According to Davis (1989):

1) "people tend to use or not use an application to the extent they believe it will help them perform their job better. This variable is referred to as *perceived usefulness*;
2) even if potential users believe that a given application is useful, they may, at the same time believe that the systems are too hard to use and that the performance benefits of usage are outweighed by the effort of using the application. That is, in addition to usefulness, usage is theorized to be influenced by *perceived ease of use*."

Davis (1989) further defines *perceived usefulness* as the degree to which a person believes that using a particular system would enhance his or her job performance. This follows the definition of the word "useful" which is capable of being used advantageously. Within the organizational context, people are generally reinforced for good performance by raises, promotions, bonuses, and other rewards (Pfeffer, 1982; Schein, 1980; Vroom, 1964). A system high in perceived usefulness, in turn, is one in which a user believes in the existence of a positive use-performance relationship. *Perceived ease of use*, in contrast, refers to the degree to which a person believes that using a particular system would be free of effort. This follows from the definition of "ease" which is freedom from difficulty or great effort. Effort is a finite resource that a person may allocate to the various activities for which he or she is responsible (Radner & Rothschild, 1975). All else being equal, an application perceived to be easier to use than another is more likely to be accepted by users.

The constructs in the original TAM introduced by Davis (1989) include perceived usefulness (U), perceived ease of use (EOU), attitude toward using (A), behavioral intention to use (BI), and actual system usage (Usage). Since Davis' (1986, 1989) elucidation of these constructs, numerous researchers have discovered that technology acceptance theory yields consistently high-explained variance for why users choose to utilize systems (Adams et al., 1992; Mathieson, 1991; Pavri, 1988; Thompson et al., 1991).

2.3 Franchise Systems and Intranet

The overview of the Technology Acceptance Model (TAM) is provided in the previous section. The literature related in franchise systems and intranet, as well as intranet in franchise systems will be described the section below.

2.3.1 Franchise Systems

The word franchise originated from a French word meaning "free from servitude." The idea underlying this word is that by owning a franchise, the franchisee is freed from the bondage of working for someone else as an employee (Swerdlow, 1993). A franchise can be defined as a legal agreement in which an owner (franchisor) agrees to grant rights or privileges (license) to someone else (franchisee) to sell the products or services under specific conditions (Khan, 1999). The franchisee becomes a business owner with much of the same decision-making ability as an independent businessperson who starts a firm from scratch. The primary difference between a franchisee and an independent businessperson is that the franchisee has a legal, contractual relationship with a franchisor required to do business as the franchisor instructs her or him (Swerdlow, 1993).

A franchise system consists of geographically dispersed multiple organizations that are legally independent, are economically interdependent, and are operationally indistinguishable to consumers (Parsa, 1996). A franchise agreement is a contractually

based business relationship between two independent parties, whereby the franchisor develops a product or service and the franchisee buys the right to use the franchisor's trade name and sell that product or service at a given place and for a certain period of time (Hing, 1995; Lafontaine, 1992). A franchisor permits a franchisee to use her or his brand name, product or system of business in a specified and ongoing manner in return for a percentage of sales, in other words, fees (Felstead, 1993). A franchise can be viewed as a mutually beneficial relationship involving the temporary transfer of a recognized product usually from a larger firm (franchisor) to a smaller legally independent business (franchisee) (Hibbard, 1997; Kennedy, 1998).

A franchise system is typically classified as being either product and trade name franchising, where the franchisee is the authorized distributor of a product or pays to use a trade name, or business format franchising, where the entire method of operating the business is franchised (Alon, 2001; Combs & Castrogiovanni, 1994; Tikoo, 1996). Examples of product and trade name franchising include automotive dealerships (Ford), gasoline service stations (Exxon Mobil), and soft drink distributions (Pepsi). Examples of business format franchising are quick service restaurants (McDonald's), automotive services (Meineke Car Care Centers), lodging (Marriott), real estate agents (RE/MAX), convenience store (7-Eleven), and tax preparation services (H&R Block) (Khan, 1999; Lafontaine, 1992). From this point of view, a franchise system can be described as a continuing relationship in which the franchisor provides the franchisee with a licensed privilege to do business, plus assistance in organizing, training, merchandising, and management, in return for a fee from the franchisee (Kostecka, 1983).

The typical franchise system has establishments that are operated by franchisees as well as establishments that are operated by corporate employees. The franchisor may offer either a single-unit franchise, the license to own and operate one establishment for a set period of time, or multi-unit franchises, the license to own and operate many establishments over a set period of time. For a franchisor, a franchise system provides a method of expansion using the franchisee's capital, which allows for a faster rate of system expansion as well as a source of capital and motivation of franchisees that comes

from owning their own business rather than being employees. For franchisees, a franchise system provides the advantages of affiliation with an established trademark and system of operation. A franchise system also provides initial and on-going training and support, the benefits of advertising programs, and in some cases the advantages of bulk purchasing programs to franchisees (Khan, 1999).

2.3.1.1 History of Franchise System

Franchise can trace its origins to the middle Ages when the Catholic Church and local governments granted tax-collecting franchises. Tax collectors (franchisees) made their rounds, sending their revenues to the Church or government body (franchisor), though kept a percentage for themselves. In 1562, the Council of Trent banned this form of taxation because it seemed to breed corruption. In the eighteenth and nineteenth centuries, the legislature and monarchy of England granted franchises to noblemen, giving them complete authority over large geographical areas to develop their personal wealth in exchange for their unwavering support (Swerdlow, 1993).

Retailing franchise began in the United States in the 1850s, when I. M. Singer & Co. established a chain of dealerships across the country. Salesmen paid a fee for the right to sell sewing machines in certain territories, and sewing machines became a common household convenience. But it was not until the early 1900s that franchise became more popular as a business practice. At that time, manufacturers dominated the franchise business. Automobile manufacturers and soft drink distributors developed national distribution networks and brand name recognition by franchising to local dealers or bottlers. By the 1930s, as automobiles became more popular and highway networks were constructed, major oil companies jumped on the franchise bandwagon. Roadside foodservice franchisees abounded; Howard Johnson's distinctive orange-roofed restaurant flourished, as did A&W root beer and Dairy Queen stands.

In 1955 within about three months of each other McDonald's and Burger King began what was to become a revolution in foodservice franchise. McDonald's from Southern California and Burger King from Southern Florida have become international

giants in the fast-food business. Also during the 1950s, Kentucky Fried Chicken (KFC) and International House of Pancakes (IHOP) began their operations (Swerdlow, 1993).

2.3.1.2 Advantages and Disadvantages of Franchise System

Franchise presents an exciting opportunity for both franchisor and franchisee, in which they share a symbiotic relationship. Much of the success of any franchise system depends on how smooth this relationship is (Khan, 1999).

Some of the advantages of a franchise system are (Swerdlow, 1993):

1) *Recognized name and logo*. If the franchise has been in operation for some time, consumers are aware of the company. Then the business is free from start-up uncertainties.
2) *A reputation.* One of the most important reasons to eat at a particular franchise is that customers know what to expect.
3) *Technical assistance.* The franchisors are the experts in their field, having done substantial research about what their customers want. They use this knowledge and their experience to give advice and provide operational manuals on how to do the simplest tasks.
4) *Lower costs.* Franchisors train their franchisees to operate their foodservice outlets much more efficiently than that of an independent outlet. Franchisors have developed systems for everything, and that means saving money. The franchisors also set up special buys with suppliers so that the cost of purchasing equipment and inventory are much lower.
5) *Quality control standards.* The standards for performance that the franchisor imposes on franchisees are beneficial because they ensure that consistency exists from restaurant to restaurant regardless of location or ownership.
6) *Opportunities for expansion.* Many franchisors grant territories so that franchisees can have more than one store. With their help and assistance, the franchisee can expand his or her success to multiple locations.

Some of the disadvantages of a franchise system are (Swerdlow, 1993):

1) *Restrictions on franchisee decision-making.* Some people have difficulty making decisions that are restricted by someone else (the franchisor). They do not want another person telling them what to do. These individuals are advised that franchising may not work for them.
2) *Franchisor power issues.* Franchisors are often perceived as being too powerful and too involved in the franchisee's business. That perception may come from too many visits from their personnel, insensitivity to the differences in needs of franchisees in different locations, or disagreements over whether a termination of a franchise is really fair. This disadvantage may be nothing more than a difference of opinion between franchisor and franchisee, or it may be more serious.
3) *The perception that franchisees are failure proof.* Many franchisees believe that the reputation and the assistance of the franchisor is all that is necessary for success. People need to be realistic. Prospective franchisees need to read all of the available literature and then visit locations and talk to franchisees in their restaurants about the requirements for a successful operation.
4) *Inconsistency of standards.* As a chain of foodservice outlets grows, it becomes harder for them to ensure that quality standards are the same at all stores. Customers have a reasonable expectation that their food, service, and cleanliness will always be the same.

2.3.2 Intranet

The Internet and the World Wide Web (WWW) have started a communication revolution that will quickly change the way franchisors and franchisees communicate (Banhazi, 1999). Business information such as new product announcements, operations manuals, and business forms, can be securely transmitted over the Internet in a matter of minutes and at a fraction of the cost of certified mail, overnight mail, and even bulk mail rates. Information can be retrieved and shared over the Internet in seconds. All business

critical information can be accessed seven days a week, 24 hours a day, 365 days a year, using nothing more than a browser and an Internet connection. This easy transference of critical information, by businesses of all sizes and technical capabilities, is enabling companies to react more quickly to customer/end-user demands (Gerdes, 1997).

Internet Web sites, intranets and extranets can be effective ways to communicate with existing franchisees, prospects and the public in general. Many franchisors operate intranets and extranets; which are basically private networks accessible over the Internet to select individuals such as employees, franchisees and suppliers. There are many uses for intranets, including communicating with franchisees on a confidential basis, collecting financial information from them, building monthly reports, monitoring quotas, providing online training and support, providing newsletters and bulletins, and providing access to updated copies of the franchisee manual (Rogers & Bennett, 2005). Internet, intranet, and extranet can be further explained as below:

1) *Internet.* The Internet is a worldwide system of computer networks that uses a set of protocols, transmission control protocol and internet protocol (TCP/IP) and allows to integrate an intranet and extranet. Companies are using the Internet as a platform to communicate with suppliers, buyers, partners and the mass audience that accesses the Internet. The Internet is a one-stop solution to connect all parties together in order to increase revenues, decrease costs and improve communication (whatis.com, n.d.). Internet sites provide information freely for all users. No limitations are placed on the usage of information posted (Gerdes, 1997).
2) *Intranet.* An intranet is a private network contained within an enterprise (whatis.com, n.d.). Intranet utilizes Internet technology to make internal, corporate information available to a company's employees via the corporate local area network (Gerdes, 1997). When part of an intranet is made accessible to customers, partners, suppliers, or others outside the company, that part becomes part of an extranet (whatis.com, n.d.).

3) *Extranet.* An extranet is a private network that uses the Internet protocol and the public telecommunication system to securely share part of a business's information or operations with suppliers, vendors, partners, customers, or other businesses. An extranet can be viewed as part of a company's intranet that is extended to users outside the company (Gerdes, 1997; whatis.com, n.d.).

Networks designed for intra-company communications rather than linking up with the outside world are called intranets. Intranets run on the World Wide Web (WWW) or a company's in-house network. They feature the same look and feel that the rest of the WWW does, but only authorized users can gain access to them (Seideman, 1996). An intranet is attractive to large corporations as well as small businesses due to their relative economy, simplicity, and flexibility compared with paper communications (Esterson, 1998). An intranet is a perfect information distribution medium for franchise information. They will deliver static information (information that doesn't change very often) and dynamic information (information that changes frequently) to franchisees seven days a week, 24 hours a day, and 365 days a year (Foley, 2005; Gerdes, 1997).

2.3.2.1 Internet

The Internet is the name given to the interconnected set of computer networks around the world (Nielsen, 1995). The Internet of today has evolved from the first computer network known as the ARPANET (Advanced Research Projects Network), developed in the 1990s; to a more global network of interconnected computers. The first ARPANET was designed for the US Department of Defense in order to transmit information safely between military computers located at different sites in case of war. The Internet is connections of computers linked by cables and modems, local area networks (LAN), and wide area networks (WAN) to the switched telecommunication network. The Internet uses standards such as the HTML (Hypertext Markup Language) and communication protocols such as Transmission Control Protocol and Internet

Protocol (TCP/IP) that can transmit data, video and audio to any type of computer hardware. The Internet is referred to informally as the "Net," or the "Web" connecting and linking people around the world. These networks allow people to share documents, exchange files, access other computers, download software, hold discussions sessions and deliver electronic mail (Rheingold, 1994).

2.3.2.2 World-Wide Web (WWW)

Although the Internet had been around for over a decade, the technology that brought the Internet to the masses is called the World Wide Web (WWW). The growth of the WWW was instrumental in simplifying the Internet. The Web was developed to be a central pool of human knowledge allowing collaborators in remote sites to share information and work on a common project. The physicists and engineers at CERN, European Particle Physics Lab in Switzerland discovered a hypertext system based on standard protocols (HTTP) and Hypertext Markup Language (HTML). This discovery led to the growth and development of easy to use point-and-click application called "browsers" which allowed people to traverse the maze of the global Web from their desktop computers (Lee, 1995). Whereas, the internet-based communications occurs in many forms such as E-mail, FTP, Gopher, and the WWW is a repository of ever-growing collection of hyperlinked documents or an on-line library available to anyone in the world who has access to an Internet and WWW browser. Mayhew (1998) refers to the Internet as "an electronic pony express, providing a means to move information from one physical location to another …," and WWW as "an online library, storing and providing public access to a huge body of information…"

2.3.2.3 Intranet

An intranet is a corporate network which utilizes internet-based technology. These networks integrate an organization's assets and communication facilities into a single environment accessible to employees but not available to Internet users outside of the company (Hursh, 1995).

The intranet is the internal corporate network that uses internet-based technology to communicate and share information with its distributed employee population. The intranet uses the transmission control protocol and internet protocol (TCP/IP) of the intent to communicate and distribute information around the entire intranet network and the Internet gateways of communications. The technology that prevents an outside Internet user from entering the corporate intranet networks is called the firewall. The intranets are the private roads of the organizational network, whereas the Internet is the global information highway for public usage.

The promise of intranet is one of corporate collaborations and communications. It allows employees to be connected with each other no matter where they are located or which type of computer they are using. This new communication medium allows employees within the company to communicate and share information, collaborate and coordinate their work on the computer network while being protected from intrusion by external Internet users.

Intranet is also referred to as the "Great Equalizer" in an organization where people have been previously excluded in the traditional communication media (Bertin, 1997). Previously, most organizations were restricted in using the computer-mediated communications tools like e-mail because of their heterogeneous environment with different hardware and software platforms. Group communication within organizations was hampered due to the limitations of varied computer technologies creating islands of communication.

Initially, corporations deployed intranets as one-way communication mediums; however, as the intranets matured there is an increasing trend to connect the users with the database applications using the Web browsers. Intranets promise the following main benefits to organizational communication:

1) *Information-sharing.* One-to-many flow of information for sharing news and other information. Web author controls what is presented, how it is presented and what links are provided.

2) *Communication.* An interactive two-way or many-to-many, sharing of information where the information flows from one or more users and exchange of information occurs via, forms, E-mail, net meetings, and feedback forms.
3) *Collaboration.* Where people can collaborate and work together on common projects.
4) *Transaction-based interaction.* Web applications allowing the user to access corporate legacy systems, place orders, update records, and make commercial purchases.

2.3.2.4 Extranet

By the year 1997, intranets were being expanded to extranets promising the advent of an electronic commerce industry. As corporations were being driven to working in a more collaborate environment, the need for business interaction via the intranet became a necessity. Business-to-business communication is becoming possible via the extranets. The extranets allow two business partners (e.g. buyer and seller) to work and collaborate with each other electronically via the Internet but still operate in a secured environment protected from the rest of the Internet or Web users. Most companies are still evaluating the implications of deploying the extranet and trying to understand how they can leverage this technology in a collaborative marketplace.

2.3.3 Intranet in Franchise Systems

Improving the flow of information between the franchisor and franchisees is key to a franchise system's future. Because franchised business is, by nature, geographically dispersed organizations, communication can easily become a barrier to efficiency and the quality of service provided (Grunber, 1997). Traditionally, franchisors and franchisees had to rely upon conventional communication and distribution mediums like phone, fax, and mail, as the key communication channels. Despite the cost and inflexibility of these

communication channels, they were the only cost-effective mediums available for both periodic and random communication streams (Gerdes, 1997; Loyel, 2004).

In recent years private intranets have emerged; the results are lowered costs, faster dissemination, and increased information flow. These intranets provide a terrific way to exchange ideas through discussion forums and provide updates on industry news, program details, and other resources. It is an inexpensive and immediate way to stay in contact by exchanging files and graphics, sending e-newsletters, and providing updates (Loyel, 2004). The franchisor saves on postage, paper, and printing costs for a greater amount of information sharing among the franchisees (Loyel, 2004; Rubinstein, 1997).

Communication between franchisors and franchisees via a system-wide network known as an intranet is perhaps the most basic technology tool used extensively by franchise systems (Larson, 2002; Saleh & Kleiner, 2005). Intranet represents Internet applications that are ideally suited for franchise systems. It gives the franchisees the chance to communicate with each other and with the franchisor. Intranet provides franchise systems with an opportunity to significantly reduce printing, postage and paper costs normally associated with the dissemination of information to a dispersed group of individual franchisees. Beyond the reduction of administrative costs, intranets provide for instant transmission of information allowing franchise organizations to capitalize on time-sensitive opportunities as well (Martin, 1999). As a result of the franchisor providing intranet as a vehicle of communication, franchisees are more comfortable and willing to bring concerns and questions to the table, and to share thoughts and ideas from the perspective of their markets (Howe, 2003).

Franchisors of all sizes can use available intranet technology to quickly share information, synchronize planning, coordinate workflow and monitor performance in concert with one another (Fisher, 2002). Intranets are a particular aspect of Internet technology that can greatly benefit franchise systems. These secure sites, which franchisees can access using passwords, can contain various features like notice boards where franchisees can interact with one another by sending electronic mail, newsletters, or operation manuals (Dixon & Quinn, 2004). Some franchise companies even provide

their franchisees with the facilities for ordering supplies online (Martin, 1999) or for calculating and paying their royalty fees (Testa, 2002), therefore simplifying many of the franchisees' administrative tasks. An intranet technology may help with business functions (e.g., forecasting, risk management, performance assessment, transfer pricing or assessment of fees and royalties, and cross functional/unit marketing, etc.) in a real-time basis within the franchisor's domain (Paswan, Wittmann, & Young, 2004).

2.3.3.1 Intranet Use in Franchise Systems

An intranet is a private and password protected corporate network. A franchisor makes it available for the exclusive use of franchisees day or night via the World Wide Web (WWW). It provides valuable information at a franchisee's fingertips to look at, print out, and download to their offices when they need it, using a simple process, without having to wade through extensive manuals or attend remarkably long training classes (Berta, 2001; Martin, 1999; Seideman, 1996; Vilchis, 2001).

Grunber (1997) and Martin (1999) listed usage of intranet in a franchise system as follows:

1) *Camera-ready flyers, point-of-sale pieces and advertisements.* With these documents posted on the Intranet system, franchisees can open the latest advertisements on screen and either print them in color or download them and take them to a commercial printer for professional printing. In fact, many companies provide "insertion fields" where franchisees can insert their specific addresses, telephone numbers and local printing information automatically into the final advertisement. Previously, camera-ready ads were delivered to franchisees in large envelopes, often late or damaged in transit. Now, electronic versions are posted in seconds for immediate access. Franchisees who lose their downloaded advertisements can simply logon to the Intranet and download them again.
2) *Electronic submission of forms, including purchasing, royalty reporting, employee hiring, and local government forms.* Finding the most current

versions of these forms can be difficult in a "paper world." Posting electronic versions of current forms eliminates the risks of errors, misprints or fax charges. With electronic versions, franchisees no longer have to worry about using the wrong form, with the wrong calculations, to complete by hand and submit via regular mail or fax. With an Intranet, franchisees can access the current version of any form, complete it online, observe as the system performs its own calculations, and then submit it electronically.

3) *Obtaining the latest news and operational updates.* With an Intranet system, franchisees can quickly and easily gain instant access to current business tips, pricing information, ad campaigns and announcements from management. With an Intranet, individual news stories, announcements and memos can be posted on a daily basis, in full color and with greater impact. Moreover, news items can be archived so that new franchisees can access previously published information in order to get up to speed faster, even before they've opened their franchise unit.
4) *Enhanced communications and support.* Intranets can often bring franchisees and franchisors together in the form of chat rooms or group discussion forums. Sharing information and tips is critical to success. With an Intranet chat room or group discussion forum, franchisees can network with dozens or hundreds of other franchisees every day online – not just annually at the convention. Ideas are proposed and refined. Questions are posted and answered by other franchisees. In addition, suppliers can get into the act by conducting seminars and informational sessions online in front of groups of interested franchisees.

2.3.3.2 Examples of Intranet Use in Franchise Systems

Intranet can vary in functionality and complexity. Some intranets consist simply of private e-mail networks that provide franchisees with a unique e-mail address to send messages to and from the franchisor or to other franchisees. More complex intranets

contain discussion forums or bulletin boards where franchisees can share ideas, comments, questions and answers with other franchisees in a singular forum. In addition, many intranets include document forums where franchisees can go to view, print or download the latest operations manuals, marketing materials or newsletters (Martin, 1999; Scott, 2000).

Examples of intranet use in a franchise system are as follows:

1) For Medicap Pharmacies, Inc., one of the most important steps in developing positive franchise relations is the development of intranet platform. The system allows for e-mail between franchisees and the corporate office, "real-time" news, franchisee discussion forums and a library section that contains online manuals and forms. The site is Web-based and has user name and password protection. A franchisee can log on at any time from any computer and pull up the latest information from the home office. One of the primary benefits of this system is the networking and sharing of "best practices" ideas that takes place between franchisees via the discussion forum (Kimball, 2003).
2) Arby's maintains an intranet site accessible only by the franchisor, franchisees and their employees. The intranet, www.MyArbys.com, provides a forum for franchisees to post questions to corporate or other franchisees as well as 24/7 access to the most up-to-date programs, brand news, and business building opportunities. This Internet-based system provides the franchisees access to a forum where they can get answers to their concerns and questions from corporate subject matter experts or other operators in the system (Howe, 2003).
3) At Planet Smoothie, the intranet is a big part of business. The intranet site provides franchisees access to orientation and training materials, marketing programs and materials, order forms and direct links to key vendors. Company news and system wide announcements, an archive of Planet Smoothie-related articles, a closed e-mail system, and a search engine also

are available. The site also has a forum, or chat room, where franchisees can discuss issues or problems and share ideas (Berta, 2001; Larson, 2002; Saleh & Kleiner, 2005).

2.3.3.3 Benefits of Intranet Use in Franchise Systems

Both franchisors and franchisees benefit from the ability to instantly locate information or network with other franchisees via intranet. Franchise systems that have implemented intranet systems have done so in order to enhance communications and support for their franchisees. They have adapted it to accommodate franchisees' actual needs in the real world (Martin, 1999). Franchisees rely on the intranet for day-to-day support and ease to access resources (Bevis, 2005). It is easy to utilize and it helps them better run their business.

According to Grunber (1997) and Martin (1999), some benefits of intranet for franchise system are as follows:

1) *Simplicity.* The beauty of Intranet systems for franchisees is ease-of-use. All that's required is a PC with a major web browser such as Netscape Navigator or Microsoft Internet Explorer and Internet access.
2) *Information resource.* An Intranet becomes a franchisee's primary resource for information 24-7, including training, marketing materials and operations manuals.
3) *Instant access.* To look up a specific procedure or a supplier's price list, franchisees can do so immediately, searching by keyword to obtain instant results. No more bulky envelopes with hole-punched documents and sticky-notes to insert into their operations manual binder.
4) *Organization.* With an Intranet, franchisees no longer have to spend valuable time searching for important documents, such as the most recent point-of-sale flyer that always seems to end up in a pile of endless paperwork. Instead, by using the Intranet system, franchisees can search for documents and pull

them up on screen in seconds and in color. Even more, they can view or print each document in whole or in part using an ordinary laser printer.

5) *Keeping documents current.* In days past, determining which supplier price list was the most current could be time consuming and confusing. With an Intranet, franchisees can be sure that the document currently available on the Intranet is the latest and greatest.
6) *Time savings.* Franchisees don't need to necessarily read every word in every manual. They just need access to specific information when they need it. This is where an Intranet shines. No more flipping through hundreds of pages - a simple keyword and click saves hours of searching.
7) *Reduced costs.* Intranets can significantly reduce costs for franchisees and franchisors by virtually eliminating postage, printing and paper costs and by significantly reducing telephone and fax tolls.

2.4 Summary

This chapter comprises a review of literature pertaining to the Technology Acceptance Model (TAM). In addition, the review of literature related to franchise systems, intranet, and intranet in franchise systems is provided. The following chapter presents the model of intranet acceptance developed in this study and describes the methodology used to examine the model.

CHAPTER III

METHODOLOGY

3.1 Introduction

The preceding chapter defined the research domain as the acceptance of intranet in the restaurant franchise systems. This chapter refines its focus in that it presents the framework of the research study and then followed by the research hypotheses and a methodology in detail.

3.2 Proposed Model Used in this Study

This study examined user acceptance of intranet. The technology acceptance model (TAM) (Davis, 1986, 1989) offers a theoretical base for examining the factors contributing to intranet acceptance in the restaurant franchise systems. As previously stated, TAM was adapted from the Theory of Reasoned Action (TRA) model. TAM replaced TRA's attitudinal determinants, which were derived separately for each behavior, with a set of two variables. The variables, perceived ease of use and perceived usefulness, are employed in many computer technology acceptance contexts. Both models were found to predict intentions and usage satisfactorily. However, TAM was much simpler and easier to use and also a more powerful model of the determinants of user acceptance of computer technology (Igbaria et al., 1997; Venkatesh & Davis, 2000). In addition, TAM's attitudinal determinants outperformed TRA's with a much larger set of measures. The theoretical insights of TAM thus provide a strong basis from which to examine factors contributing to users' acceptance of technology. Furthermore, TAM has proven to be successful in predicting and explaining usage across a variety of systems such as email (Adams et al., 1992; Davis, 1989), word processors (Adams et al., 1992; Davis et al., 1989), groupware (Taylor & Todd, 1995b), spreadsheets (Agarwal,

Sambamurthy, & Stair, 2000; Mathieson, 1991), and World Wide Web (Lederer, Maupin, Sena, & Zhuang, 2000).

The theory of innovation diffusion (IDT) was previously applied to a wide range of research studies which include anthropology, sociology, education, communication, marketing, etc (Rogers, 1995). Information Technology (IT) studies also utilized IDT (Agarwal & Prasad, 1997; Brancheau, 1987; Brancheau & Wetherby, 1990; Hoffer & Alexander, 1992; Karahanna, 1993; Karahanna et al., 1999; Moore, 1989; Moore & Benbasat, 1991; Rogers, 1995; Tornatzky & Klein, 1982). As with TAM, IDT studies demonstrated a similar relationship between the two constructs; relative advantage and compatibility in IT adoption correspond to the constructs of perceived usefulness and perceived ease of use in the technology acceptance model (TAM). Due to the redundancy between the two models, the theory of innovation diffusion was discarded as the explicit model for this study.

The theory of reasoned action (TRA) (Fishbein & Ajzen, 1975) was developed to explain and predict behavioral intentions in any setting. TRA is a general model for predicting behavioral intentions, and the technology acceptance model (Davis, 1986) was adapted from TRA. Therefore, the TRA is implicit in the TAM. Davis et al.'s (1989) findings supported both theories. They found that behavioral intentions to use an information system is significantly correlated with usage and that behavioral intentions represent a major determinant of users' behavior. However, Davis et al. (1989) further contend that perceived usefulness and perceived ease of use are the primary determinants in IT acceptance with behavior as a mediating construct to system usage. As this study examines use of an intranet as an IT tool, the technology acceptance model (TAM) is a more appropriate model than TRA.

The theory of planned behavior (TPB) has been examined in several studies in other fields. Although TPB has been tested in information technology studies, very few studies have been adopted by IT researchers (Mathieson, 1991). As such TPB lacks sufficient scale development and empirical evidence for this study in technology acceptance.

The Task-Technology Fit (TTF) model was developed by Goodhue (1988, 1995). TTF evaluates an organization's overall information technology system rather than specific applications. Since this study tests the acceptance of intranet as an IT tool, TTF is discarded as the basis for this study.

The technology acceptance model (TAM) (Davis, 1986, 1989) remains the best model for this study of user's intranet acceptance in restaurant franchise systems. Thus, TAM forms the basis of this research study.

Although TAM has provided insights into the user acceptance of technology (Davis, 1986, 1989), the research focused only on the determinants of usage rather than on the factors affecting those determinants (e.g., perceived usefulness and ease of use). Prior research on technology acceptance and information systems (IS) implementation has identified various exogenous controllable factors that influence technology acceptance (Davis et al., 1989; DeLone, 1988; Igbaria, 1993; Montazemi, 1988; Raymond, 1988, 1990a; Soh et al., 1992; Thompson et al., 1991; Thong et al., 1996). These exogenous factors are expected to influence technology acceptance indirectly through perceived usefulness (U) and perceived ease of use (EOU) (Davis et al., 1989; Szajna, 1996).

Management support was previously studied as an external factor that affects usage through perceived usefulness and perceived ease of use. Management support was identified as one of the key recurring factors affecting system success (Cerveny & Sanders, 1986; DeVreede, Jones, & Mgaya, 1998/1999; Guimaraes & Igbaria, 1997; Igbaria, 1994; Kwon & Zmud, 1987; Lucas, 1981; Pinto & Slevin, 1989). Management support ensures sufficient allocation of resources and acts as a change agent to create a more conductive environment for information systems (IS) success. Previous studies examined management support as an indirect influence through perceived usefulness and perceived ease of use.

The model for this study, conceptualized based on literature reviews, appears in Figure 3.1. It illustrates the proposed relationships among the study variables.

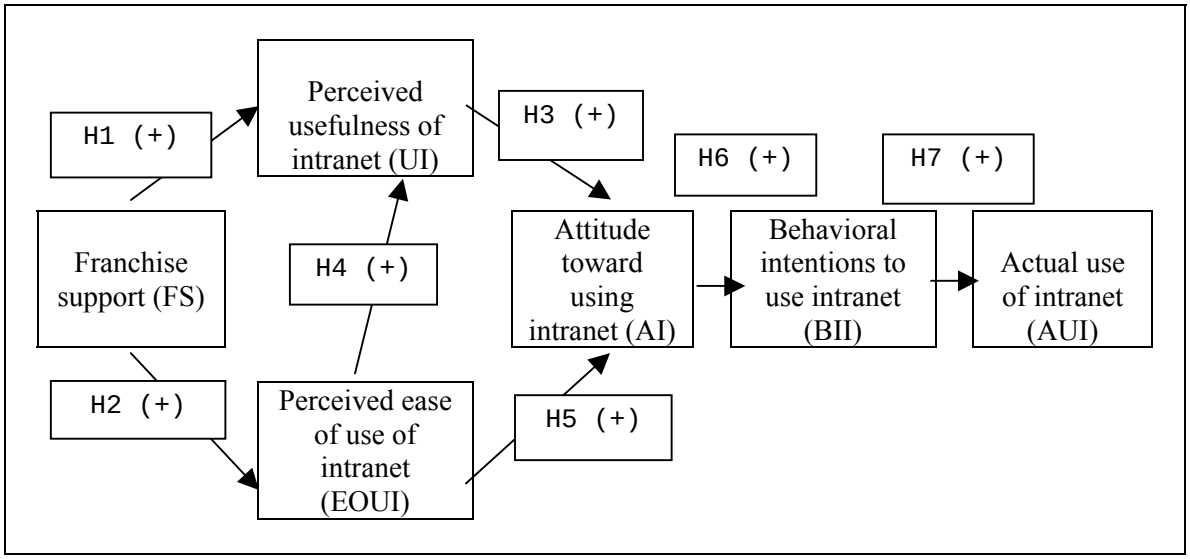

Figure 3.1 The Proposed Research Model

3.3 Hypotheses

This research examined user acceptance of intranet in the restaurant franchise systems. The model adapted variables from the original technology acceptance model (TAM) developed by Davis (1986, 1989), and added one variable, franchise support, that may affect perceived usefulness and perceived ease of use of the base model. Studies on the TAM posited that users' perceived usefulness and ease of use are fundamental determinants of their behavior (i.e., intention to use or acceptance of information technology systems) by mediating attitudes (Adams et al., 1992; Bagozzi, Davis, & Warsaw, 1992; Davis et al., 1989, Davis, 1989; Mathieson, 1991; Szajna, 1994).

As the technology acceptance model (TAM) is one of the most influential research models of technology acceptance, this study adopted this model to test the following hypotheses derived from the previous TAM studies.

H1: Franchise support (FS) is positively related to perceived usefulness of intranet (UI).

H2: Franchise support (FS) is positively related to perceived ease of use of intranet (EOUI).

H3: Perceived usefulness of intranet (UI) is positively related to attitude toward using intranet (AI).

H4: Perceived ease of use of intranet (EOUI) is positively related to perceived usefulness of intranet (UI).

H5: Perceived ease of use of intranet (EOUI) is positively related to attitude toward using intranet (AI).

H6: Attitude toward using intranet (AI) is positively related to behavioral intentions to use intranet (BII).

H7: Behavioral intentions to use intranet (BII) is positively related to actual use of intranet (AUI).

3.3.1 Franchise Support (H1 and H2)

Previous studies have demonstrated that management support influences system usage in organizations through perceived usefulness and perceived ease of use (Cerveny & Sanders, 1986; Kwon & Zmud, 1987; Lucas, 1981). Management support ensures sufficient allocation of resources and acts as a change agent to create a more conducive environment for information systems (IS) success. Therefore, management support is associated with greater system success, while lack of it is considered a critical barrier to the effective utilization of information technology (Abdul-Gader, 1992; DeLone, 1988; Yap, Soh, & Raman, 1992).

Miller and Toulouse (1986) found that the chief executive officer (CEO) has an influence on a company's performance. The primary finding of DeLone's (1988) study was that the successful use of computers was strongly linked to CEO knowledge of computers and active involvement in the computerization efforts. Pinto and Slevin (1989) found that top management support was critical to project success at each stage of the project on their study of 159 research and development (R&D) projects. Yap et al. (1992) found a positive correlation between IS success and CEO support. Abdul-Gader (1992) concluded that management support had a positive influence on computing acceptance. Guimaraes and Igbaria (1997) found that management support was important to success

with client/server systems (CSS). DeVreede et al. (1998/1999) found that the endorsement of top management as a relevant external factor for a model of group support systems (GSS) acceptance in Africa.

Technology Acceptance Model (TAM) proposes that management support affects perceived usefulness as well as perceived ease of use. Igbaria et al. (1995a) and Igbaria et al. (1997) found support for the relationship between management support and perceived usefulness and perceived ease of use. Management support refers to the perceived level of general support offered by top management in organizations (Igbaria, 1993). Franchise support is defined as the strength of user's beliefs with general support offered by the franchise system in this study. Therefore, the following hypotheses were proposed:

H1: Franchise support (FS) is positively related to perceived usefulness of intranet (UI).

H2: Franchise support (FS) is positively related to perceived ease of use of intranet (EOUI).

3.3.2 Perceived Usefulness of Intranet (H3)

Perceived usefulness has been confirmed as an important factor that influences user technology acceptance and therefore has received a great deal of attention from prior research (Adams et al., 1992; Davis et al., 1989; Igbaria, 1994; Straub et al., 1997, Szajna, 1996; Thompson et al., 1991). Hu et al. (1999) found that perceived usefulness was found to be a significant determinant of attitude in explaining physicians' decisions to accept telemedicine technology in the health-care context. Devaraj, Fan, and Kohli (2002) found that perceived usefulness is important in forming consumer attitudes with the electronic commerce (EC) channel. Oh, Ahn, and Kim (2003) found that perceived usefulness affects user attitudes of the adoption of broadband Internet access technology in Korea. Liu, Tucker, Koh, and Kappelman (2003) found that perceived usefulness predicts user attitude of the standard user interface. Stoel and Lee (2003) found that perception of usefulness positively influenced attitudes towards the Web-based learning technologies to supplement college classroom instruction.

Perceived usefulness plays an important role in forming a user's attitudes in previous TAM studies (Sun & Zhang, 2006). Perceived usefulness is defined as "the degree to which a person believes that using a particular system would enhance his or her job performance (Davis, 1989, p.320)." Perceived usefulness of intranet is defined as the strength of user's belief that using an intranet would enhance his or her work performance in this study. Therefore, the following hypothesis was proposed:

H3: Perceived usefulness of intranet (UI) is positively related to attitude toward using intranet (AI).

3.3.3 Perceived Ease of Use of Intranet (H4 and H5)

Perceived ease of use has shown a significant effect on perceived usefulness in the majority of studies (Davis, 1989; Davis et al., 1989; Mathieson, 1991; Szajna 1996; Taylor & Todd, 1995a,b; Venkatesh & Davis, 2000). Davis et al. (1989) identified ease of use as an important determinant of system usage through perceived usefulness. Davis (1989) suggested that perceived ease of use may actually be a causal antecedent to perceived usefulness. Goodwin (1987) argued that the effective functionality of a system (i.e., perceived usefulness) depends on its usability (i.e., perceived ease of use). Igbaria et al. (1997) found that perceived ease of use is a dominant factor in explaining perceived usefulness of personal computing acceptance in New Zealand. Chan and Lu (2004) found that perceived ease of use has a significant indirect effect on intention to adopt/use through perceived usefulness within the context of Hong Kong Internet Banking services.

Perceived ease of use has shown a significant effect on attitude toward use in the majority of studies (Agarwal & Prasad, 1999a,b; Chau & Hu, 2002; Karahanna et al., 1999; Mathieson, 1991; Moon & Kim, 2001; Morris & Dillon, 1997; Taylor & Todd, 1995a,b; Thompson, 1998). Phillips et al. (1994) found that attitude to adopt international technology depends on perceived ease of adoption. Igbaria et al. (1997) found that perceived ease of use is a dominant factor in explaining perceived usefulness of personal computing acceptance in New Zealand. Perceived ease of use is important in forming consumer attitudes with the electronic commerce (EC) channel (Devaraj et al., 2002).

Perceived ease of use affects user attitude of the adoption of broadband Internet access technology in Korea (Oh et al., 2003). Perceived ease of use also predicts attitude toward the usage of the standard user interface (Liu et al., 2003). In addition, perception of usefulness positively influenced attitudes towards the technology (Stoel & Lee, 2003).

Perceived ease of use refers to "the degree to which a person believes that using a particular system would be free of effort (Davis, 1989, p.320)." In this study, perceived ease of use of intranet is defined as the strength of user's belief that interacting with an intranet would be free of effort. Therefore, the following hypotheses were proposed:

H4: Perceived ease of use of intranet (EOUI) is positively related to perceived usefulness of intranet (UI).

H5: Perceived ease of use of intranet (EOUI) is positively related to attitude toward using intranet (AI).

3.3.4 Attitude Toward Using Intranet (H6)

Attitude toward behavior is defined as an individual's positive or negative feelings (evaluative affect) about performing the target behavior (Davis et al., 1989; Fishbein & Ajzen, 1975). People's intentions to participate in a specific activity were highly correlated with attitudes, which could be fundamental factors to predict participants' future behaviors (Ajzen & Driver, 1991). Klobas (1995) identified that attitude to outcomes was the best predictor to explain potential user's behavioral intention. Stoel and Lee (2003) found that attitude positively influenced intention to use Web-based learning technologies to supplement college classroom instruction. Attitude toward using intranet is defined as the strength of the user's feeling of favorableness toward the intranet usage in this study. Therefore, the following hypothesis was proposed:

H6: Attitude toward using intranet (AI) is positively related to behavioral intentions to use intranet (BII).

3.3.5 Behavioral Intentions to Use Intranet (H7)

Behavioral intention is a measure of the strength of one's intention to perform a specified behavior (Davis et al., 1989; Fishbein & Ajzen, 1975). In the theory of planned behavior (TPB), Ajzen (1993) described that specific human behaviors are determined or affected by intention to perform the behavior, or behavioral intention. Customers tend to build positive behavioral intention when the perceived service quality meets their expectations, and then the determined behavioral intention is believed to be an antecedent variable of actual behavioral outcomes (Boulding, Kalra, Staelin, & Zeithaml, 1993; Taylor & Baker, 1994; Zeithaml, Berry, & Parasuraman, 1996). Intention to use the Web-based learning technologies to supplement college classroom instruction positively influenced usage (Stoel & Lee, 2003). Behavioral intentions to use intranet is defined as the strength of the user's willingness to use the intranet system in this study. Therefore, the following hypothesis was proposed:

> H7: Behavioral intentions to use intranet (BII) is positively related to actual use of intranet (AUI).

3.3.6 Actual Use of Intranet

Actual systems usage refers to a self-reported measure of time or frequency of employing the application (Ajzen & Fishbein, 1980). Actual use of intranet is defined as the current intranet use in this study. Studies on the technology acceptance model (TAM) posited that users' perceived usefulness and ease of use are fundamental determinants of their behavior (i.e., intention to use or acceptance of information technology systems) by mediating attitudes (Adams et al., 1992; Bagozzi et al., 1992; Davis et al., 1989). In the TAM model, users perceived usefulness and perceived ease of use, directly or indirectly, influences their behavioral intention to use an information system and its actual use, while having attitudes as mediating effects between the two constructs. Replicating the Davis study, researchers (Adams et al., 1992; Bagozzi et al., 1992; Davis et al., 1989) proved that users' acceptance of information systems was determined by two constructs: perceived usefulness and perceived ease of use. Consistently, the results of these studies

supported the overall framework of the theory of reasoned action (TRA) model identifying that users' intention to use computer systems, if affected by both perceived usefulness and perceived ease of use, can be a predictive indicator of their actual computer use.

3.4 Research Design

This study used a theoretical model to examine and predict user's acceptance of intranet in the restaurant franchise systems. Data were gathered by means of a questionnaire survey administered in the restaurant franchise systems in the United States. Survey research has been widely used and justified in information technology literature (Pinsonneault & Kraemer, 1993). The research methodology for this study was similar to that of Davis et al. (1989) in order to maintain continuity of research on the technology acceptance model (TAM). As such, this study used a survey design using instruments identical or similar to those used by Davis et al. (1989). The instruments are widely regarded and have received considerable attention by researchers (Adams et al., 1992; Chin & Todd, 1995; Hendrickson et al., 1993; Igbaria et al., 1995a; Mathieson, 1991; Segars & Grover, 1993; Straub et al., 1995; Subramanian, 1994).

3.5 Population and Sample

The purpose of the study is to examine the user acceptance of intranet in the restaurant franchise systems. The unit of analysis in this research study is the individual user. The population of this study consisted of individuals who use intranet for their tasks in the restaurant franchise systems in the United States. The sample consisted of 3,500 franchisees of the restaurant franchise systems in the United States, excepting Alaska and Hawaii.

The list of restaurant franchise systems was obtained from the Franchise Opportunities Guide by the International Franchise Association (IFA) (2005). Among those restaurant franchise systems, the quick service restaurant (QSR) systems were

selected for the study. The list of individual franchisees who own five or less units was collected from the Uniform Franchise Offering Circular (UFOC) of the selected restaurant franchise systems that use intranet. The basic disclosure document known as the UFOC contains twenty-three categories of essential and reliable information about the franchisor, the franchise business, and terms of the franchise agreement. Federal Trade Commission (FTC) requires the franchise systems to file the UFOC if they offer franchise business.

3.6 Survey Instruments and Measures

A questionnaire was created with multi-items used in prior research. These instruments, used in past research, have demonstrated acceptable levels of reliability and validity. They were modified for this study by only substituting "intranet" for the specific system examined in previous studies. The questionnaire includes six measures (franchise support, perceived usefulness of intranet, perceived ease of use of intranet, attitude toward using intranet, behavioral intentions to use intranet, and actual use of intranet) depicted in Figure 3.1 and described as below. Five-point scales were used for all of the aforementioned constructs' measurement, with 1 being "strongly disagree" and 5 being "strongly agree". In addition, gender, year of birth, ethnicity, education, browser, speed of intranet connection, frequency of intranet use, position, years with present franchise, and years of intranet use for present franchise were measured for demographics purposes. The measures used in the questionnaire are discussed below starting with franchise support.

3.6.1 Franchise Support (FS)

Franchise support (FS) is defined as the strength of user's beliefs with general support offered by the franchise system in this study. Respondents were asked to indicate the extent of agreement or disagreement with five statements concerning franchisor encouragement and allocation of resources for intranet (Table 3.1). This five-item scale

adapted from Igbaria (1993) uses a five-point Likert-type scale ranging from (1) strongly disagree to (5) strongly agree.

Table 3.1 Franchise Support Scale

1.	Franchisor is really eager to see that franchisees are happy with using the intranet.
2.	Franchisor has provided most of the necessary help and resources to get franchisees used to the intranet quickly.
3.	I am always supported and encouraged by my franchisor to use the intranet in my job.
4.	I am convinced that franchisor is sure of the benefits which can be achieved with the use of the intranet.
5.	Franchisor is available to help whenever I have any trouble with the intranet use.

3.6.2 Perceived Usefulness of Intranet (UI)

Perceived usefulness of intranet (UI) is defined as the strength of user's belief that using an intranet would enhance his or her work performance in this study. The ten items were adapted from Davis et al. (1989), with appropriate modifications to make them specifically relevant to intranet (Table 3.2). Respondents were asked to indicate the extent of agreement or disagreement with the ten statements concerning intranet on a five-point Likert-type scale ranging from (1) strongly disagree to (5) strongly agree.

3.6.3 Perceived Ease of Use of Intranet (EOUI)

Perceived ease of use of intranet (EOUI) is defined as the strength of user's belief that interacting with an intranet would be free of effort in this study. This measure was adapted from Davis et al. (1989). It consisted of eight statements on a five-point Likert-type scale ranging from (1) strongly disagree to (5) strongly agree. They were adapted for this study by substituting "intranet" to describe the specific IT tool examined in this study in each of the original items (Table 3.3).

Table 3.2 Perceived Usefulness of Intranet Scale

1.	Using the intranet in my job enables me to accomplish tasks more quickly.
2.	Using the intranet improves my job performance.
3.	Using the intranet in my job increases my productivity.
4.	Using the intranet enhances my effectiveness on the job.
5.	Using the intranet makes it easier to do my job.
6.	I find the intranet to be useful in my job.
7.	I find the intranet to be a valuable communication link to my franchisor.
8.	Using the intranet is helpful in conducting day-to-day business.
9.	I can better take advantage of the services provided by the franchisor by using the intranet.
10.	I can get updated information quickly from my franchisor with the use of the intranet.

Table 3.3 Perceived Ease of Use of Intranet Scale

1.	Learning to operate the intranet was easy for me.
2.	I find it easy to get the intranet to do what I want it to do.
3.	My interaction with the intranet is clear and understandable.
4.	I find the intranet to be flexible enough to interact with.
5.	It was easy for me to become skillful at using the intranet.
6.	I find the intranet easy to use.
7.	I find the intranet to be very user friendly.
8.	I can access the intranet from any place I want.

3.6.4 Attitude Toward Using Intranet (AI)

Attitude toward using intranet (AI) is defined as the strength of the user's feeling of favorableness toward the intranet system usage in this study. This measure was adapted from Davis et al. (1989). It consisted of six statements on a five-point Likert-type scale ranging from (1) strongly disagree to (5) strongly agree. They were adapted for this study by substituting "intranet" to describe the specific IT tool examined in this study in each of the original items (Table 3.4).

Table 3.4 Attitude Toward Using Intranet Scale

1.	Using the intranet is a good idea.
2.	Using the intranet is a wise idea.
3.	I like the idea of using the intranet.
4.	Using the intranet is pleasant.
5.	Using the intranet is a good way to communicate with franchisor.
6.	Using the intranet helps me in troubleshooting.

3.6.5 Behavioral Intentions To Use Intranet (BII)

Behavioral intentions to use intranet (BII) is defined as the strength of user's willingness to use the intranet system in this study. The five items were adapted from Davis et al. (1989), with appropriate modifications to make them specifically relevant to intranet (Table 3.5). Respondents were asked to indicate the extent of agreement or disagreement with the five statements concerning intranet on a five-point Likert-type scale ranging from (1) strongly disagree to (5) strongly agree.

Table 3.5 Behavioral Intentions To Use Intranet Scale

1.	I intend to use the intranet frequently.
2.	I predict I would use the intranet more often in future.
3.	I plan on using the intranet to accomplish work related to my franchise.
4.	I plan to use the intranet for availing of services provided by my franchisor.
5.	I intend to use the intranet to communicate with other franchisees.

3.6.6 Actual Use of Intranet (AUI)

Actual use of intranet (AUI) is defined as the current intranet use in this study. Researchers have identified several indicators of personal computing acceptance. The most generally accepted measures of personal computing acceptance appear to be user satisfaction (Montazemi, 1988; Raymond, 1985, 1987, 1990a,b; Soh et al., 1992; Thong et al., 1993; Yap et al., 1992). However, system usage has been the primary indicator of

technology acceptance (Adams et al., 1992; Davis et al., 1989; Straub et al., 1995; Szajna, 1996; Thompson et al., 1991). Further, "system usage has a notable practical value for managers interested in evaluating the impact of information technology (IT) (Straub et al., 1995, p.1328)." Consistent with Agarwal and Prasad (1997), respondents were asked to record responses to the five statements concerning intranet on a five-point Likert-type scale ranging from (1) strongly disagree to (5) strongly agree. It assesses the extent to which they use the intranet. It was adapted from Agarwal and Prasad (1997) for this study in the following way (Table 3.6).

Table 3.6 Actual Use of Intranet Scale

1.	I use the intranet a lot to do my work.
2.	I use the intranet whenever possible to do my work.
3.	I use the intranet frequently to do my work.
4.	I use the intranet whenever appropriate to do my work.
5.	I use the intranet for other than my franchise work.

3.6.7 Demographic Information

In addition to the scales discussed above, gender, year of birth, ethnicity, education, browser, speed of intranet connection, frequency of intranet use, position, years with present franchise, and years of intranet use for present franchise were asked to gather the demographic information.

3.7 Pilot Study

Pilot testing was conducted. The first draft of the questionnaire was circulated to the faculty in the Department of Hospitality and Tourism Management at Virginia Polytechnic Institute and State University for feedback regarding wording, layout and comprehension of the questionnaire items. Based on the feedback received, the questionnaire was substantially revised in wording and layout. Second, the revised

questionnaire was distributed to 200 unit managers who use intranet in the selected restaurant franchise systems locally. At the same time, the questionnaire was distributed to 445 franchisees who use intranet in the selected restaurant franchise systems nationally except Alaska and Hawaii to determine if there were any problems in completing the questionnaire. Based on the feedback received from all of the above sources, the questionnaire was further modified for its final format.

3.8 Data Collection Procedure

The data were gathered by means of a questionnaire. The cover letter and accompanying questionnaires were mailed out to 3,500 individual users of intranet in the restaurant franchise systems in the United States on June 1, 2006. After three weeks of mailing out surveys, a reminder post card was sent out to the individuals to encourage response. A second mailing of the questionnaire was sent out three weeks later to encourage participation in the study.

3.9 Reliability and Validity of Measures

Reliability refers to the degree to which observations are consistent or stable. Validity refers to the relationship between a construct and its measures. That is, validity refers to the degree to which the instrument measures what it purports to measure (Rosenthal & Rosnow, 1984). These two issues are further described the section below.

3.9.1 Reliability

Reliability concerns the extent to which measurements are repeatable (Nunally & Durham, 1975), or have a relatively high component of true score and relatively low component of random error (Carmines & Zeller, 1979). In other words, reliability tells the degree to which a measure is free of random error. The reliability of a multi-item measure is often estimated by Cronbach's alpha, and it was used for the scales in this

study. A low value of Cronbach's alpha (i.e. close to 0) implies that the variables are not internally related in the manner expected (Churchill, 1979). Values of Cronbach's alpha are acceptable at the 0.60 standard for exploratory research (Nunnally, 1978). Davis et al. (1989) obtained 0.98 for perceived usefulness and 0.94 for perceived ease of use in their study.

3.9.2 Content Validity

Content validity deals with how representative and comprehensive the items were in creating the scale (Davis & Cosenza, 1993). To ensure content validity, a review of the literature has been conducted to examine the scale items used in prior research and the result of those investigations (Straub, 1989). In this research, definitions of franchise support, perceived usefulness of intranet, perceived ease of use of intranet, attitude toward using intranet, behavioral intentions to use intranet, and actual use of intranet were proposed based on the review of theory and research in information systems (IS) and other disciplines. In generating scales, items were selected and adapted from the Technology Acceptance Model (TAM) research.

3.9.3 Construct Validity

Construct validity ensures that the instrument used is in fact measuring the construct or concept being studied (Churchill, 1979). Construct validity can be evaluated in many ways. Two such methods are discriminant validity and convergent validity (Bagozzi, 1980). Convergent validity is the degree to which multiple attempts to measure the same concepts are in agreement: two or more measures of the same item should co-vary highly if they are valid measures of the concept. Discriminant validity is the degree to which measures of different concepts are distinct; if two or more concepts are unique, then measures of each should not correlate well. If the differentiation is high, then discriminant validity is suggested (Davis & Cosenza, 1993). Two methods are often used to examine construct validity:

1) Multitrait-multiple item analysis (MTMI) matrix method, and
2) Factor analysis (Kerlinger, 1986).

Factor analysis results have assessed construct validity for the various scales utilized in this study (Davis et al., 1989; Straub et al., 1997; Szjana, 1996).

3.10 Non-Response Bias

In order to address possible non-response bias, the responses of the earlier respondents were compared with the responses of the later respondents. Armstrong and Overton (1977) suggest comparing late responses to those received earlier because late respondents are similar to non-respondents.

3.11 Data Analysis/Testing Procedures

The intent of this study is to use technology acceptance model (TAM) to explain user acceptance of intranet in the restaurant franchise systems. The following data analysis and hypotheses tests were performed. All analyses were conducted by means of the SPSS software package.

All the responses were coded and entered into the computer. A frequency distribution was performed for demographic characteristics of respondents. Descriptive statistics (means and standard deviations) were used for all scales. The Cronbach's alpha coefficient was used to test the internal consistency of items. Principal component factor analysis with varimax rotation was conducted to assess the validity of the constructs. Chi-square tests and the independent sample t-tests were utilized to address possible non-response bias. The hypothesized relationships were tested using regression analysis to maintain consistency with earlier studies (Davis et al., 1989; Moon & Kim, 2001; Straub et al., 1997; Szjana, 1996). Regression analysis is a simple and straightforward dependence technique that can provide both prediction and explanation (Hair, Black, Babin, Anderson, & Tatham, 2005).

3.12 Summary

In this chapter the research framework was defined and research hypotheses were developed. Further, research design, specifics of research instrument and scales, data collection methods and statistical analyses methods were discussed. The results are presented in the following chapter.

CHAPTER IV

RESULTS

4.1 Introduction

The purpose of this study was to examine the relationship between the use of intranet and five antecedents: franchise support, perceived usefulness of intranet, perceived ease of use of intranet, attitude toward using intranet, and behavioral intentions to use intranet. This chapter reports the results of the research with regard to the data collected, statistical analyses and hypotheses testing.

4.2 Data Collected

Table 4.1 shows the list of the individuals contacted. The list covers five different quick service restaurant (QSR) franchise systems. Three thousand and five hundred (3,500) franchisees were selected throughout the entire U.S. except Alaska and Hawaii. A questionnaire was mailed out with a cover letter that explains the nature of the study. Return envelopes with prepaid postage were also included. Additionally, a reminder post card and a second mailing of the questionnaire were sent out to encourage response.

Table 4.1 List of Franchisees Contacted

Franchise Restaurants	Franchisees
Chick-fil-a	846
Domino's Pizza	362
Hardee's	511
Quizno's Sub	1,248
Subway	533
Total	3,500

Table 4.2 provides a summary of the response rate. The overall response rate was 4.83 percent (169 responses). Eight responses were eliminated before data coding because they were returned blank (6 responses) or only partially completed (2 responses). After eliminating the unusable responses, 161 responses were coded for data analysis.

Table 4.2 Overall Response Rate

	Number	Percent (%)
Sample	3,500	100.00
Returned	25	0.71
Responses Received	169	4.83
Responses Discarded	8	0.23
Returned without any completion	6	0.17
Incomplete response	2	0.06
Total Usable Responses	161	4.60

4.3 Profiles of Respondents

This section describes the profile of the respondents with regard to their demographic characteristics. As discussed in Chapter Three, the respondents in the study were those individuals who use intranet for their tasks in the restaurant franchise systems in the United States. Table 4.3 summarizes the responses to gender, ethnicity, education, browser, speed of connection, frequency of intranet use, and position. Table 4.4 presents means and standard deviations for respondents' age, years of work with current franchise, and years of intranet use for current franchise.

4.3.1 Gender

Respondents were asked to indicate if they were male or female. All individuals responded to this question. 123 or 76.40% were male and 38 or 23.60% were female (Table 4.3).

Table 4.3 Profiles of Respondents

	Frequency	Percent (%)
Gender (n = 161)		
Male	123	76.40
Female	38	23.60
Ethnicity (n = 158)		
Caucasian	123	77.80
African American	5	3.20
Hispanic	4	2.50
Native American	1	0.60
Asian	20	12.70
Pacific Islander	1	0.60
Not Specified	4	2.50
Education (n = 161)		
Some high school	0	0.00
High school graduate	9	5.60
Some college	29	18.00
2-year college degree	11	6.80
4-year college degree	75	46.60
Masters	34	21.10
Doctorate	3	1.90
Browser (n = 161)		
Netscape Navigator	4	2.50
Microsoft Internet Explorer	130	80.70
America Online	12	7.50
Other	15	9.30
Intranet connection (n = 155)		
Modem connection	43	27.70
ISDN connection	37	23.90
T1 connection	11	7.10
Don't know	21	13.50
Other	43	27.70
Intranet use every week (n = 158)		
Less than once a week	8	5.10
About once a week	11	7.00
2 or 3 times a week	18	11.40
Several times a week	17	10.80
About once a day	28	17.70
Several times each days	75	47.50
Other	1	0.60
Position (n = 160)		
Franchise Owner	134	83.80
Unit Manager	8	5.00
Manager	10	6.30
Other	8	5.00

4.3.2 Age

Respondents were asked to provide the year of their birth to obtain accurate age information. Ages ranged from 20 to 71 years old. On average, respondents were 44.28 years old (Table 4.4).

Table 4.4 Profiles of Respondents

	Minimum	Maximum	Mean	S. D.
Age (n = 157)	20	71	44.28	10.66
Hours using intranet every week (n = 152)	0	85	9.02	10.82
Years of work with current franchise (n = 159)	1	36	9.00	7.98
Years of intranet use for current franchise (n = 155)	1	16	3.97	2.78

4.3.3 Ethnicity

Respondents were asked to indicate their ethnicity. Among the seven categories, ethnicity was distributed as follows: (a) Caucasian (77.80%), (b) African American (3.20%), (c) Hispanic (2.50%), (d) Native American (0.60%), (e) Asian (12.70%), (f) Pacific Islander (0.60%), and (g) Not specified (2.50%). The above results indicate that most respondents were Caucasian and Asian (Table 4.3).

4.3.4 Education

For the highest education attained, seven categories were supplied as answer options for respondents to select. All individuals provided their education levels. The distribution of education levels is: (a) some high school (0.00%), (b) high school graduate (5.60%), (c) some college (18.00%), (d) 2-year college degree (6.80%), (e) 4-year college degree (46.60%), (f) masters (21.10%), and (g) doctorate (1.90%). The results indicate

that most respondents attended at least some college and that 78.40 percent of the respondents had a college degree (Table 4.3).

4.3.5 Browser

Respondents were asked to indicate their browser. All individuals responded to this question. A majority of the respondents were using Microsoft Internet Explorer (80.70%), followed by America Online (7.50%), and Netscape Navigator (2.50%). Others included Firefox, AT&T, Charter Net, etc. (9.30%). The results indicate that Microsoft Internet Explorer was the popular browser used by respondents (Table 4.3).

4.3.6 Intranet Connection

Respondents were asked to select their intranet connection speed from five categories. The distribution of intranet connection is: (a) modem connection (27.70%), (b) ISDN connection (23.90%), (c) T1 connection (7.10%), (d) don't know (13.50%), and (e) other including cable, broadband, DSL, and so on (27.70%). The above results indicate that most respondents were connected to intranet via modem and ISDN (Table 4.3).

4.3.7 Intranet Use Every Week

Respondents were asked to indicate frequency of intranet use every week. The intranet use was distributed as follows: (a) not at all (0.00%), (b) less than once a week (5.10%), (c) about once a week (7.00%), (d) 2 or 3 times a week (11.40%), (e) several times a week (10.80%), (f) about once a day (17.70%), (g) several times each days (47.50%), (h) other (0.60%). The results indicate that 65.20 percent of the respondents use intranet at least once a day (Table 4.3).

4.3.8 Hours Using Intranet Every Week

Respondents were asked to provide the number of hours using the intranet every week to obtain accurate hour of intranet use information. Hours ranged from 0 to 85 hours. On average, respondents tend to use the intranet 9.02 hours per week (Table 4.4).

4.3.9 Position

Respondents were asked to indicate their position in the restaurant franchise systems. Positions were grouped into three distinctive categories. The results were distributed as follows: (a) franchise owner (83.80%), (b) unit manager (5.00%), and (c) manager (6.30%). Other position includes office assistant, regional direct, and etc (5.00%). Most respondents were franchise owner (Table 4.3).

4.3.10 Years of Work with Current Franchise

Respondents were asked to provide years of work with current franchise. Respondents worked with current franchise 9.00 years on average with the range from 1 year to 36 years (Table 4.4).

4.3.11 Years of Intranet Use for Current Franchise

Respondents were asked to provide years of intranet use for their current franchises. Respondents used intranet for their current franchises on average 3.97 years with their answers ranging from 1 year to 16 years (Table 4.4).

4.4 Descriptive Statistics

Descriptive statistics (means and standard deviations) for franchise support, followed by perceived usefulness of intranet, perceived ease of use of intranet, attitude

toward using intranet, behavioral intentions to use intranet, and actual use of intranet, are discussed in this section.

4.4.1 Descriptive Statistics of Franchise Support

Franchise support (FS) is defined as the strength of user's beliefs with general support offered by the franchise system in this study. Respondents were asked to indicate their level of agreement with five statements regarding franchisor support for intranet on a five-point Likert-type scale ranging from (1) strongly disagree to (5) strongly agree. This five-item scale was adapted from Igbaria (1993).

Table 4.5 depicts the means and standard deviations of items measuring franchise support. The means for franchise support ranged from 3.69 to 4.14. Among five items, the highest mean is 4.14 for "I am convinced that franchisor is sure of the benefits which can be achieved with the use of the intranet." The lowest mean is 3.69 for "Franchisor is available to help whenever I have any trouble with the intranet use."

Table 4.5 Descriptive Statistics of Franchise Support

Items	Mean	S.D.
1. Franchise is eager to see that franchisees are happy with using the intranet.	3.84	1.19
2. Franchisor has provided most of the necessary help and resources to get franchisees used to the intranet quickly.	3.75	1.27
3. I am always supported and encouraged by my franchisor to use the intranet in my job.	3.89	1.17
4. I am convinced that franchisor is sure of the benefits which can be achieved with the use of the intranet.	4.14	1.01
5. Franchisor is available to help whenever I have any trouble with the intranet use.	3.69	1.33

Note. 1 = Strongly Disagree to 5 = Strongly Agree

4.4.2 Descriptive Statistics of Perceived Usefulness of Intranet

Perceived usefulness of intranet (UI) is defined as the strength of user's belief that using an intranet would enhance his or her work performance in this study. Respondents were asked to indicate their level of agreement with ten statements regarding perceived usefulness of intranet on a five-point Likert-type scale ranging from (1) strongly disagree to (5) strongly agree. This ten-item scale was adapted from Davis et al. (1989).

Table 4.6 describes the means and standard deviations of items measuring perceived usefulness of intranet. The means for perceived usefulness of intranet ranged from 3.62 to 4.08. Among ten items, the highest mean is 4.08 for "I can get updated information quickly from my franchisor with the use of the intranet," followed by 4.01 for "I find the intranet to be useful in my job." The lowest mean is 3.62 for "Using the intranet is helpful in conducting day-to-day business" followed by 3.74 for "Using the intranet improves my job performance" and 3.75 for "Using the intranet in my job increases my productivity."

Table 4.6 Descriptive Statistics of Perceived Usefulness of Intranet

Items	Mean	S.D.
1. Using the intranet in my job enables me to accomplish tasks more quickly.	3.89	1.20
2. Using the intranet improves my job performance.	3.74	1.12
3. Using the intranet in my job increases my productivity.	3.75	1.17
4. Using the intranet enhances my effectiveness on the job.	3.81	1.14
5. Using the intranet makes it easier to do my job.	3.91	1.17
6. I find the intranet to be useful in my job.	4.01	1.08
7. I find the intranet to be a valuable communication link to my franchisor.	3.85	1.28
8. Using the intranet is helpful in conducting day-to-day business.	3.62	1.28
9. I can better take advantage of the services provided by the franchisor by using the intranet.	3.89	1.17
10. I can get updated information quickly from my franchisor with the use of the intranet.	4.08	1.13

Note. 1 = Strongly Disagree to 5 = Strongly Agree

4.4.3 Descriptive Statistics of Perceived Ease of Use of Intranet

Perceived ease of use of intranet (EOUI) is defined as the strength of user's belief that interacting with an intranet would be free of effort in this study. Respondents were asked to indicate their level of agreement with eight statements regarding perceived ease of use of intranet on a five-point Likert-type scale ranging from (1) strongly disagree to (5) strongly agree. This eight-item scale was adapted from Davis et al. (1989).

Table 4.7 provides the means and standard deviations of items measuring perceived ease of use of intranet. The means for perceived ease of use of intranet ranged from 3.74 to 4.20. Among eight items, the highest mean is 4.20 for "Learning to operate the intranet was easy for me," followed by 4.10 for "I find the intranet easy to use." The lowest mean is 3.74 for "I can access the intranet from any place I want," followed by 3.86 for "I find it easy to get the intranet to do what I want it to do" and "I find the intranet to be very user friendly."

Table 4.7 Descriptive Statistics of Perceived Ease of Use of Intranet

Items	Mean	S.D.
1. Learning to operate the intranet was easy for me.	4.20	0.81
2. I find it easy to get the intranet to do what I want it to do.	3.86	0.93
3. My interaction with the intranet is clear and understandable.	4.03	0.85
4. I find the intranet to be flexible enough to interact with.	3.92	0.86
5. It was easy for me to become skillful at using the intranet.	4.06	0.85
6. I find the intranet easy to use.	4.10	0.86
7. I find the intranet to be very user friendly.	3.86	0.98
8. I can access the intranet from any place I want.	3.74	1.19

Note. 1 = Strongly Disagree to 5 = Strongly Agree

4.4.4 Descriptive Statistics of Attitude Toward Using Intranet

Attitude toward using intranet (AI) is defined as the strength of the user's feeling of favorableness toward the intranet system usage in this study. Respondents were asked to indicate their level of agreement with six statements regarding attitude toward using

intranet on a five-point Likert-type scale ranging from (1) strongly disagree to (5) strongly agree. This six-item scale was adapted from Davis et al. (1989).

Table 4.8 depicts the means and standard deviations of items measuring attitude toward using intranet. The means for attitude toward using intranet ranged from 3.58 to 4.38. Among six items, the highest mean is 4.38 for "Using the intranet is a good idea," followed by 4.32 for "Using the intranet is a wise idea" and 4.30 for "I like the idea of using the intranet." The lowest mean is 3.58 for "Using the intranet helps me in troubleshooting."

Table 4.8 Descriptive Statistics of Attitude Toward Using Intranet

Items	Mean	S.D.
1. Using the intranet is a good idea.	4.38	0.78
2. Using the intranet is a wise idea.	4.32	0.82
3. I like the idea of using the intranet.	4.30	0.84
4. Using the intranet is pleasant.	3.84	1.01
5. Using the intranet is a good way to communicate with franchisor.	3.78	1.25
6. Using the intranet helps me in troubleshooting.	3.58	1.18

Note. 1 = Strongly Disagree to 5 = Strongly Agree

4.4.5 Descriptive Statistics of Behavioral Intentions to Use Intranet

Behavioral intentions to use intranet (BII) is defined as the strength of user's willingness to use the intranet system in this study. Respondents were asked to indicate their level of agreement with five statements regarding behavioral intentions to use intranet on a five-point Likert-type scale ranging from (1) strongly disagree to (5) strongly agree. This five-item scale was adapted from Davis et al. (1989).

Table 4.9 describes the means and standard deviations of items measuring behavioral intentions to use intranet. The means for behavioral intentions to use intranet ranged from 3.35 to 4.11. Among five items, the highest mean is 4.11 for "I intend to use the intranet frequently," followed by 4.10 for "I predict I would use the intranet more

often in future." The lowest mean is 3.35 for "I intend to use the intranet to communicate with other franchisees."

Table 4.9 Descriptive Statistics of Behavioral Intentions to Use Intranet

Items	Mean	S.D.
1. I intend to use the intranet frequently.	4.11	0.97
2. I predict I would use the intranet more often in future.	4.10	0.87
3. I plan on using the intranet to accomplish work related to my franchise.	4.05	0.99
4. I plan to use the intranet for availing of services provided by my franchisor.	4.08	0.92
5. I intend to use the intranet to communicate with other franchisees.	3.35	1.35

Note. 1 = Strongly Disagree to 5 = Strongly Agree

4.4.6 Descriptive Statistics of Actual Use of Intranet

Actual use of intranet (AUI) is defined as the current intranet use in this study. Respondents were asked to indicate their level of agreement with five statements regarding actual use of intranet on a five-point Likert-type scale ranging from (1) strongly disagree to (5) strongly agree. This five-item scale was adapted from Agarwal and Prasad (1997).

Table 4.10 provides the means and standard deviations of items measuring actual use of intranet. The means for actual use of intranet ranged from 3.13 to 4.15. Among five items, the highest mean is 4.15 for "I use the intranet whenever appropriate to do my work." The lowest mean is 3.13 for "I use the intranet for other than my franchise work."

Table 4.10 Descriptive Statistics of Actual Use of Intranet

Items	Mean	S.D.
1. I use the intranet a lot to do my work.	3.52	1.28
2. I use the intranet whenever possible to do my work.	3.66	1.11
3. I use the intranet frequently to do my work.	3.51	1.21
4. I use the intranet whenever appropriate to do my work.	4.15	0.86
5. I use the intranet for other than my franchise work.	3.13	1.46

Note. 1 = Strongly Disagree to 5 = Strongly Agree

4.5 Reliability and Validity Estimates

The definitions of all scales were proposed based on the review of theory and research in information systems (IS) to ensure content validity. In addition, items were adapted from the prior Technology Acceptance Model (TAM) research. A primary test of reliability and validity deals with the internal reliability and construct validity issues and demonstrated in this section.

4.5.1 Reliability Estimates of Study

Reliability was assessed using the Cronbach's alpha coefficient. The use of coefficient alpha is to test the internal consistency of items relating to a single trait within a questionnaire (Nunally, 1978). Therefore, the test was performed on the scale items within different dimensions which were designed to measure a single common trait.

Table 4.11 summarizes the reliability estimates obtained in this study for all scales. An acceptable coefficient is regarded as 0.70 (Nunnally, 1978), although it may decrease to 0.60 for basic research. Of the six dimensions of the questionnaire which were tested for internal consistency, the coefficient alpha was higher than 0.80 above the acceptable level on all dimensions.

Table 4.11 Scale Reliability

Scales	Alpha Value
Franchise support (Items 1-5)	0.90
Perceived usefulness of intranet (Items 6-15)	0.96
Perceived ease of use of intranet (Items 16-23)	0.90
Attitude toward using intranet (Items 24-29)	0.89
Behavioral intentions to use intranet (Items 30-34)	0.86
Actual use of intranet (Items 35-39)	0.81

4.5.2 Validity Estimates of Study

Principal component factor analysis with varimax rotation was conducted to assess the validity of the constructs. The use of principal factor analysis is to investigate the distinctions among franchisor support, perceived usefulness of intranet, perceived ease of use of intranet, attitude toward using intranet, behavioral intentions to use intranet, and actual use of intranet. For adequate construct validity, the decision rule was that each item shows a loading of greater than 0.45 on one underlying dimension. Also, the latent root (eigenvalue) of 1.00 was used for factor inclusion. Furthermore, the appropriateness of factor analysis was determined by the Kaiser-Meyer-Olkin (KMO = 0.926) measure of sampling adequacy and the Bartlett's Test of Sphericity ($p < 0.000$).

Table 4.12 represents the result of the factor analysis. Six factors were extracted after eight rotations. The principal component analysis results show that these six constructs are distinct uni-dimensional scales. The primary criterion for discriminant validity is that each indicator must load more highly on its associated construct than on any other construct. Six factors emerged with no-cross construct loadings above 0.45, indicating good discriminant validity (Straub et al., 1997; Szajna, 1996).

Table 4.12 Factor Analysis of Scales

Items	Factor Loading
Perceived Usefulness of Intranet	
Using the intranet in my job increases my productivity.	.820
Using the intranet enhances my effectiveness on the job.	.800
Using the intranet improves my job performance.	.780
Using the intranet makes it easier to do my job.	.779
Using the intranet in my job enables me to accomplish tasks more quickly.	.722
I find the intranet to be useful in my job.	.710
I can better take advantage of the services provided by the franchisor by using the intranet.	.619
Using the intranet is helpful in conducting day-to-day business.	.607
Perceived Ease of Use of Intranet	
It was easy for me to become skillful at using the intranet.	.895
My interaction with the intranet is clear and understandable.	.828
I find the intranet easy to use.	.826
I find the intranet to be very user friendly.	.727
I find the intranet to be flexible enough to interact with.	.721
I find it easy to get the intranet to do what I want it to do.	.687
Learning to operate the intranet was easy for me.	.656
Franchise Support	
I am always supported and encouraged by my franchisor to use the intranet in my job.	.789
Franchisor is eager to see that franchisees are happy with using the intranet.	.787
I am convinced that franchisor is sure of the benefits which can be achieved with the use of the intranet.	.764
Franchisor has provided most of the necessary help and resources to get franchisees used to the intranet quickly.	.730
Franchisor is available to help whenever I have trouble with the intranet use.	.659
Attitude Toward Using Intranet	
Using the intranet is a wise idea.	.826
I like the idea of using the intranet.	.800
Using the intranet is a good idea.	.796
Using the intranet is pleasant.	.596
Behavioral Intentions to Use Intranet	
I intend to use the intranet to communicate with other franchisees.	.649
I predict I would use the intranet more often in the future.	.576
I plan to use the intranet for availing of services provided by my franchisor.	.569
I plan on using the intranet to accomplish work related to my franchise.	.465
Actual Use of Intranet	
I use the intranet whenever possible to do my work.	.772
I use the intranet frequently to do my work.	.724
I use the intranet a lot to do my work.	.697
I use the intranet whenever appropriate to do my work.	.630

4.6 Non-response Bias Testing

In order to address possible non-response bias, the responses of the earlier respondents were compared with the responses of the later respondents as recommended in the literature (Armstrong & Overton, 1977). Ninety-four usable responses were returned from the initial mailing. The number of usable responses received after the second mailing was 67. Thus, the responses of two groups were compared for a non-response test by utilizing Chi-square tests and the independent sample t-tests.

The results of the independent sample t-tests also showed that there was no difference between two groups for all of the scales used in this study (Table 4.13). The results of the Chi-square tests revealed that there was no different distribution between the early respondents and the late respondents in terms of their demographic characteristics which included: gender, ethnicity, education, browser, speed of intranet connection, frequency of intranet use, and position (Table 4.14). These results suggested that there was an absence of non-response bias in the collected data.

Table 4.13 Results of Non-Response Bias by Independent Sample T-tests

Scales	Early Respondents	Late Respondents	*t*-value	Sig.
Franchise Support	3.97	3.72	1.52	0.13
Perceived Usefulness of Intranet	3.90	3.88	0.12	0.91
Perceived Ease of Use of Intranet	4.01	3.96	0.43	0.67
Attitude Toward Using Intranet	4.03	4.05	-0.16	0.87
Behavioral Intentions To Use Intranet	3.94	3.92	0.15	0.88
Actual Use of Intranet	3.67	3.49	1.24	0.22

Table 4.14 Results of Non-Response Bias by Chi-square Tests

Demographic Characteristics	Early (n = 94)	Late (n = 67)	χ^2	*P*
Gender (n = 161)			2.49	0.12
Male	76	47		
Female	18	20		
Ethnicity (n = 158)			4.95	0.55
Caucasian	74	49		
African American	3	2		
Hispanic	2	2		
Native American	0	1		
Asian	11	9		
Pacific Islander	0	1		
Not Specified	1	3		
Education (n = 161)			1.65	0.90
Some high school	0	0		
High school graduate	5	4		
Some college	16	13		
2-year college degree	5	6		
4-year college degree	47	28		
Masters	19	15		
Doctorate	2	1		
Browser (n = 161)			2.13	0.55
Netscape Navigator	1	3		
Microsoft Internet Explorer	78	52		
America Online	7	5		
Other	8	7		
Intranet connection (n = 155)			5.70	0.22
Modem connection	21	22		
ISDN connection	25	12		
T1 connection	9	2		
Don't know	11	10		
Other	25	18		
Intranet use every week (n = 158)			9.02	0.17
Less than once a week	3	5		
About once a week	8	3		
2 or 3 times a week	8	10		
Several times a week	10	7		
About once a day	13	15		
Several times each days	51	24		
Other	1	0		
Position (n = 160)			1.91	0.59
Franchise Owner	81	53		
Unit Manager	4	4		
Manager	4	6		
Other	5	3		

4.7 Hypotheses Testing

The principal purpose of this study was to examine the relationship between the actual use of intranet and five antecedents: franchise support, perceived usefulness of intranet, perceived ease of use of intranet, attitude toward using intranet, and behavioral intentions to use intranet. A summated scale is a composite value for a set of variable calculated by such simple procedures as taking the average of the variables in the scale (Hair, Black, Babin, Anderson, & Tatham, 2005). Summated scale for franchise support, perceived usefulness of intranet, perceived ease of use of intranet, attitude toward using intranet, behavioral intentions to use intranet, and actual use of intranet were created by computing the average score of all items. These single variables representing each scale are used in the testing of hypotheses. Chapter Three presented the basic research model guiding this study and seven hypotheses explained in specific terms. This section reports the results of the statistical tests performed on these research hypotheses. Each hypothesis is reiterated below, and then the results of statistical analyses – regression analyses – are reported. The assumptions related to regression analysis are linearity, constant variance, and normality. The Durbin Watson statistics is used to evaluate the assumption that the residuals are not correlated with each other. The Durbin Watson ranges from 1 to 4 with no autocorrelation. A histogram is used to see if the residuals are normally distributed. The plot of residuals is evaluated for constant variance.

Hypothesis 1: Franchise support (FS) is positively related to perceived usefulness of intranet (UI).

With respect to the testing of the above research hypothesis, primary statistics of significance testing was regression analysis. The regression analysis was carried out using the following equation: $UI = FS + e$

(where, UI is perceived usefulness of intranet; FS is franchise support; and e is an error term)

The Durbin Watson for the independent variable was 2.049. The histogram appeared to be normally distributed. The plot of residuals showed that the residuals have constant variance (homoscedasticity). These results suggested that assumptions were not violated. There is a positive correlation (R = 0.695) between franchise support and perceived usefulness of intranet, which is significant (p = 0.000). Franchise support explains 48.3% of the variance in perceived usefulness of intranet ($R^2 = 0.483$). The result of regression analysis supported Hypothesis 1 (Table 4.15). This result is similar to that of Cerveny and Sanders (1986), DeVreede et al. (1998/1999), Guimaraes and Igbaria (1997), Igbaria et al. (1995), Igbaria et al. (1997), Kwon and Zmud (1987), Lucas (1981), and Pinto and Slevin (1989) that management support is positively related to perceived usefulness of the system.

Table 4.15 Results of Hypothesis 1 Test

Perceived Usefulness of Intranet	R	R^2	Std. Error	Standardized Coefficients Beta	Sig.
	.695	.483	.723		
(Constant)					
Franchise Support				.695	.000

Hypothesis 2: Franchise support (FS) is positively related to perceived ease of use of intranet (EOUI).

With respect to the testing of the above research hypothesis, primary statistics of significance testing was regression analysis. The regression analysis was carried out using the following equation: $EOUI = FS + e$
(where, EOUI is perceived ease of use of intranet; FS is franchise support; and e is an error term)

The Durbin Watson for the independent variable was 2.160. The histogram appeared to be normally distributed. The plot of residuals showed that the residuals have constant variance (homoscedasticity). These results suggested that assumptions were not violated. There is a positive correlation (R = 0.453) between franchise support and perceived ease of use of intranet, which is significant (p = 0.000). Franchise support explains 20.6% of the variance in perceived usefulness of intranet ($R^2 = 0.206$). The result of regression analysis supported Hypothesis 2 (Table 4.16). This is consistent with the results reported by Cerveny and Sanders (1986), DeVreede et al. (1998/1999), Guimaraes and Igbaria (1997), Igbaria et al. (1995), Igbaria et al. (1997), Kwon and Zmud (1987), Lucas (1981), and Pinto and Slevin (1989) that management support is positively related to perceived ease of use of the system.

Table 4.16 Results of Hypothesis 2 Test

Perceived Ease of Use of Intranet	R	R^2	Std. Error	Standardized Coefficients Beta	Sig.
	.453	.206	.627		
(Constant)					
Franchise Support				.453	.000

Hypothesis 3: Perceived usefulness of intranet (UI) is positively related to attitude toward using intranet (AI).

With respect to the testing of the above research hypothesis, primary statistics of significance testing was regression analysis. The regression analysis was carried out using the following equation: $AI = UI + e$
(where, AI is attitude toward using intranet; UI is perceived usefulness of intranet; and e is an error term)

The Durbin Watson for the independent variable was 2.251. The histogram appeared to be normally distributed. The plot of residuals showed that the residuals have constant variance (homoscedasticity). These results suggested that assumptions were not violated. There is a positive correlation (R = 0.766) between perceived usefulness of intranet and attitude toward using intranet, which is significant (p = 0.000). Perceived usefulness of intranet explains 58.6% of the variance in attitude toward using intranet (R^2 = 0.586). The result of regression analysis supported Hypothesis 3 (Table 4.17). This result is similar to that of Agarwal and Prasad (1999a,b), Chau and Hu (2001), Chau and Hu (2002), Davis (1993), Davis et al. (1989), Devaraj et al. (2002), Dishaw and Strong (1999), Heijden (2003), Hu et al. (1999), Karahanna et al. (1999), Liu et al. (2003), Mathieson (1991), Mathieson, Peacock, and Chin (2001), Moon and Kim (2001), Morris and Dillon (1997), Oh et al. (2003), Stoel and Lee (2003), Taylor and Todd (1995a,b), and Thompson (1998) that perceived usefulness of the system is positively related to attitude toward using the system.

Table 4.17 Results of Hypothesis 3 Test

Attitude Toward Using Intranet	R	R^2	Std. Error	Standardized Coefficients Beta	Sig.
	.766	.586	.512		
(Constant)					
Perceived Usefulness of Intranet				.766	.000

Hypothesis 4: Perceived ease of use of intranet (EOUI) is positively related to perceived usefulness of intranet (UI).

With respect to the testing of the above research hypothesis, primary statistics of significance testing was regression analysis. The regression analysis was carried out using the following equation: $UI = EOUI + e$
(where, UI is perceived usefulness of intranet; EOUI is perceived ease of use of intranet; and e is an error term)

The Durbin Watson for the independent variable was 1.798. The histogram appeared to be normally distributed. The plot of residuals showed that the residuals have constant variance (homoscedasticity). These results suggested that assumptions were not violated. There is a positive correlation ($R = 0.543$) between perceived ease of use of intranet and perceived usefulness of intranet, which is significant ($p = 0.000$). Perceived ease of use of intranet explains 29.4% of the variance in perceived usefulness of intranet ($R^2 = 0.294$). The result of regression analysis supported Hypothesis 4 (Table 4.18). This is consistent with the results reported by Agarwal and Karahanna (2000), Agarwal and Prasad (1999a,b), Chan and Lu (2004), Chau (1996), Davis and Venkatesh (1996), Davis (1989), Davis (1993), Davis et al. (1989), Dishaw and Strong (1999), Gefen and Keil (1998), Gefen and Straub (2000), Gefen, Karahanna, and Straub (2003), Goodwin (1987), Heijden (2003), Hendrickson and Collins (1996), Hong, Thong, Wong, and Tam (2001), Igbaria, Iivari, and Maragahh (1995), Igbaria et al. (1996), Igbaria et al. (1997), Karahanna and Straub (1999), Lucas and Spitler (1999), Mathieson (1991), Mathieson et al. (2001), Moon and Kim (2001), Morris and Dillon (1997), Szajna (1996), Taylor and Todd (1995a,b), Teo, Lim, and Lai (1999), Thompson (1998), Venkatesh and Davis (1996), Venkatesh and Davis (2000), Venkatesh and Morris (2000), and Venkatesh (2000) that perceived ease of use of the system is positively related to perceive usefulness of the system.

Table 4.18 Results of Hypothesis 4 Test

Perceived Usefulness of Intranet	R	R^2	Std. Error	Standardized Coefficients Beta	Sig.
	.543	.294	.831		
(Constant)					
Perceived Ease of Use of Intranet				.543	.000

Hypothesis 5: Perceived ease of use of intranet (EOUI) is positively related to attitude toward using intranet (AI).

With respect to the testing of the above research hypothesis, primary statistics of significance testing was regression analysis. The regression analysis was carried out using the following equation: AI = EOUI + e
(where, AI is attitude toward using intranet; EOUI is perceived ease of use of intranet; and e is an error term)

The Durbin Watson for the independent variable was 2.121. The histogram appeared to be normally distributed. The plot of residuals showed that the residuals have constant variance (homoscedasticity). These results suggested that assumptions were not violated. There is a positive correlation (R = 0.666) between perceived ease of use of intranet and attitude toward using intranet, which is significant (p = 0.000). Perceived ease of use of intranet explains 44.3% of the variance in attitude toward using intranet (R^2 = 0.443). The result of regression analysis supported Hypothesis 5 (Table 4.19). This result is similar to that of Agarwal and Prasad (1999a,b), Chau and Hu (2002), Davis (1993), Heijden (2003), Igbaria et al. (1997), Karahanna et al. (1999), Liu et al. (2003), Mathieson (1991), Mathieson et al. (2001), Moon and Kim (2001), Morris and Dillon (1997), Oh et al. (2003), Phillips et al. (1994), Stoel and Lee (2003), Taylor and Todd

(1995a,b), and Thompson (1998) that perceived ease of use of the system is positively related to attitude toward using the system.

Table 4.19 Results of Hypothesis 5 Test

Attitude Toward Using Intranet	R	R^2	Std. Error	Standardized Coefficients Beta	Sig.
	.666	.443	.590		
(Constant)					
Perceived Ease of Use of Intranet				.666	.000

Hypothesis 6: Attitude toward using intranet (AI) is positively related to behavioral intentions to use intranet (BII).

With respect to the testing of the above research hypothesis, primary statistics of significance testing was regression analysis. The regression analysis was carried out using the following equation: BII = AI + e
(where, BII is behavioral intentions to use intranet; AI is attitude toward using intranet; and e is an error term)

The Durbin Watson for the independent variable was 2.198. The histogram appeared to be normally distributed. The plot of residuals showed that the residuals have constant variance (homoscedasticity). These results suggested that assumptions were not violated. There is a positive correlation (R = 0.752) between attitude toward using intranet and behavioral intentions to use intranet, which is significant (p = 0.000). Attitude toward using intranet explains 56.6% of the variance in behavioral intentions to use intranet ($R^2 = 0.566$). The result of regression analysis supported Hypothesis 6 (Table 4.20). This is consistent with the results reported by Agarwal and Prasad (1999a,b), Ajzen and Driver (1991), Chau and Hu (2001, 2002), Davis et al. (1989), Dishaw and

Strong (1999), Heijden (2003), Hu et al. (1999), Karahanna et al. (1999), Klobas (1995), Mathieson (1991), Mathieson et al. (2001), Moon and Kim (2001), Morris and Dillon (1997), Stoel and Lee (2003), and Thompson (1998) that attitude toward using the system is positively related to behavioral intentions to use the system.

Table 4.20 Results of Hypothesis 6 Test

Behavioral Intentions to Use Intranet	R	R^2	Std. Error	Standardized Coefficients Beta	Sig.
	.752	.566	.539		
(Constant)					
Attitude Toward Using Intranet				.752	.000

Hypothesis 7: Behavioral intentions to use intranet (BII) is positively related to actual use of intranet (AUI).

With respect to the testing of the above research hypothesis, primary statistics of significance testing was regression analysis. The regression analysis was carried out using the following equation: AUI = BII + e
(where, AUI is actual use of intranet; BII is behavioral intentions to use intranet; and e is an error term)

The Durbin Watson for the independent variable was 1.833. The histogram appeared to be normally distributed. The plot of residuals showed that the residuals have constant variance (homoscedasticity). These results suggested that assumptions were not violated. There is a positive correlation (R = 0.703) between behavioral intentions to use intranet and actual use of intranet, which is significant (p = 0.000). Behavioral intentions to use intranet explains 49.4% of the variance in actual use of intranet ($R^2 = 0.494$). The result of regression analysis supported Hypothesis 7 (Table 4.21). This result is similar to

that of Bagozzi et al. (1992), Boulding et al. (1993), Davis et al. (1989), Davis, Bagozzi, and Warshaw (1992), Dishaw and Strong (1999), Heijden (2003), Mathieson et al. (2001), Moon and Kim (2001), Morris and Dillon (1997), Szajna (1996), Stoel and Lee (2003), Taylor and Baker (1994), Taylor and Todd (1995a,b), and Venkatesh and Davis (2000) that behavioral intentions to use the system is positively related to actual use of the system.

Table 4.21 Results of Hypothesis 7 Test

Actual Use of Intranet	R	R^2	Std. Error	Standardized Coefficients Beta	Sig.
	.703	.494	.649		
(Constant)					
Behavioral Intentions to Use Intranet				.703	.000

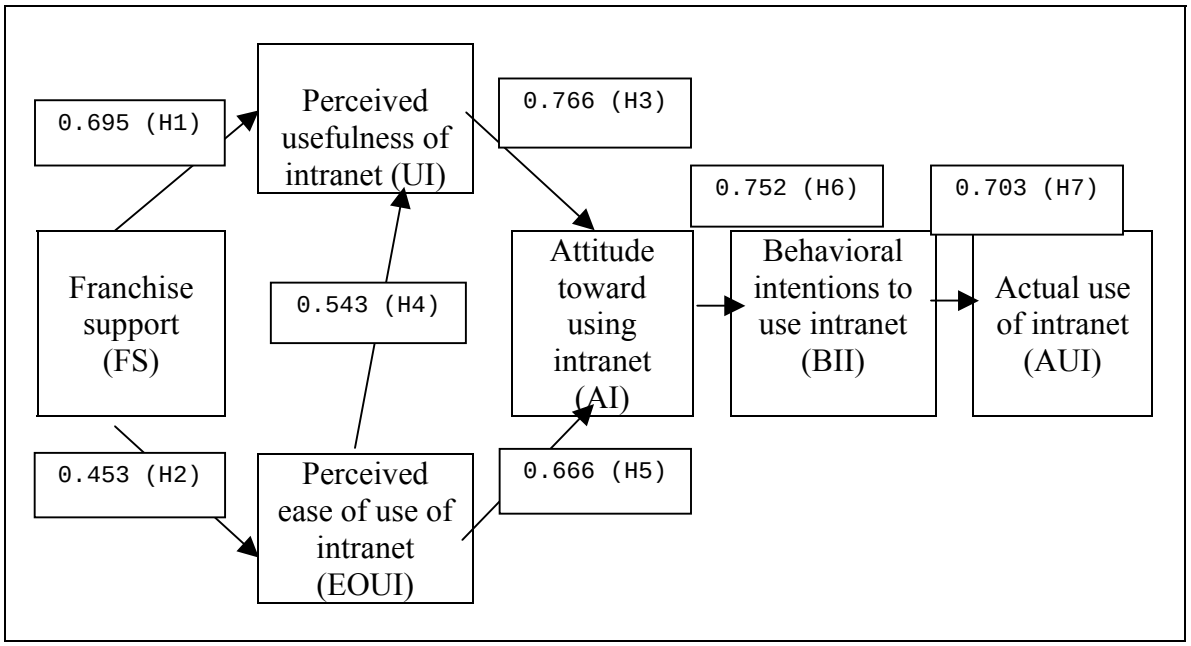

Figure 4.1 Regression Analysis Results

The results of regression analysis as illustrated in Figure 4.1 indicated that all seven of the hypothesized relationships within the proposed model were significant at the 0.05 levels.

4.8 Summary

There were 161 usable returned surveys from 3,500 potential participants, which shows a response rate of 4.60%. Summary and descriptive statistics, along with reliability estimates, validity estimates and regression analysis were conducted using SPSS software. A profile of the respondents who participated in this study and statistical tests to examine the relationship among the variables being studied were presented. The results of regression analysis indicate that seven hypotheses were supported. The next chapter will present a discussion on the findings with respect to the hypothesis testing.

CHAPTER V

CONCLUSIONS

5.1 Introduction

This study was designed to explore the issues of intranet usage. Based on the technology acceptance model (TAM), a model for usage of intranet was proposed. The results from the analyses conducted on the data collected for this study indicated that the model explains and predicts intranet use. A summary of the significant findings, conclusions, implications, and limitations of the study are presented below, followed by recommendations for future research.

5.2 Summary of this Research

The objective of this research was to examine the relationships between actual use of intranet and five antecedents: franchise support, perceived usefulness of intranet, perceived ease of use of intranet, attitude toward using intranet, and behavioral intentions to use intranet. As the technology acceptance model (TAM) was introduced by Davis (1986, 1989), this research supported earlier findings and determined that TAM is still valid after recent advances in systems and technology affecting system usage. This study also identified antecedents of use of intranet as a communication tool. The objective of this research study is to validate a modified technology acceptance model (TAM) (Davis, 1986, 1989) with intranet among franchisees in the restaurant franchise systems. The questionnaire consisted of six scales. Scale reliability of each of the constructs was shown in Table 4.11 for the current study.

5.3 Significant Findings

The questionnaire included eleven items for demographics. The results shown in Table 4.3 and Table 4.4 suggested these significant findings:

1) A majority of the respondents were male (76.40%), Caucasian (77.80%), and Franchise Owner (83.80%);
2) Most of the respondents (94.40%) attended some college and beyond;
3) 80.70% of the respondents used Microsoft Internet Explorer as their browser;
4) 27.70% of the respondents were connected to intranet via modem and 23.90% were connected via ISDN;
5) 47.50% of the respondents used intranet several times each day and 17.70% used about once a day; and
6) On average, respondents were 44.28 years old, used intranet 9.02 hours per week, and worked 9 years and used intranet 3.97 years for current franchise.

This study attempted to predict the use of intranet by adopting the technology acceptance model (TAM). The regression analysis was used to test the hypothesized relationships. The results of regression analysis provided support for all seven hypotheses proposed in this study. Table 5.1 summarizes the hypotheses tests. Therefore, two research questions were answered:

1) Can the Technology Acceptance Model (TAM) explain the user acceptance of the intranet in restaurant franchise systems?
2) What are the significant antecedents of the acceptance of intranet in restaurant franchise systems?

Franchise support, perceived usefulness of intranet, perceived ease of use of intranet, attitude toward using intranet, and behavioral intentions to use intranet are antecedents of the use of intranet. Furthermore, the study also confirms that the Technology Acceptance Model (TAM) is valid for additional application such as the intranet in restaurant franchise systems in this study.

Table 5.1 Summary of Hypotheses Tests

Hypothesis	R	Sig.	Sign	Support for Hypothesis
H1: Franchise support (FS) is positively related to perceived usefulness of intranet (UI).	0.695	0.000	Positive	Yes
H2: Franchise support (FS) is positively related to perceived ease of use of intranet (EOUI).	0.453	0.00	Positive	Yes
H3: Perceived usefulness of intranet (UI) is positively related to attitude toward using intranet (AI).	0.766	0.000	Positive	Yes
H4: Perceived ease of use of intranet (EOUI) is positively related to perceived usefulness of intranet (UI).	0.543	0.000	Positive	Yes
H5: Perceived ease of use of intranet (EOUI) is positively related to attitude toward using intranet (AI).	0.666	0.000	Positive	Yes
H6: Attitude toward using intranet (AI) is positively related to behavioral Yes intentions to use intranet (BII).	0.752	0.000	Positive	Yes
H7: Behavioral intentions to use intranet (BII) is positively related to actual use of intranet (AUI).	0.703	0.000	Positive	Yes

5.4 Conclusion

Acceptance is one of the crucial keys to successful information technology choice and use (Borthick, 1988). Clearly, many factors influence technology acceptance (Adams et al., 1991; Davis et al., 1989; DeLone, 1988; DeLone & McLean, 1992; Igbaria, 1993; Igbaria et al., 1995a; Mathieson, 1991; Montazemi, 1988; Moore & Benbasat, 1991; Raymond, 1988; Soh et al., 1992; Straub et al., 1995; Szajna, 1996; Taylor & Todd, 1995b; Thompson et al., 1991; Thong et al., 1996). This study adopted the technology acceptance model (TAM) (Davis, 1986, 1989) to explain the user acceptance of intranet in restaurant franchise systems with perceived usefulness of intranet, perceived ease of

use of intranet, attitude toward using intranet, and behavioral intentions to use intranet from the original model. In addition, one external variable, franchise support, was introduced in this study. Results indicated that there are positive and significant relationships among variables franchise support, perceived usefulness of intranet, perceived ease of use of intranet, attitude toward using intranet, and behavioral intentions to use intranet and actual use of intranet.

5.5 Implications of this Study

The significant development in the information systems (IS) field (Davis et al., 1989; DeLone, 1988; Igbaria, 1993; Rivard & Huff, 1988) has helped make technology acceptance a significant activity in organization (Hu et al., 1999; Raymond & Bergeron, 1992). Acceptance of technology will continue to be an active area of research as new technologies are continually developed and implemented in organizations (Horton et al., 2001). Many organizations face substantial problems of low usage in many different types of information technology (IT) application including the intranet of a business. This study examined user acceptance of intranet systems as communication tool in restaurant franchise systems.

This study extends the Technology Acceptance Model (TAM) with franchise support concept. It suggests that franchisors should provide ease of use and usefulness for their intranet to encourage frachisees to use intranet systems. It also suggests that franchise support is important in the decision to use intranet systems in the restaurant franchise systems. This study also provides an instrument that could be useful to franchisors in restaurant franchise systems that encourage franchisees to use intranet systems. Franchisors can have franchisees complete the instrument about intranet systems. The responses can be used to identify strengths and weaknesses in existing intranet systems. Franchisors can investigate the items with lower scores. The responses may thus be useful in improving those intranet systems. As a result of this study, franchisors are able to take into consideration the issues that affect intranet usage when developing intranet systems.

5.6 Limitations of this Study

There are some limitations in this study. Firstly, this study was conducted at quick service restaurant systems in the United States except Alaska and Hawaii. Different segments of restaurant systems (e.g., full service restaurant systems) or geographic regions (other than the United States) may yield different results. Secondly, the participants of this study are franchise owners of restaurant franchise systems. If this survey was given to managers at restaurant franchise systems, the results may have been different. Thirdly, the only one external variable, franchise support, was included in this study. Other external variables (e.g., information quality and intranet systems quality) may play an important role in user acceptance of intranet systems. Chapter I listed some of the external variables previously studied. These limitations draw a number of implications for future studies as described in next section.

5.7 Recommendations for Future Research

Future researchers may pursue a number of different options as follows:

1) conducting a study on the acceptance of intranet usage with full service restaurant systems or other geographic regions;
2) introducing other external variables that may affect intranet usage to the current study; and
3) conducting a study on the acceptance of intranet usage by managers at the franchise restaurant systems.

It would be of additional value for future studies to explore its applicability in additional organizations with modifications to the technology acceptance model (TAM). In addition, other method of data collection such as an interview with franchisee would be recommended to overcome the low response rate.

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APPENDIX

QUESTIONNAIRE

June 1, 2006

Dear Participant:

I am a doctoral candidate in the Department of Hospitality and Tourism Management at Virginia Polytechnic Institute and State University and am currently working on my dissertation. The main purpose of my research is to examine user's acceptance of the intranet in restaurant franchise systems. You were randomly selected to participate in this study and I am hoping you will take time do so. If you cannot participate for reason, please allow anyone who uses intranet in your restaurant to participate.

The enclosed questionnaire should take approximately ten to fifteen minutes to complete. Data are being collected for academic purposes only. All responses will remain strictly confidential, and results will be presented only in a summary form.

Please take a few minutes to complete the survey. When you have completed the survey, please return it via the pre-paid return envelope provided by **June 22, 2006.** Completion and return of this survey indicates your voluntary consent to participate in this study.

If you have any questions please do not hesitate to contact me via phone at (540) 231-8422 or via email at kupark@vt.edu.

Thank you in advance for your cooperation.

Sincerely,

Kunsoon Park
Doctoral Candidate

USER ACCEPTANCE OF THE INTRANET IN RESTAURANT FRANCHISE SYSTEMS
Intranet is defined as the franchise network which utilizes internet-based technology to communicate and share information with its franchisees in this study.

PART I. USER ACCEPTANCE OF THE INTRANET

Directions: The following statements express your opinions of the intranet provided by your franchisor. Please read each statement carefully and indicate your level of agreement or disagreement for each statement by circling the number that most closely describes your opinion.

Strongly Disagree (**SD**)	Disagree (**D**)	Neutral (**N**)	Agree (**A**)	Strongly Agree (**SA**)
1	2	3	4	5

Franchise Support	**SD**	**D**	**N**	**A**	**SA**
1. Franchisor is eager to see that franchisees are happy with using **the intranet**.	1	2	3	4	5
2. Franchisor has provided most of the necessary help and resources to get franchisees used to **the intranet** quickly.	1	2	3	4	5
3. I am always supported and encouraged by my franchisor to use **the intranet** in my job.	1	2	3	4	5
4. I am convinced that franchisor is sure of the benefits which can be achieved with the use of **the intranet**.	1	2	3	4	5
5. Franchisor is available to help whenever I have any trouble with **the intranet** use.	1	2	3	4	5

Perceived Usefulness of Intranet	**SD**	**D**	**N**	**A**	**SA**
6. Using **the intranet** in my job enables me to accomplish tasks more quickly.	1	2	3	4	5
7. Using **the intranet** improves my job performance	1	2	3	4	5
8. Using **the intranet** in my job increases my productivity.	1	2	3	4	5
9. Using **the intranet** enhances my effectiveness on the job.	1	2	3	4	5
10. Using **the intranet** makes it easier to do my job.	1	2	3	4	5
11. I find **the intranet** to be useful in my job.	1	2	3	4	5
12. I find **the intranet** to be a valuable communication link to my franchisor.	1	2	3	4	5
13. Using **the intranet** is helpful in conducting day-to-day business.	1	2	3	4	5
14. I can better take advantage of the services provided by the franchisor by using **the intranet**.	1	2	3	4	5
15. I can get updated information quickly from my franchisor with the use of **the intranet**.	1	2	3	4	5

Strongly Disagree (**SD**)	Disagree (**D**)	Neutral (**N**)	Agree (**A**)	Strongly Agree (**SA**)
1	2	3	4	5

Perceived Ease of Use of Intranet	**SD**	**D**	**N**	**A**	**SA**
16. Learning to operate **the intranet** was easy for me.	1	2	3	4	5
17. I find it easy to get **the intranet** to do what I want it to do.	1	2	3	4	5
18. My interaction with **the intranet** is clear and understandable.	1	2	3	4	5
19. I find **the intranet** to be flexible enough to interact with.	1	2	3	4	5
20. It was easy for me to become skillful at using **the intranet**.	1	2	3	4	5
21. I find **the intranet** easy to use.	1	2	3	4	5
22. I find **the intranet** to be very user friendly.	1	2	3	4	5
23. I can access **the intranet** from any place I want.	1	2	3	4	5

Attitude Toward Using Intranet	**SD**	**D**	**N**	**A**	**SA**
24. Using **the intranet** is a good idea.	1	2	3	4	5
25. Using **the intranet** is a wise idea.	1	2	3	4	5
26. I like the idea of using **the intranet**.	1	2	3	4	5
27. Using **the intranet** is pleasant.	1	2	3	4	5
28. Using **the intranet** is a good way to communicate with franchisor.	1	2	3	4	5
29. Using **the intranet** helps me in troubleshooting.	1	2	3	4	5

Behavioral Intentions To Use Intranet	**SD**	**D**	**N**	**A**	**SA**
30. I intend to use **the intranet** frequently.	1	2	3	4	5
31. I predict I would use **the intranet** more often in future.	1	2	3	4	5
32. I plan on using **the intranet** to accomplish work related to my franchise.	1	2	3	4	5
33. I plan to use **the intranet** for availing of services provided by my franchisor.	1	2	3	4	5
34. I intend to use **the intranet** to communicate with other franchisees.	1	2	3	4	5

Actual Use of Intranet	**SD**	**D**	**N**	**A**	**SA**
35. I use **the intranet** a lot to do my work.	1	2	3	4	5
36. I use **the intranet** whenever possible to do my work.	1	2	3	4	5
37. I use **the intranet** frequently to do my work.	1	2	3	4	5
38. I use **the intranet** whenever appropriate to do my work.	1	2	3	4	5
39. I use **the intranet** for other than my franchise work.	1	2	3	4	5

PART II. DEMOGRAPHIC INFORMATION

Directions: Please complete the following demographic information, giving your best estimate where exact answers are not known.

40. Please indicate your gender.
a) Male b) Female

41. Please indicate your year of birth. _____

42. Please indicate your ethnicity.
a) Caucasian b) African American c) Hispanic d) Native American
e) Asian f) Pacific Islander g) Not specified

43. From the choices below, please indicate your highest level of education.
a) Some high school b) High school graduate c) Some college
d) 2-year college degree e) 4-year college degree f) Master
g) Doctorate h) Other (specify):

44. From the choices below, please indicate your browser.
a) Netscape Navigator b) Microsoft Internet Explorer c) America Online browser
d) Other (specify):

45. From the choices below, please indicate your intranet connection speed.
a) Modem b) ISDN connection c) T1 connection
d) Don't know e) Other (specify):

46. How many times do you use the intranet during a week?
a) Not at all b) Less than once a week c) About once a week
d) 2 or 3 times a week e) Several times a week f) About once a day
g) Several times each days h) Other (specify):

47. How many hours do you use the intranet every week? _____ hours

48. What is your position?
a) Franchise Owner b) Unit Manager c) Manager Other (specify):

49. How long have you been with your current franchise? _____ years

50. How long have you used the intranet for your current franchise? _____ years

Thank you for taking the time to complete this survey.
Your input is extremely important and greatly appreciated.

VITA

Kunsoon Park was born on February 14, 1966, in Seoul, Korea. He married Juyeon Kim in 1998 and he is now the father of Sangah (age 7), David (age 5), Joseph (age 4), Joshua (age 2), and James (age 1). He graduated from Chung- Ang University (1989, Bachelor of Law), University of Nebraska at Omaha (1995, Bachelor of Science, Business Administration), University of Nebraska at Omaha (1995, Master of Business Administration), and Virginia Polytechnic Institute and State University (2002, Master of Science, Hospitality and Tourism Management). While pursuing a master's and a doctoral degree at Virginia Tech, he was employed as a graduate teaching assistant. Between 1999 and 2005, he held various positions in the food and beverage department at the Donaldson Brown Hotel and Conference Center. He has been published in *Journal of Human Resources in Hospitality and Tourism, Journal of Food Service and Business Research, Journal of Hospitality and Tourism Education, Korean Journal of Tourism and Leisure Research, Journal of Korean Society of Event*, and various conference proceedings.