Psychological ownership theory: an application for the restaurant industry

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Psychological ownership theory:

An application for the restaurant industry

by

Vahagn Sahak Asatryan

A dissertation submitted to the graduate faculty
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This is to certify that the doctoral dissertation of

Vahagn Sahak Asatryan

has met the dissertation requirements of Iowa State University

Signature was redacted for privacy.

Major Professor

Signature was redacted for privacy.

For the Major Program
To my beloved wife, Lina and our son, Michael

To my parents, Sahak and Anahida
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People have possessed property, objects, and relationships from the dawn of time. Humans experience special feelings toward the objects of their ownership and develop strong attitudes towards the relationships built based on such feelings. Building such loyal and continuous relationships between restaurant companies and their customers has been recognized as an important strategy for achieving a long-term financial performance. However, the mystery of customer-company relationships’ formation remains undiscovered in many economic contexts, specifically in the hospitality industry.

This study proposes a new framework for explaining customer-company relationship formation and investigates how customers form psychological ownership toward a company/brand. Additionally, it examines antecedents and consequences of psychological ownership, testing psychological ownership theory (Pierce et al., 2003). Specifically, the study conceptualizes the roots of psychological ownership and formulates both antecedents and consequences of psychological ownership. Psychological ownership theory (Pierce et al., 2003) suggests that individuals experience a cognitive-affective state, i.e., psychological ownership, in their interactions with objects when the individuals feel as though the target object is “theirs” (p. 86).

A web-based survey was used to collect data from faculty and staff at a major Midwestern university in the United States. The proposed model was tested using the
structural equation modeling technique via LISREL 8.5. The fit indices of the measurement model suggested evidence of reliability and validity for the latent constructs, based on a good model fit.

All path coefficients in the structural model were statistically significant, except for the path between perceived control and psychological ownership, which contradicted the theory. Results supported the usefulness of the psychological ownership framework in predicting customer behavioral intentions. These results suggest that psychological ownership plays an important role in building strong relationships with restaurant customers. Moreover, theoretical foundation laid out in this research exhibited a potential for future theory development. The findings and implications need to be considered in light of the study limitations.

Keywords: Psychological ownership; Relationship Marketing; Customer loyalty; Customer identification; Customer participation; Sense of belonging; Perceived control; Word-of-mouth; Relationship intention; Willingness to pay more; Competitive resistance; Restaurant industry.
CHAPTER I. INTRODUCTION

People have possessed property, land, objects, and relationships from the dawn of time, and ownership is still a cornerstone of many modern societies today. People own cars, houses, recreational equipment, and even timeshare vacations. Interactions with these objects require our attention and engagement, and owners’ involvement with the many things they own creates many emotions and ideas about those objects. Humans experience special feelings toward their ownership targets and develop strong attitudes towards the relationships they build with the items they own. These possessive feelings toward objects appear to exist beyond the notion of legal ownership; in particular, they are psychological in nature. The psychological element of ownership constitutes a basis for a continuous relationship with the object and is the focus of this research.

Human beings seem to experience a special psychological attachment to the objects of their ownership, beyond the cognition associated with legal or physical ownership. People appear to feel more than the legal ownership toward a vehicle when they refer to the vehicle as “my car.” They often name the vehicle, personalize it with accessories, and refer to their common experiences with that car. Similar feelings exist toward created works of art and writing. Authors often passionately defend their own thoughts and expressions, referring to them as “my ideas.” Possessions, both material and immaterial, are objects of psychological attachment and appear to be continuations of our selves (Belk, 1989). These possessive feelings seem to be at the heart of many continuous associations between people and objects, and the feelings are the foundation for establishing long-term relationships.
Ownership is a complex phenomenon. It is expressed from early childhood (Issacs, 1933) and continues to evolve with the complexity of our interactions with social and physical environments. Human possessiveness may be attributed to an instinct or a biological drive to the extent that it is influenced by social and cultural factors. For example, we call our offspring “our children” or “my son.” And children claim ownership of day-care toys which do not actually belong to them. People also express feelings of “mineness” toward social institutions: “this is my alma mater.” In all of these instances, we experience a psychological connection between self and owned objects. This emotional and cognitive bond with the ownership object represents the essence of what Pierce, Dirks, and Kostova (2001, 2003) call psychological ownership (PO).

The expressions of PO are also reflected in particular behaviors associated with ownership experience. People tend to protect their property and their relationships with a certain object of which they feel PO. For example, people protect their collection of toys by placing them in specially designed boxes. They defend policies of their college long after graduation. Feelings of “mineness” may motivate an individual to share the experience of ownership with others. University alumni fund-raising campaigns often appeal to a sense of personal ownership and pride toward the institution.

Although researchers have recognized PO as a relevant construct in organizational research and found empirical support for its effects on organizational commitment and employee extra-role behaviors (Pierce et al., 2001; Vandewalle, Van Dyne, & Kostova, 1995), the literature on this subject in consumer research is underdeveloped. Heskett (2002), for example, attempted to address the phenomenon by presenting a five-level hierarchy of customer behaviors ranging from customer satisfaction to “ownership.” Heskett suggested
types of customers who are so attached to the company that they can be considered "owners" who believe they have a stake in the company and who tend to support its sustainable development. Heskett's conceptual description of such customers and potential benefits associated with their behavior call for a more in-depth investigation of the phenomenon.

Marketing practitioners echo academic researchers in describing the complexity and exclusivity of relationships between customers and companies. Smith (1998) (as cited in Shoemaker & Lewis, 1999) suggested that often "the customer feels so strongly that you can best meet his or her relevant needs that your competition is virtually excluded from the consideration set and the customer buys virtually exclusively from you – referring to you as 'their restaurant' or 'their hotel'" (p. 349). This proposition contains a connotation of ownership-like feelings toward a hospitality business.

Expressions of such possessive relationships are common in our daily lives: even television commercials suggest the importance of "mineness" people experience toward drinking and eating establishments. For example, a character in an IBM (International Business Machines) television commercial aired in the United States in 2005 exclaimed in frustration – "but this is our place!" - when faced with a long line and entry restrictions at a favorite bar. This and other examples indicate that identification of motives that result in such feelings of "mineness" is crucial for understanding how to develop sustainable customer relationships and gain competitive advantage in the marketplace. Thus, firms need to seek to build relationships with and sustain such customer "owners" to receive the benefits of their commitment. However, the mystery of PO and its formation remains undiscovered in customer-company relations, particularly in the hospitality industry. To address these issues,
the behavioral and affective consequences of such relationships need to be investigated within the newly proposed PO framework.

Building long-term successful customer relationships is becoming increasingly important and challenging in today's competitive marketplace. The hospitality industry's maturity and increasing global competition (Bowen & Shoemaker, 2003; Shoemaker & Lewis, 1999) coupled with the spread of innovative products (Oh, 2000) appear to undermine managers' efforts to maintain lasting company-customer relationships. Nevertheless, the effects of long-term customer relationships on the success of hospitality businesses have been notable. Long-term customer interactions have been shown to affect the bottom line of hospitality enterprises, as managers have realized that recruiting a new customer costs 5-10 times as much as retaining an existing customer (Blodgett, Wakefield, & Barnes, 1995; Gummesson, 1994). Other benefits of relationship marketing include lower marketing and transaction costs (Grönroos, 1990), increased sales volume per customer (Shani & Chalasani, 1992), and lower cost and reduced risk of introducing new products by pre-testing on a "core group" of customers (Jüttner & Wehrli, 1994). A continuous relationship with a company also implies loyalty (Gwinner, Gremler, & Bitner, 1998) and results in better financial performance in that a 2% increase in customer retention has been reported to result in a 10% decrease in overhead costs (Jamieson, 1994). Reichheld and Sasser (1990) found that a 5% increase in customer retention yielded 25- to 125% increase in profits for various industries. Thus, relationship marketing, customer retention, and customer commitment remain important goals to marketers.

Long-term customer loyalty and retention issues found fertile ground for further development in the relationship marketing (RM) literature, and the issues require thinking
beyond previously adopted framework of customer satisfaction and service quality (Ganesh, Arnold, & Reynolds, 2000; Hennig-Thurau, et al., 2002; Oh, 2002). Examinations of such frameworks produced inconclusive and conflicting results. Research indicates that many satisfied customers are willing to try alternative brands and an increasing number of business travelers are willing to switch brands (Worecester, 1999). Findings by Reichheld and Aspinwall (1993) indicate that 90% of the satisfied bank customers switched from one service provider to another. Such inconclusive results prompted calls from researchers and industry executives to conduct more research on the nature of customer loyalty and customer relationships (Fournier & Yao, 1997).

The RM framework suggests development of long-term customer involvement and commitment to the company based on continuous relationship exchanges. According to Rao and Perry (2002), long-term relationship exchanges are often based on social bonds, i.e., investments of time and energy that create positive interpersonal relationships between the partners. These social and personal relationships are also complex and multidimensional (Iacobucci & Ostrom, 1996) and rely on both cognitive and emotional processes, which require effort, thought, and consideration on the part of both customers and service providers.

Industry executives also continue to recognize that successful lasting customer relationships are a key component in successful long-term operations (Nozar, 1999). Knowing what drives successful customer relationships is important for the hospitality practitioners, because loyal customers appear to purchase more, pay higher prices, and offer word-of-mouth recommendations to others (Ganesh, Arnold, & Reynolds, 2000; Reichheld & Kenny, 1990). Thus, investigation of motives for creating such relationships may contribute to a better understanding of how to manage those relationships.
Marketers often stress the significance of learning new strategies to build customer relationships (Bowen & Chen, 2001). Development of new theories to understand consumer attitudes and behaviors is important to the hospitality industry. The preceding discussion suggests that PO appears to be a central phenomenon in the lives of human beings from early childhood (Furby, 1978), and studying its effects on consumer behavior may provide valuable guidance to marketing researchers and practitioners. Furthermore, enrichment of the current theoretical thinking on the subject will contribute to in-depth understanding of RM. The findings of this study may prompt development of new marketing strategies and tactics in the hospitality industry. Furthermore, this research offers an innovative and stimulating agenda for RM research and suggests actionable implications for the hospitality industry managers.

**Purpose of the Study**

This study conceptualizes PO to investigate how customers form PO toward a company by applying PO theory (Pierce et al., 2003). Recent customer loyalty studies contain connotation of ownership (e.g., Bowen & Shoemaker, 2003; Shoemaker & Lewis, 1999). Therefore, identification of motives that result in PO and its behavioral outcomes is crucial for understanding customer behavior and for building long-term relationships.

This study examines antecedents and consequences of PO as suggested by Pierce et al. (2003) in the restaurant industry. A model including the antecedents and consequences of PO is developed and tested using restaurant customers. More specifically, the objectives of the study are to:

1. develop and test a conceptual model of PO;
2. examine how PO is formed based on basic motives such as perceived control, self-identity, and sense of belonging;

3. investigate the antecedents and consequences of PO and their relationships;

4. assess a mediating role of PO in explaining behavioral outcomes;

5. enrich the existing RM research by providing a new conceptual framework based on PO theory and;

6. help restaurant marketers to develop strategies to retain customers and develop long-term company-customer relationships.

The study provides a conceptual foundation for alternative approaches to explaining customer behavioral intentions, based on PO theory. The results may also indicate new opportunities that could change the way marketers promote and sell products and services and have a positive impact on companies’ bottom line.

**Definition of Terms**

The operational definition of key terms used in this study is as follows.

**Control:** the ability to intentionally influence environmental, psychological, and behavioral events.

**Customer participation:** the degree to which the customer is involved in producing and delivering the service.

**Customer identification:** Customer identification occurs when an individual’s beliefs about an organization become self-referential and self-defining and when individuals believe that the company they identify with has values and beliefs similar to their own values and beliefs.
Sense of belonging: the sense of feeling at home and/or having a close relationship and affinity to a place.

Psychological ownership (PO): the state in which the customer feels as though the target of ownership is his or hers (Pierce et al., 2003). PO, in this study, is defined as a state in which the customer feels as though the restaurant is his or hers.

Relationship intention: the stated willingness to repurchase the same brand repeatedly in the long-run.

Word-of-mouth communication/recommendation: the informal communication directed at other customers about ownership or characteristics of particular goods and services and/or their sellers.

Willingness to pay more: the degree to which customers are willing to pay certain prices for the service of a company.

Competitive resistance: the customer’s tendency not to shop elsewhere if the price is lower or if the competitors provide attractive offers.

Dissertation organization

Chapter 1 provided a general introduction to the research and study objectives. The second chapter presents a critical review of research on psychological ownership, perceived control, customer participation, sense of identification, sense of belonging, word-of-mouth communications, relationship intention, competitive resistance, and willingness to pay more. Chapter 2 also discusses relationships among the variables, proposes a research model, and develops hypotheses. Chapter 3 describes methods, including measurement development, sample selection, data collection, and data analysis processes. Chapter 4 provides analysis
results of the hypotheses and model and discusses the results. Chapter 5 presents a summary of the study, practical and theoretical implications of the results, and suggestions for future research. Finally, appendices provide supplementary materials (e.g., the survey instrument, the correlation matrix, and results of various statistical tests).
CHAPTER II. LITERATURE REVIEW

This chapter provides a synthesis of the theoretical and empirical literature used in the development of the hypotheses and the research model. The first section introduces and operationalizes the concept of psychological ownership. In the second and third sections, the antecedents and consequences of psychological ownership are identified. A proposed conceptual model and hypotheses for the present study are presented in the forth and fifth sections, respectively.

Psychological ownership (PO)

The existing RM paradigm only partially addresses the psychological nature of the customer-company relationship, and the topic requires further expansion. Researchers have noted a customer-company relationship where a customer feels loyal to a company with the fervor of a partner or an owner having a stake in the success of the firm and feels dedicated to contributing to its improvement (Shoemaker & Lewis, 1999). This partnership-like relationship is reflected in the psychological experience of connection or emotional bonding between the firm and the customer (Matilla, 2001). Such an experience often results in psychological and behavioral effects.

The personal connection between a person and the object of his or her loyalty is reflected in Fournier and Yao’s (1997) analysis of such committed relationships. A number of interviews conducted by these researchers uncovered the possessive nature of such relationships. For example, when speaking about her relationship with Dunkin Donut’s products (i.e., coffee), the interviewee admitted that “there is nothing like your own cup of coffee” and “this coffee is a part of my life.” Another interviewee noted: “It’s special. I love
it. It’s my Gevalia” about another brand of coffee (p. 461). These examples illustrate the psychological connection customers develop and pursue with brands and the connotation of ownership-like feelings in such connections.

*Psychological ownership theory* attempts to explain this connection or the psychological state of ownership (Pierce et al., 2003), and it provides insight into the nature of the phenomenon. First, Pierce et al. (2003) argued that the sense of ownership is manifested in “the meaning and emotion associated with my or mine and our” (p. 86). Second, PO represents a relationship between an individual and an object (both material and immaterial). Third, an individual perceives the object (i.e., a firm) to have a close connection with the self (Furby, 1978; Pierce et al., 2003). Finally, the state of PO is complex and consists of both affective and cognitive components: “Psychological ownership is a state in which individuals feel as though the target of ownership or a piece of that target is ‘theirs’ (i.e. ‘It is mine’)... It is a condition of which one is aware through intellectual perception. It reflects an individual’s awareness, thoughts, and beliefs regarding the target of ownership. The cognitive state, however, is coupled with an emotional or affective sensation” (Pierce et al., 2003, p. 86). Research has shown that ownership can be felt even toward nonphysical entities (i.e., works of art, ideas, thoughts, words, relationships, and people). Children, for example, demonstrate feelings of ownership toward nursery rhymes and songs if they heard them before other children (Issacs, 1933).

Ownership is a matter of “being.” Sartre (1969) commented that “to have (along with “to do” and “to be”) is one of the three categories of human existence” (p. 591-592). He continued to state that “the totality of my possessions reflects the totality of my being... I am what I have... What is mine is myself.” Issacs (1933) argued in a similar manner, suggesting
that “what is mine becomes (in my feelings) a part of me” (p. 225). Along the same lines, Belk (1988) suggested that our possessions are parts of our extended selves. Customers arguably “identify themselves by the formula: I am = what I have and what I consume” (Fromm, 1976, p. 36, italics original). This notion of customer behavior may be paraphrased in the context of RM theory as “I am = what I have/consume and relationships I build.” Thus, building a relationship based on PO reflects psychological proximity between the customer and the object of his/her ownership.

Rudmin and Berry (1987) acknowledged that ownership is a “linguistically opaque concept” (p. 262), with its meaning being “difficult to grasp outside of an intraindividual view” (Pierce et al., 2003, p. 93). Rudmin and Berry (1987) suggested that it is virtually impossible to understand the meaning of ownership by simply examining examples of property: “After all, a stolen apple does not look any different from any other apple” (Snare, 1972, as cited in Rudmin and Berry, 1987). A review of literature on ownership and its motives portrays the concept as a “dual creation, part attitude, part object, part in the mind, part ‘real’” (Etzioni, 1991, p. 466). A person may feel a sense of both personal ownership (e.g., “Those ideas are mine!”) and collective ownership (e.g., “That garden space is ours!”) (Pierce et al., 2003, p. 86). These complex feelings of ownership are pleasure producing (Beggan, 1992) and object-specific.

The conceptualization of PO provides a distinction from that of legal ownership. Although psychological and legal ownership may coexist (Etzioni, 1991), the concepts differ in a number of ways. First, legal ownership is recognized by society and is protected by a legal system, while PO is recognized only by the person who experiences the feeling toward the target. Second, PO may exist without legal ownership (or vice versa); i.e. people may feel
PO toward a target without legally owning that target (Etzioni, 1991; Furby, 1980). Finally, legal ownership of an object (e.g. automobile or house) may not evoke feelings of PO. McCracken (1986) suggested that PO may fail to occur because people find insignificant personal meaning in the target. The personal meaning in the ownership target’s symbolic properties is necessary for claiming the object as “mine” (Pierce et al. 2003). Furthermore, Pierce et al. noted that responsibilities stemming from legal ownership are consequences of the legal system. In contrast, responsibilities from PO originate in the individual, i.e. from the individual’s feelings of being responsible (Pierce et al., 2003).

**Formation of PO**

Different explanations of reasons for ownership emerged in the scientific community. The innate need for possession, i.e., the “nature” side, suggested the existence of a possessive instinct that drives human behavior (Porteous, 1976). The proponents of this argument (Ellis, 1985; McDougall, 1923/1908; Sharp, 1986) suggested that acquisitive instinctive disposition among humans is similar to that of animals (e.g., collecting and hoarding among birds, insects, and rodents) and has significant biological survival value (Dittmar, 1992). The “nurture” camp, on the other hand, has argued that the need for possession is driven by social reasons (Furby, 1978; Seligman, 1975), such as developmental processes in the context of social relationships. For example, Issacs (1933) argued for the social nature of ownership, suggesting that ownership represents a social response and possessiveness which are related to “the motives of power and rivalry (p. 221).” Hallowell (1943) argued that a person’s possession of an object is meaningless without others’ recognition of such possession. He
stated that “the property relation is triadic: A owns B against C,” and C represents any other third party (e.g., other customers) (p. 120).

Research on PO suggests a number of sources of the PO feelings and their consequences. Porteous (1976) detailed three satisfactions that stem from ownership: (a) control over space per se (e.g., ability to manipulate fixed physical space), (b) personalization of space as an assertion of identity (i.e., self-knowledge and recognition by one’s fellows), and (c) stimulation (achieved by thinking about, using, improving, or defending one’s possessions-territory). These satisfactions derive from humans’ innate need for possession (Ardrey, 1966; Furby, 1978; Porteous, 1976) and social and cultural disposition (Dittmar, 1992; Rudmin, 1990a, 1990b). Research on a related topic in the area of organizational commitment proposed employee ownership as an antecedent of organizational commitment (Florkowski, 1987). Limited empirical research provided evidence of a positive effect of PO on organizational commitment and extra-role behavior (Vandevalle, Van Dyne, & Kostova, 1995). Although the PO construct was developed as a means of explaining employee attachment to an organization (Dirks, Cummings, & Pierce, 1996; Van Dyne & Pierce, 2004), it may be applied in studies on consumption relationships between a customer and an organization. Nevertheless, little empirical research has been conducted to support a number of theoretical assertions of PO theory.

Pierce et al. (2001, 2003) theorized a number of antecedents of PO. According to their conceptualization, the roots of PO are found in three human motives: (a) perceived control (i.e., efficacy and effectance); (b) self-identity, and (c) having a place.
**Perceived control**

White (1959) argued that it is in the nature of human beings to explore an external environment because of an effectance motive. Such a motive stems from differences in the environment and desire for change or control over the environment through interaction. Control is defined as “the ability to intentionally influence environmental, psychological, and behavioral events” (Morling & Fiske, 1994, p. 719). The ability to control may result in feelings of efficacy and intrinsic pleasure on one hand and extrinsic satisfaction from the acquisition of desired objects on the other hand (Pierce et al., 2003). Such a desire for control is described in the form of an ability to provide oneself with convenience, security, enjoyment, and comfort. In a large cross-cultural study of American and Israeli adults and children, Furby (1978) found that the desire for being in control was often cited as a motivation for ownership. Possessions were found to be a means to such an end as they tend to allow an individual to act as she/he pleases. Thus, PO stems partly from the motive of being in control and, hence, being efficacious (Isaacs 1933; Pierce et al., 2003).

People are motivated for effectance or desire for control over events that influence the environment. Research on the construct of control differentiates between control over physical environment and over people (i.e., social control) (Furby, 1978). Control over physical environments assumes manipulations of physical surroundings, whereas social control is exercised over people. Furby suggested two types of control over physical environment: (a) the ability to affect the object in any way one may desire, and (b) the ability to affect the environment more generally by using the possession object. For example, in the former case, a restaurant customer may believe that a special relationship with the restaurant (i.e., with its employees or owner) would enable him/her to receive preferential treatment
such as a special seating for an important occasion. In the latter case, a person may use the restaurant for a fund-raising activity to sponsor clean-up of an oil spill in the nearby bay by renting the restaurant for a “temporary ownership” use.

Social control, i.e., control over people, comes from the ability to regulate the access of other individuals to the target of possession or the use of those targets. Private property often carries signs of social control, such as “No trespassing” or “Stay away – private property.” Rudmin and Berry (1987) also found the element of “defensiveness” to be associated with feelings of ownership, stressing the emphasis on the social control (p. 263).

The construct of control is often referred to as perceived control by many psychologists. Perceived control has been recently conceptualized as “a flexible set of interrelated beliefs that are organized around interpretations of prior interactions within specific domains” (Skinner, 1995, p. 4). Perceived control has been identified as a significant factor in satisfactory interpersonal interactions (Faranda, 2001). Namasivayam (2002) suggested that in a service encounter, customers may feel that they have the ability (or capacity) to influence the service provider in service delivery. His research suggested that such capacity beliefs answer the question “am I able to perform the required behavior?” (Namasivayam, 2002, p. 467). For example, the ability to change a side order of the entrée ordered in a restaurant or substitute a king-size bed with a queen-size alternative in a hotel setting are examples of such control.

Limited research on perceived control in customer research has provided some evidence of positive effects of perceived control on customer choices (Natarajan & Angur, 1997). Hui and Bateson (1991) provided theoretical and empirical support for the effects of perceived control on positive service experiences. Perceived control may constitute a
perception that the customer is in power to manipulate the service experience (e.g., receive a preferential treatment at the restaurant, influence the quality of the service, or request an item specifically prepared to meet his/her special needs). The feeling of being in control can evoke positive emotions and feelings of “ownership” of the restaurant (this restaurant is “mine”). However, few studies have investigated the effects of perceived control on feelings of PO in the hospitality industry.

Self-identity

An individual forms self-identity through his or her perception of how other members of the society view his or her. Previous research identified that possessions often represent symbolic expressions of the self (Dittmar, 1992). For instance, Abelson and Prentice (1989) suggested that close connections exist between possessions and self-identity. Similarly Pierce et al argued that “the ultimate meaning of ownership is the fusing of the target of the ownership with the self” (2003, p. 88). This fusion, or ultimate and intimate knowledge of the object of ownership, is created through the subject’s immediate involvement or participation in the being or existence of the object and identification with the object. Thus, customer self-identity is known to consist of mainly two components: customer participation and identification.

Customer participation

Crafting or making an object is often associated with the ownership of that object. Rudmin and Berry (1987) provided evidence that crafting (“I made it”) serves as a criterion of ownership. Individuals experience feelings of ownership toward objects created by
application of their skills and/or knowledge. Similarly, Furby (1978) found empirical evidence that links participation in the making of an object with its ownership ("owner making object"). The products of our work are associated with us, and we often identify with and often take ownership of those products ("I made my desk; therefore, it's mine"). Dittmar (1992) stated that "personal possessions come to objectify aspects of self-definition" (p. 85). Those possessions do so through individuals' interactions with them, and such interactions are often reflected in the mere creation or crafting of those objects. A combination of our interaction with possession objects or participation in their creation and reflection on their meaning establishes our sense of identity (Dittmar, 1992).

Customers in the service industry often co-create services rendered by service companies (Bowen, 1990; Mills, Chase, & Marguiles, 1986; Lengnick-Hall, 1996). Customer participation is "the degree to which the customer is involved in producing and delivering the service" (Dabholkar, 1990, p. 484). Lengnick-Hall (1996) suggested that "co-production enables customers to shape the service encounter" (p. 365), reflecting influence of the customer over the delivery process of the services. For example, Southwest Airline’s customers are present and actively participate in the flight attendant selection process (Heskett, 2002). Customer participation at this level is said to encourage PO of the airline ("It's my airline").

The level of customer participation and interaction with tangible and intangible attributes of service delivery varies depending on the nature of the rendered services (Bitner, Faranda, Hubbert, & Zeithaml, 1997). The customer's physical presence is required at low levels of participation (e.g., enjoying a symphony concert or live entertainment in a casino). In moderate cases of participation, customer inputs, such as information, effort, or physical
presence, are needed (Bitner et al., 1997). Ordering menu items at a restaurant or bringing travel documents to a travel agency require at least moderate participation on the part of the customer. Customers may also play essential production roles in their interactions with a company to achieve desired results (i.e., high level of participation) in such situations as health care or education.

Similarly, Claycomb, Lengnick-Hall, and Inks (2001) suggested three dimensions of customer participation: attendance, information provision, and co-production. The attendance dimension requires a mere presence of the customer at the point of service encounter. The information provision refers to the extent to which customers provided information to the company and to other customers of the company. Co-production encompasses the extent to which customers went beyond normal expectations to provide service to the company and help the organization in the service delivery process.

The effects of customer participation on service providers have been previously studied in different contexts. Customer participation has been known to contribute positively to service quality and satisfaction (i.e., pleasurable fulfillment) (Oliver, 1997), as well as to organizational efficiency and reduced costs (Bitner et al., 1997). Customers usually expect that participation in the service delivery process will result in a pleasant service experience that meets their needs. Pleasant experiences and positive outcomes tend to lead to repeat patronage, although little empirical evidence exists to support its effects on loyalty (Lengnick-Hall et al., 2000). However, the effect of customer participation on PO has not been addressed in the related literature.
Customer-company identification

Customers identify themselves with a number of company associations that constitute the company’s identity (Bhattacharya & Sen, 2003). A customer’s identification with a company is motivated by self-definitional needs (i.e., “Who am I?”) (Dutton, Dukerich, & Harquail, 1994; Pratt, 1998). Customers often derive non-economic benefits, such as prestige, security, and social status, from identification with companies and brands. For example, identification with Disney may reflect the desire of the person to be associated with fun and entertainment.

Organizational behavior literature proposes a number of definitions of identification in the context of individuals’ relationships with organizations (Ashforth, 1998; Bergami & Bagozzi, 2000; Pratt, 1998). Pratt (1998) suggested that “organizational identification occurs when an individual’s beliefs about his or her organization become self-referential and self-defining” (p. 172). Organizational identification deals with the social aspects of a customer’s identity and self-concept. Pratt (1998) concluded that most identification definitions involve a perception of value congruence. One’s sense of self-identity serves as a means of determining (Pratt, 1998) one’s identification with an organization (i.e. similarity in values) and continuation of a relationship.

Value congruence occurs when individuals believe that the company they identify with has values and beliefs similar to their own values and believes. This definition of customer-company identification is adopted in this study. For example, although not an employee, one may identify with Red Lobster because of the company’s environmentally friendly fishing policies. In this case, identification refers to a “feeling of oneness” (Ashforth & Mael, 1989) with the object and does not require modifications in the individual’s values.
and beliefs. Customer-company identification may render positive effects for both the object and the subject, such as deep and committed relationship between the companies and their customers (Bhattacharya & Sen, 2003). The process of identification is also considered an important element in the formation of psychological attachment (Bowlby, 1982).

People become familiar with objects of ownership and develop feelings by virtue of learning and gaining more knowledge about those objects. Pierce et al. (2003) argued that PO "reflects … a psychological proximity" (p. 93). Interactions with PO objects result in internalization of the social meaning of those objects and their incorporation into the self. Interactions with a restaurant’s ambience and staff, producing pleasurable and comfortable dining experiences, for example, and learning about the restaurant’s values and image become determining components of one’s self identity. These interactions are reflected in declarations of self-identity that communicate the individual’s self-identity to others, thus, achieving desired outcomes, e.g., recognition and prestige.

Despite the progress on determining the role of self-identity on human behavior in the psychological literature (Terry, Hogg, & White, 1999), research on identification in the customer behavior context has been scant and inconclusive (Bhattacharya & Sen, 2003). Bhattacharya and Sen noted that “customers become champions of the companies with whom they identify” (p. 77). Pierce et al. (2003) suggested that motivation for PO is grounded in self-identity and interaction between the object of PO and the individual. Thus, the implied relationship between customer-company identification and PO requires further examination.
Sense of belonging

_Sense of belonging_ may be defined as the sense of feeling at home and/or having a close relationship and affinity for a place (Seamon, 1979). It is an affective bond between the individual and the place that is constructed through experiences and interactions with that place (Jones, Patterson, & Hammitt, 2000). Porteous (1976) stated that people develop special feelings for places because they have an innate need for territoriality. People are “geographical” beings and function within the limits of a specified space. The space and action are limited to a particular place. The concept of place and belonging is also crucial for human self-identity and self-competence. Ardrey (1966) and Duncan (1981) associated this need with feelings of ownership.

The notion of a place is also often associated with the concept of home (Porteous, 1976). Home is “a major reference point for the structuring of the reality” (p. 386). People make emotional investments in their homes, and feelings of “home” result in a sense of security and belonging. Pierce et al. (2003), based on research in humanistic geography (Relph, 1976; Tuan, 1974), suggest that “motivation for PO is, in part, grounded in having a home, a place of one’s own” (p. 91). Home serves the need of human beings for having a place, and home is a place where one can be himself or herself. Cresswell (2004) stated that “home is an intimate space where experience is particularly intense” (p. 24). People may “feel at home” even toward immaterial objects (e.g., language, skills, etc.) (Dreyfus, 1991). Whether a place, object, or concept, home is also associated with one’s roots or family (Kron, 1983). Some hospitality companies attempt to appeal to this concept of home. For example, the Olive Garden’s TV commercial states “When you are here – you are family.”
Sense of belonging, as a theoretical construct, has received relatively little amount of attention in the RM literature. Stebbins (1979) identified the sense of belonging as a self-benefit associated with sport fan's leisure activities. In addition, a similar concept of place attachment has been researched in the context of residential places (Hidalgo & Hernandez, 2001). A scant number of articles on this topic discuss the meaning of place or sense of belonging and individuals' identity in a tourism setting (Hammitt, Backlund, & Bixter, 2004; McCabe & Stokoe, 2004). For example, Hammitt et al. (2004) found that trout fishers who had extensive use history experienced higher levels of sense of bonding to the fishing place. However, the effect of sense of belonging on consumer behavior in the hospitality industry remains relatively unaddressed. Therefore, more significant research efforts are needed to conceptualize the meaning of place in the hospitality industry context and its effect on customer behavior.

**Implications of PO**

*Relationship intention*

Long-term behavioral intentions suggested by the RM literature have been operationalized in lodging research (Oh, 2002). Oh (2002) described *relationship intention* as a long-range behavioral intention in contrast to a short-term *repurchase intention* (i.e., the likelihood that the customer will repurchase the same brand in the next purchase occasion). Relationship intention is defined as “the stated willingness to repurchase the same brand [repeatedly] in the long-run” in contrast to a short-term repurchase intention reflecting immediately the post-purchase feeling or evaluation (Oh, 2002, p. 286). Relationship intentions, therefore, refer to “internalized” long-term attitudes of customers toward a
company. Oh (2002) found empirical evidence that showed relationship intention as an outcome variable stemming from trust and short-term repurchase intention in his conceptual model of a postexperience decision process.

Kumar, Bohling, and Ladda (2003) define relationship intention in the context of industrial relations as an “intention of a customer to build a relationship with a firm while buying a product or a service attributed to a firm, a brand, and a channel” and conceptualize it as a degree on an intention continuum (p. 669). One end of the continuum indicated lack of relationship intention (i.e., transactional intention) and the other end illustrated a high degree of relationship intention. Kumar et al. argued that customers may develop relationship intention based on the perceived equity of the firm and the brand. Customers with high levels of relationship intentions are less opportunistic and have a longer-term positive attitude toward the firm. Kumar et al. (2003) suggested that these customers express higher levels of affinity toward the organization, are emotionally attached to the firm, and experience high levels of trust. However, the factors that affect the formation of relationship intention remain virtually unaddressed in the hospitality marketing literature. More research is needed to identify the connections between relationship intention and other attitudinal and behavioral variables.

**Word-of-Mouth**

Positive word-of-mouth (WOM) communications or recommendations by customers have been researched in hospitality industry as an important component of marketing strategy (Bowen & Shoemaker, 2003; Oh, 2002). WOM is defined as interpersonal communications in which none of the participants are marketing sources (Bone, 1995). Westbrook (1987, p.
defined WOM as “the informal communication directed at other customers about ownership, or characteristics of particular goods and services and/or their sellers.” For example, individuals may share their experiences and their associations with the objects of PO (i.e., a restaurant) with others in casual conversations with neighbors and friends about these objects. These conversations may include positive recommendations about experiencing that object.

Marketing researchers have recognized the importance of WOM in attitude formation and purchase decision making (Arndt, 1967). WOM appears more credible in the eyes of the customers in comparison to official channels of communication employed by companies (Derbaix & Vanhamme, 2003). WOM has also been suggested to reduce perceptions of pre-purchase risk (Arndt, 1967; Murray, 1991). Furthermore, research has indicated that WOM eases tension created during a purchase decision making process (Dichter, 1966). Individuals tend to rely on information conveyed to them by their peers, relatives, and friends when making such decisions. However, time is crucial, as Richins and Root-Shaffer (1988) revealed: the level of WOM communication is higher immediately after the purchase and evaluation of the product or service. WOM has also been used as a behavioral measure for researching differences between stayers and switchers (Wangenheim & Bayon, 2004).

**Willingness to pay more**

*Willingness to pay more* refers to the degree to which customers are willing to pay certain prices for the service of a company. Marketing researchers “have a limited understanding of the extent to which customers are willing to pay more for the benefits they receive” (Fullerton, 2003, p. 336). Zeithaml, Berry, and Parasuraman (1996) recognized that
consumers’ acceptance of price increases is an important issue in service relationships. Homburg, Koschate, and Hoyer (2005) suggested that customers with higher levels of satisfaction may perceive higher outcomes of a service exchange, and therefore, be willing to pay more for those outcomes. Fullerton's (2003) study found a positive relationship between affective commitment and willingness to pay more, suggesting that affectively committed customers are more likely to pay premium prices for the benefits provided by service companies in the service exchange process. Fullerton adopted the definition of affective commitment developed by Allen and Meyer (1990, p. 2) as “affective or emotional attachment to the organization such that the strongly committed individual identifies with, is involved in, and enjoys membership in the organization.” Such an emotional attachment is consistent with the “psychology of mine” (Pierce et al., 2003). PO assumes protection of the object and willingness to sacrifice to maintain the relationship. Thus, feelings of PO may motivate an individual to incur higher costs or pay premium prices to maintain the relationship with a particular restaurant.

Competitive resistance

In the context of retail industry, Reynolds and Arnold (2000) defined competitive resistance as “the customer’s tendency not to shop elsewhere if the price is lower or if the brand/style/size desired is not available” at a particular service provider. Prior conceptualizations of competitive resistance suggest a broader scope and nature of the construct (Dick & Basu, 1994; Oliver, 1999). Thus, competitive resistance is defined here as the customer’s tendency to disregard marketing offers of competitors in favor of the favorite
brand or service provider. Reynolds and Arnold (2000) found a positive relationship between retail store loyalty and customers’ resistance to purchase competitive offerings.

Customers’ resistance to competitive offers, such as lower prices, convenient hours, and other benefits, is important for hospitality companies because of industry’s fierce competition and relatively low switching costs. For example, customers may easily “switch” to another restaurant without incurring cost associated with similar “switch” of carriers in the telecommunications industry where changing cellular service providers may result in significant financial sacrifices. Competitive resistance stems from a strong commitment to a subject (e. g., restaurant) (Oliver, 1999; Reynolds & Arnold, 2000). Customers are said to “tune out” competitive messages, focused on searching for a favorite brand, and “possibly even shun the trial of competitive brands” (Oliver, 1999, p. 37). Oliver (1999) suggested that competitive offers may deteriorate the established relationship between the company and the customer. However, feelings of “mineness” toward a restaurant motivate the customer to protect his/her relationship with the company and disregard competitive offers: customers who feel PO are ready to sacrifice in the name of their relationship with the restaurant (Pierce, et al., 2003). Competitive resistance may eventually lead to stable financial performance of the hospitality company and prospects for future development and expansion.
The proposed model and research hypotheses

Based on the discussion above, Figure 2.1 presents the proposed model and displays the proposed relationships among the variables. The model represents the relationship between the exogenous variables (i.e., control, customer participation, customer–company identification, and sense of belonging) and endogenous variables (i.e., PO, relationship intention, word-of-mouth, willingness to pay more, and competitive resistance). The latent constructs (e.g., perceived control) are represented by ovals in the model. The arrows among the ovals represent the hypothesized relationships among the corresponding latent constructs.
Figure 2.1 A proposed PO framework

Control

Customer participation

Customer - company identification

Sense of belonging

Psychological ownership

Relationship intention

Word-of-mouth

Willingness to pay more

Competitive resistance
PO and its antecedents

Customers can perceive control over aspects of their dining experience (e.g., a specially arranged seating or service delivery). Perceived control over the restaurant environment/experience results in positive feelings of being in charge and being able to manipulate the surrounding resources for one’s benefit and satisfy one’s needs for efficacy and effectance (Pierce et al., 2003). The desire to experience the pleasure of being a cause of change in the environment leads individuals to take possession of objects in that environment (Furby, 1978; Pierce, et al. 2003). The feeling of being in control is likely to evoke positive emotions and feelings of “ownership” towards the restaurant (this restaurant is “mine”). Thus:

**H1: Perceived control is positively related to PO.**

Customer participation in the service delivery process allows the customer to obtain more information and knowledge about the company. Restaurant customers may participate by expressing their service preferences to the serving staff to make their dining experiences more pleasant. Customers may also learn about special ingredients or cooking techniques employed by the chef when cooking their order and may make suggestions concerning that matter while in the restaurant. For example, Mongolian barbecue restaurants allow customers to collect combinations of raw foods and spices from a buffet menu to be cooked by the chef in the presence of the customer. This intimate knowledge and participation may strengthen the feeling of PO. Beaglehole (1932) suggested that intimate knowledge of an object contributes to the feeling that the object is a part of the self: “People come to find themselves psychologically tied to things as a result of their active participation or association with those
things” (Pierce et al., 2003). Customers invest their time and effort during participation in the delivery of service (e.g., providing feedback to the restaurant). Ford and Heaton (2001) suggested that “involved guests feel ownership in their experiences and loyalty to the organization” (p. 50). The greater the knowledge about the target, the more intimate is the connection between the individual and that target (Pierce et al., 2003). Therefore:

**H2:** Customer participation is positively related to PO.

Customer identification occurs when an individual’s values are deemed to be similar to those of the organization. One’s sense of self-identity serves as a means of determining one’s identification with an entity or organization (i.e., similarity in values) and continuation of relationship or interaction with the target (Pratt, 1998). Identification satisfies a need for self-definition (i.e., “Who am I?” need) (Bhattacharya & Sen, 2003). According to Dittmar (1992), “personal possessions come to objectify aspects of self-definition” (p. 85). People experience a sense of possessiveness toward immaterial objects as well, thereby developing a sense of ownership toward objects that share their values. A customer may identify his or her own values with the values of the hospitality organization (e.g., “I share the environmental concerns of Red Lobster”) and see the brand as a continuation of the self. The individual’s nearness to the object (i.e., the hospitality company) suggests “oneness” (Ashforth & Mael, 1989) between the individual and the object (Dittmar, 1992). Pierce et al. (2003) proposed that such psychological proximity of the owners with the owned object or target leads to feelings of PO. This proximity may occur even through the process of association with the target (Beggan & Brown, 1994; Rudmin & Berry, 1987).

**H3:** Customer-company identification is positively related to PO.
A place or a home ("my place") becomes an object of ownership to satisfy the need for territoriality: "As people develop their 'home base,' they become psychologically attached (e.g., come to feel at home in their language, country, or possessions) to a variety of objects of material and immaterial in nature" (Pierce et al., 2003, p. 91). A booth or table at a restaurant or a hotel room may be perceived as a "home base" for the duration of a service encounter. Many customers may even develop permanent feelings of ownership toward a particular place (e.g., "our favorite table" or "my room"). Sense of belonging involves an intimate relationship with the object, i.e., the "sacred structure" in the community (Hester, 1993) such as a local drugstore or a pub which people see as extensions of their selves. Feelings of PO reflect such a relationship between the individual and the target of PO.

**H4: Customer sense of belonging is positively related to PO.**

**Consequences of PO**

*Relationship intention*

Based on the research by Dittmar (1992) and Porteous (1976), Pierce et al. (2003) argued that individuals tend to "maintain the continuity of the self across time" (p. 89). Relationships based on PO provide us with the sense of continuity of what and who we are. For example, people who frequent a neighborhood bar and feel as if the place is "theirs" are likely to continue their relationship because the bar's environment constitutes a part of their self. Feelings of PO allow the customers to incorporate the bar into that self. They associate themselves with the other patrons of the bar, the atmosphere and the décor of the place, the service staff and the owner, as well as the food and entertainment. Feelings of PO result in willingness to continue relationship with the object of PO due to intimate psychological
investment of the self into that object. Thus, people strive to continue relationships with the objects to which they feel PO.

**H5:** _PO is positively related to relationship intention._

*Word-of-mouth communication*

The intimate knowledge about the object of PO may result in excitement about the target of ownership (e.g., restaurant) and evoke a customer’s desire to share his or her experiences with colleagues, relatives, and friends. (“You have to check this restaurant out! It’s a place for us”). Dichter (1966) suggested that product involvement results in word-of-mouth: “experience with the product (or service) produces a tension which is not eased by the use of the product alone, but must be channeled by way of talk, recommendation, and enthusiasm....” (p. 148). Customers’ willingness to give referrals has been found to correlate with the importance they ascribe to the shared information (Gilly, Graham, Wolfinbarger, & Yale, 1998). The desire to be associated with a particular restaurant or lifestyle and significance of the PO object are likely to generate the excitement and willingness to share information about that target (i.e., a favorite restaurant).

**H6.** _PO is positively related to word-of-mouth communication._

*Willingness to pay more*

Customers who feel attached to and bonded with the objects of their PO are more likely to spend more resources or money for the benefits derived from those objects. For example, people may be more willing to pay more for the benefits of the dining experiences in their favorite “place” than those of other restaurants. This behavior is consistent with the
individuals’ innate need for preserving and expanding self-identity and belonging to a place. People’s feelings of PO toward objects which they consider as elements of the extended self (Belk, 1988) suggest stronger willingness to pay more for those benefits associated with those objects.

H7. PO is positively related to willingness to pay more.

**Competitive resistance**

PO theory suggested an intimate connection between the individual and the target of ownership. A stronger association with the target (i.e., the restaurant) (Furby, 1978) and a deeper knowledge of that target (Rudmin & Berry, 1987) create preference for that target against other alternatives. This preference is based on stronger attachment feelings to the object of ownership; the attachment stems from having a perceived control over the object and a desire to continue a relationship that is appealing to the customer’s self-identity. Self-efficacy and mastery of service encounters lead to enduring interest in activities and objects (Bandura & Schunk, 1981).

Individuals tend to make evaluative judgments among different alternatives and prefer one specific alternative to another in the consumption context. This preference for a particular object suggests a weak competitive power of other alternatives. Thus, customers who experience PO toward the restaurant are less likely to be lured by competitive offers from other restaurants and more likely to be resistant to such offers.

H8. PO is positively related to competitive resistance.
This section provided a review of literature on PO, defined constructs, and argued for specific relationships among those constructs. The review of the related literature defined PO as a psychological state which reflects feelings of “mineness” toward both material and immaterial objects. PO appears to exist in customer-company relationships and seems to influence customer behavior. Eight proposed hypotheses reflect the formation of PO in relationships to control, customer participation, customer-company identification, and sense of belonging, and the hypotheses describe the effects of PO on customer attitudinal and behavioral intentions. All proposed relationships are hypothesized as positive.


CHAPTER III. RESEARCH METHODS

Chapter three presents study methods, including the research design, instrument development, measures, sampling, pretest, and data collection. Data analysis consisted of two parts: preliminary and structural equation modeling. Preliminary analysis included sampling adequacy, normality, and scale validity and reliability using confirmatory factor analysis. Structural equation modeling was used to test the proposed model and research hypotheses.

Instrument development and measures

Most measures were chosen based on previous research in the customer behavior, RM, and psychology literatures. The instrument underwent a review by 5 faculty members to ensure content validity. The questionnaire was also pre-tested using a sample of hospitality graduate students. Most questionnaire items were significantly modified from the original items to fit the nature and context of the research questions. All measurement items, except for customer identification and demographics, were measured on a scale ranging from “very likely” to “very unlikely” and on a 5-point Likert scale ranging from “strongly disagree” to “strongly agree.” Customer identification was measured on a 7-point and an 8-point scale. Appendix A1 contains the measurement items described in this section. Appendix A2 includes the on-line questionnaire.

Perceived control refers to the ability to intentionally influence environmental, psychological, and behavioral events. The scale for perceived control construct was a 3-item Likert scale based on a set of questionnaire items applied by Namasivayam (2004) for
restaurants and hotels. Example items include, “I feel in control over my dining experience in my most frequently patronized restaurant,” and “I have some influence over the quality of the service provided to me by the service staff in my most frequently patronized restaurant.”

Customer participation is the degree to which the customer is involved in producing and delivering the service. The measures of customer participation were developed following the discussions by Zeithaml and Bitner (1996) and Bitner et al. (1997) and included 5 items. For example, “I express my service preferences to the service staff in my most frequently patronized restaurant” or “I provide feedback to my most frequently patronized restaurant on menu options.”

Customer identification occurs when an individual’s beliefs about an organization become self-referential and self-defining and when individuals believe that the company they identify with has values and beliefs similar to their own values and beliefs. The measures of customer-company identification consisted of two types: visual and verbal. This separate operationalization was applied by Bergami and Bagozzi (2000), which was in line with other similar measures developed earlier (Aron, Aron, & Smollan, 1992). The visual measures reflected the extent to which the customer’s own identity overlapped with the restaurant’s identity and was measured on an 8-point scale. This measure consisted of two circles, each representing identity of the customer and the company/restaurant. The circles were positioned at different distances from each other, reflecting 8 different scenarios or depictions of identity proximity. Appendix 2 contains a depiction of this measure. The verbal measure asked the respondents to express the degree to which their values overlapped with those of the restaurant. The verbal measure appeared as follows: “Please identify the degree
to which your own values overlap with those of the restaurant.” The scale ranged from “not at all” to “very much,” with “moderate” in the middle.

Sense of belonging refers to the sense of feeling at home and/or having a close relationship and affinity to a place. Sense of belonging was operationalized based on the measures developed by Jones et al. (2000) and Lalli (1992). These measures captured respondents’ feelings toward the restaurant as a home and a place they feel they belong. The 5 items included items such as “I feel I ‘belong’ in my most frequently patronized restaurant” and “I feel ‘at home’ in my most frequently patronized restaurant.”

PO is the state in which the customer feels as though the restaurant is his or hers. Van Dyne and Pierce (2004) measured PO in three field studies using a 5-item scale. The respondents were provided with a brief instructional paragraph followed by the items. This scale was adopted for this study with modifications. Examples of these items included “I sense that my most frequently patronized restaurant is ‘mine’ or ‘I feel ‘personal ownership’ of my most frequently patronized restaurant.”

Relationship intention is the stated willingness to repurchase the same brand repeatedly in the long-run. Kumar et al. (2003) developed a scale for measuring relationship intention. This study adopted the items from the scale as follows: “I intend to continue the relationship with my most frequently patronized restaurant.” Two more items were adopted from a previous study by Oh (2002).

Word-of-mouth communication/recommendation is the informal communication directed at other customers about ownership or characteristics of particular goods and services and/or their sellers. The hospitality industry researchers have developed a number of scales to measure positive word-of-mouth communication of hospitality customers (Jun &
Baloglu, 2003; Kim & Cha, 2002; Oh, 1999). Three items were used on 5-point likelihood scale anchored with “1-very unlikely/5-very likely.” The items, for example, were “I will recommend my most frequently patronized restaurant to others” and “I will share my positive experiences in my most frequently patronized restaurant with others.”

Willingness to pay more refers to the degree to which customers are willing to pay certain prices for the service of a company. Willingness to pay more was measured with the items developed by Zeithaml et al. (1996) and Baker and Compton (2000). The 4 items were anchored with “1-very unlikely/5-very likely.” Two of the items, for example, were “I will continue to dine in my most frequently patronized restaurant even if there may be some price increases” and “I am likely to pay more for the benefits I get from my most frequently patronized restaurant.”

Competitive resistance refers to the customer’s tendency not to shop elsewhere if the price is lower or if the competitors provide attractive offers. Measures of competitive resistance were developed based on the items used by Reynolds and Arnold (2000). Three items were measured on a 5-point scale and anchored with “1-very unlikely/5-very likely.” The measures appeared as follows: “I am likely to disregard marketing offers of other restaurants in favor of my most frequently patronized restaurant” and “Reduced prices at other restaurants will not stop me from choosing my most frequently patronized restaurant.”

Pretest

The study involved development of a new measurement instrument. Thus, pretests were deemed important to assess validity of the questions and concepts, readability, usability of the format/layout of the planned Web-based survey, and amount of time needed to
complete the survey online. Two pretests were conducted for this purpose. The first was
done with a convenience sample of five graduate students in the Foodservice and Lodging
Management program at Iowa State University (ISU) and five ISU faculty members with
various backgrounds. The researcher personally distributed the instrument to the graduate
students and the faculty members, asking for their comments and suggestions on the wording
of the questions.

The second pretest was conducted with a sample of 230 faculty and staff randomly
selected from the directory of the College of Family and Customer Sciences at ISU. The
respondents received a link to the instrument via e-mail with instructions to complete the
survey and provide comments related to the instrument. Thirty eight questionnaires (16.5%)
were returned. The respondents’ comments from the two pretests called for revisions to the
instrument in terms of wording, clarity, layout, and readability of the items. For example,
“my favorite restaurant” was changed to “my most frequently patronized restaurant” because
the respondents commented on the difference they perceived to exist between the two types
of restaurants, i.e., those that they liked vs. those they frequented and those with they
maintained relationships. Most of the comments were related to the clarity of wording in
questions on personal identification with the restaurant. The data collection method and the
instrument were approved by the ISU Institutional Review Board (IRB) (see Appendix B).

Sample and data collection

Data were collected from ISU faculty and staff members. An invitation to participate
in the study was sent via e-mail to 5,514 faculty and staff members. The faculty and staff
were considered adequate for purposes of this theory-testing study (Greenberg, Gordon,
Slade, & Schmitt, 1987). The homogeneous sample is acceptable because it reduces the likelihood of extraneous variables adversely affecting the study results (Reynolds, Simintiras, & Diamantopoulos, 2002) and because such samples “typically provide a stronger test of the theory” (Calder, Philips, & Tybout, 1981, p. 200). Participants were assured of confidentiality of their responses. They were also offered to enter their names in a drawing for a gift certificate redeemable at Target as incentive for participation in the study. The respondents were not aware of the nominal value of the incentive, which was $50.

Data were collected during the second week in June of 2005. The survey link was sent to the current ISU faculty and staff via e-mail. The survey participants provided their answers on the Web site electronically. Those answers were automatically sorted in a spreadsheet, which could eliminate data entry errors. This method of data collection provided several advantages, such as a shorter timeframe to collect data and lower costs of conducting the survey (Medin, Roy, & Ann, 1999).

A total of 1,255 responses were collected. Two respondents submitted their answers twice, and the duplicate submissions were eliminated from the analysis. No reminders were sent to the respondents. Thus, a total of 1,253 (22.7%) usable responses were further reduced to 1,045 cases after using a list-wise deletion of missing data cases. Boomsma (1982) suggested that a sample size of minimum 100 cases be used for accurate results in confirmatory factor analysis and 200 and more cases for more reliable results. Bentler (1990) recommended at least 5 cases per parameter in determining an appropriate sample size, while Kline (1998) recommended a sample size of 200 for obtaining reliable results. The sample size analyzed in this study, therefore, seemed sufficient to achieve reliable results.
Data analysis

Data analysis was conducted in two phases: preliminary analyses and structural equation modeling. Missing data, normality, reliability, and sampling adequacy were checked during the preliminary analysis. This analysis was performed with SPSS 12.0 for Windows. The Linear Structural Relationship (LISREL) 8.5 program (Jöreskog & Sörbom, 2001) was used for structural equation modeling (SEM) and hypothesis testing in the second phase of the data analysis. The variance-covariance matrix of the data was analyzed via a maximum likelihood estimator.

Sampling adequacy

The Kaiser-Mayer-Olkin test and Bartlett’s Test of Sphericity were used to determine sampling adequacy. The former tests the adequacy of the distribution of values for factor analysis. George and Mallery (2001) suggested that a Kaiser-Mayer-Olkin measure higher than .9 be considered excellent, or higher .8 good, and higher .7 acceptable for factor analysis purposes. Factor analysis can be meaningless with an identity matrix. Therefore, Bartlett’s Test of Sphericity was conducted to inspect whether the correlation matrix was non-singular so that an inverse of the matrix for parameter computation exists. When chi-square values associated with this test for all constructs are significant (p < .01), the data do not produce an identity matrix (George & Mallery, 2001; Stevenson, 1992).

Normality

SEM assumes normally distributed data. Kurtosis and skewness are problems associated with violations of normality. Kurtosis is a measure of whether the data are peaked
or flat in comparison to a normal distribution. Skewness refers to the degree to which a
distribution of values is symmetric around the mean. George and Malley (2001) suggested
that values of kurtosis and skewness between ± 1.0 be considered excellent and those
between ± 2.0 acceptable.

**Scale reliability**

Cronbach’s alpha (α) was computed to assess scale reliabilities of all model
constructs included in the instrument. Cronbach’s α is a widely adopted method for assessing
reliability (Churchill, 1979; Pedhazur & Schmelkin, 1991). Cronbach’s α > .70 is considered
acceptable (Kline, 1998; Nunnally, 1978).

**Structural equation modeling**

Structural equation modeling (SEM) is the statistical modeling technique that
combines factor analysis and path analysis. SEM allows testing of the structure of the
measurement model. Relationships between latent variables are then examined based on the
accepted measurement model. Jöreskog and Sörbom (2001) recommend using a covariance
matrix as input for SEM.

**Assessment of the measurement model**

The first stage in SEM is to assess the measurement model (Anderson & Gerbing,
1988; Jöreskog & Sörbom, 1993). The measurement model was evaluated in two stages.
First, the significance of factor loadings and error variances was checked. Second, construct
reliability and validity were tested. Construct validity consisted of two elements: convergent
and discriminant validity (Pedhazur & Schmelkin, 1991; Kline, 1998). Cronbach's alphas for individual constructs were computed to evaluate reliability.

The proposed measurement model was examined by conducting confirmatory factor analysis. The model consisted of nine latent constructs with 34 indicators. Four of the latent constructs were exogenous variables, which were sense of belonging (SBELONG), perceived control (CONTROL), customer participation (PARTIC), and customer-company identification (IDENTIF), and five of the variables were endogenous variables, namely, PO (PSYCOWN), word-of-mouth (WOMOUTH), competitive resistance (COMPRES), willingness to pay more (PAYMORE), and relationship intention (RELINT) in the model. See Appendix A1 for more detailed information on the content of each construct.

**Assessment of the structural model**

Assessment of the structural model fit involved a number of steps. First, the overall model fit indices were examined. Second, the $R^2$ for each model construct was checked. Third, the signs of the path coefficients were investigated. The signs indicated directions of the hypothesized relations between the variables, all positive in the proposed model. Finally, significance of each path coefficient was examined toward hypothesis tests.

Overall, model fit refers to the extent to which a hypothesized model is consistent with the empirical data. The closer the implied covariance matrix is to the sample covariance matrix, the better is the fit of the model. A number of fit indices have been developed to estimate the goodness of this fit in different ways. The SEM literature recommends the following set of fit indices to be used: chi-square ($\chi^2$), goodness of fit index (GFI), adjusted goodness of fit index (AGFI), root mean square error of approximation (RMSEA), Bentler-
Bonnet normed fit index (NFI), non-normed fit index (NNFI), and comparative fit index (CFI). Table 3.1 summarizes the suggested cut-off points for a good model fit that were followed in this study. The table contains references for the particular fit index.

Table 3.1

*Cut-off points for overall model fit assessment*

<table>
<thead>
<tr>
<th>Fit measure</th>
<th>Suggested cut off point</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\chi^2$ (df)</td>
<td>$p &gt; 0.05$</td>
<td>Bentler (1995)</td>
</tr>
<tr>
<td>RMSEA</td>
<td>$\leq 0.05$</td>
<td>Steiger &amp; Lind (1980), Browne &amp; Cudeck (1993)</td>
</tr>
<tr>
<td>CFI</td>
<td>$\geq 0.90$</td>
<td>Rigdon (1996), Byrne (1998)</td>
</tr>
<tr>
<td>NFI</td>
<td>$\geq 0.90$</td>
<td>Bentler &amp; Bonnet (1980)</td>
</tr>
<tr>
<td>NNFI</td>
<td>$\geq 0.95$</td>
<td>Hu &amp; Bentler (1999)</td>
</tr>
<tr>
<td>GFI</td>
<td>$\geq 0.90$</td>
<td>Hu &amp; Bentler (1995)</td>
</tr>
<tr>
<td>AGFI</td>
<td>$\geq 0.90$</td>
<td>Jöreskog &amp; Sörbom (1993)</td>
</tr>
</tbody>
</table>
CHAPTER IV. RESULTS AND DISCUSSION

This chapter presents descriptive information about the respondents. The KMO and BTS sampling adequacy tests are reported and discussed. Next, construct reliability and validity test results are evaluated. Finally, the results of confirmatory factor analysis and hypothesis tests are presented and discussed.

Demographic description of the sample

The sample represented faculty and staff of individuals from Iowa State University. Table 4.1 presents the respondents' characteristics. About 57% of the respondents were female. The annual household income ranged from $30,000-$100,000 for the majority (approximately 66%). A significant number of the respondents declined to answer this question (approximately 11%). The level of education varied among the respondents, but most of them had a college or post-graduate degree (30.1% and 46.4%, respectively). The average age was 44.8 and majority of respondents were in their 40s and 50s.

Table 4.1.

Characteristics of the sample (N=1,253)

<table>
<thead>
<tr>
<th>Category</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>717</td>
<td>57.2</td>
</tr>
<tr>
<td>Male</td>
<td>450</td>
<td>35.9</td>
</tr>
<tr>
<td>Unidentified</td>
<td>86</td>
<td>0.07</td>
</tr>
<tr>
<td><strong>Household income</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under $30,000</td>
<td>48</td>
<td>3.8</td>
</tr>
<tr>
<td>$30,001 - $60,000</td>
<td>382</td>
<td>30.5</td>
</tr>
<tr>
<td>$60,001 - $100,000</td>
<td>444</td>
<td>35.4</td>
</tr>
</tbody>
</table>
Table 4.1. Characteristics of the sample (N=1,253) (continued)

<table>
<thead>
<tr>
<th>Category</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>over $100,000</td>
<td>235</td>
<td>18.8</td>
</tr>
<tr>
<td>Unidentified</td>
<td>144</td>
<td>11.5</td>
</tr>
</tbody>
</table>

**Education level**

<table>
<thead>
<tr>
<th>Category</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than high school</td>
<td>1</td>
<td>.1</td>
</tr>
<tr>
<td>High school graduate</td>
<td>31</td>
<td>2.5</td>
</tr>
<tr>
<td>Some college including vocational schools</td>
<td>184</td>
<td>14.7</td>
</tr>
<tr>
<td>College graduate</td>
<td>377</td>
<td>30.1</td>
</tr>
<tr>
<td>Post graduate (Master’s or Doctorate)</td>
<td>581</td>
<td>46.4</td>
</tr>
</tbody>
</table>

**Marital status**

<table>
<thead>
<tr>
<th>Category</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Married</td>
<td>899</td>
<td>71.7</td>
</tr>
<tr>
<td>Not married</td>
<td>277</td>
<td>22.1</td>
</tr>
<tr>
<td>Unidentified</td>
<td>77</td>
<td>6.2</td>
</tr>
</tbody>
</table>

**Age (mean=44.8; mode=52; range=17-74)**

<table>
<thead>
<tr>
<th>Age</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>17-30</td>
<td>149</td>
<td>12.8</td>
</tr>
<tr>
<td>31-40</td>
<td>260</td>
<td>22.2</td>
</tr>
<tr>
<td>41-50</td>
<td>357</td>
<td>30.6</td>
</tr>
<tr>
<td>51-60</td>
<td>337</td>
<td>28.9</td>
</tr>
<tr>
<td>61-74</td>
<td>65</td>
<td>.06</td>
</tr>
</tbody>
</table>

**Monthly dining out frequency in the most frequently patronized restaurant**

<table>
<thead>
<tr>
<th>Monthly dining out frequency</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>45.2</td>
<td></td>
</tr>
</tbody>
</table>

**Monthly share of purchase ratio in the most frequently patronized restaurant**

| Percentage | 57.9 |

**Length of patronage**

(For how long have you been patronizing...)

<table>
<thead>
<tr>
<th>Length of patronage</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 3 months</td>
<td>19</td>
<td>1.5</td>
</tr>
<tr>
<td>4-6 months</td>
<td>30</td>
<td>3.9</td>
</tr>
<tr>
<td>7-11 months</td>
<td>57</td>
<td>4.5</td>
</tr>
<tr>
<td>1-3 years</td>
<td>424</td>
<td>33.8</td>
</tr>
<tr>
<td>4-5 years</td>
<td>168</td>
<td>13.4</td>
</tr>
<tr>
<td>More than 5 years</td>
<td>483</td>
<td>38.5</td>
</tr>
</tbody>
</table>

\(^a\) Percentage may not total 100% because of missing values.
The respondents reported that they dined out in their most frequently patronized restaurant in approximately 45% of the eating out cases. This ratio was computed by dividing average scores of “How often do you eat out in your most frequently patronized restaurant per month” (3.72) by “How often do you eat out in any restaurants per month?” (8.22).

The share of purchases contributed to the most frequently patronized restaurant was approximately 58%. Share of purchases is a ratio of the amount of money spent (61.8) in the most frequently patronized restaurant to all restaurant dinner-related purchases per month (106.8).

**Preliminary analyses**

Preliminary analyses were conducted to determine sampling adequacy for conducting factor analysis and other tests. The value of the Kaiser-Mayer-Olkin test ranged from .5 for IDENTIF to .84 for PSYCOWN. All Kaiser-Mayer-Olkin values, except for IDENTIF, exceeded a recommended acceptable level of .7 (George & Mallery, 2001). These results indicated an acceptable level of sampling adequacy for conducting factor analysis with the data. Appendix C1 presents results of Kaiser-Mayer-Olkin tests.

BTS indicated significant chi-squares for all constructs (p < .01). This meant that the correlation matrix was not an identity matrix and was suitable for conducting factor analysis. Bartlett’s Test of Sphericity results are in Appendix C1.

Appendix C2 presents the results of kurtosis and skewness tests of the data. Kurtosis values for three items fell outside the recommended boundaries: (1 PARTIC, 1 RELINT, and 1 WOMOUTH). Twenty one items resulted in the slightly negative kurtosis. All items had skewness values within the recommended boundaries of ± 2.0. Lei and Lomax (2005) found
that data with such deviations from non-normality assumptions are appropriate for use in structural equation modeling.

The measurement model

Construct reliability

Cronbach’s alpha was computed to evaluate scale reliabilities of the variables in the measurement model. Cronbach’s alpha was above .7 for most constructs. IDENTIF was the only construct that showed an alpha level of .69. The alpha coefficients overall indicated high internal consistency for all constructs (Churchill, 1979). These results supported reliability of the constructs. Table 4.2 presents all 34 items and includes item mean, standard deviation, item-to-total correlations, and alpha values. The item means ranged from 2.33 for PSYCOWN4 to 4.54 for WOMOUTH1 for 5-point scale items.

Table 4.2

Descriptive statistics and scale reliability (N=1,045)

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>Item-to-total correlation</th>
<th>Cronbach α</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived control (CONTROL)</td>
<td></td>
<td></td>
<td></td>
<td>.80</td>
</tr>
<tr>
<td>CONTROL 1 (Influence over the quality of service in my most frequently patronized restaurant)</td>
<td>3.05</td>
<td>1.00</td>
<td>.54</td>
<td></td>
</tr>
<tr>
<td>CONTROL 2 (Feel in control over my dining experience)</td>
<td>3.43</td>
<td>.91</td>
<td>.56</td>
<td></td>
</tr>
<tr>
<td>CONTROL 3 (Cause the staff to give me a quality dining experience)</td>
<td>3.23</td>
<td>.94</td>
<td>.57</td>
<td></td>
</tr>
<tr>
<td>Customer participation (PARTIC)</td>
<td></td>
<td></td>
<td></td>
<td>.78</td>
</tr>
<tr>
<td>PARTIC 1 (I express my service preferences)</td>
<td>3.32</td>
<td>.97</td>
<td>.56</td>
<td></td>
</tr>
<tr>
<td>PARTIC 2 (I tend to be cooperative)</td>
<td>4.05</td>
<td>.64</td>
<td>.35</td>
<td></td>
</tr>
<tr>
<td>PARTIC 3 (I provide feedback on menu)</td>
<td>3.03</td>
<td>1.09</td>
<td>.62</td>
<td></td>
</tr>
<tr>
<td>PARTIC 4 (I facilitate the service staff)</td>
<td>3.39</td>
<td>.91</td>
<td>.60</td>
<td></td>
</tr>
<tr>
<td>PARTIC 5 (I provide feedback on quality)</td>
<td>2.85</td>
<td>1.00</td>
<td>.63</td>
<td></td>
</tr>
</tbody>
</table>
Table 4.2 *Descriptive statistics and scale reliability (continued)*

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>Item-to-total correlation</th>
<th>Cronbach α</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sense of belonging (SBELONG) *</td>
<td></td>
<td></td>
<td></td>
<td>.79</td>
</tr>
<tr>
<td>SBELONG 1 (I feel “at home”)</td>
<td>3.93</td>
<td>.84</td>
<td>.65</td>
<td></td>
</tr>
<tr>
<td>SBELONG 2 (I feel “attached”)</td>
<td>3.51</td>
<td>.92</td>
<td>.63</td>
<td></td>
</tr>
<tr>
<td>SBELONG 3 (I feel like a stranger)</td>
<td>4.10</td>
<td>.85</td>
<td>.61</td>
<td></td>
</tr>
<tr>
<td>SBELONG 4 (I feel I “belong”)</td>
<td>3.61</td>
<td>.85</td>
<td>.62</td>
<td></td>
</tr>
<tr>
<td>SBELONG 5 (“At home” more than in other restaurants)</td>
<td>3.68</td>
<td>.92</td>
<td>.39</td>
<td></td>
</tr>
<tr>
<td>Psychological ownership (PSYCOWN) *</td>
<td></td>
<td></td>
<td></td>
<td>.90</td>
</tr>
<tr>
<td>PSYCOWN 1 (I sense restaurant is “mine”)</td>
<td>2.50</td>
<td>.91</td>
<td>.86</td>
<td></td>
</tr>
<tr>
<td>PSYCOWN 2 (I feel “personal ownership”)</td>
<td>2.43</td>
<td>.90</td>
<td>.84</td>
<td></td>
</tr>
<tr>
<td>PSYCOWN 3 (I feel personally connected)</td>
<td>2.94</td>
<td>1.09</td>
<td>.69</td>
<td></td>
</tr>
<tr>
<td>PSYCOWN 4 (It is hard for me to think about this restaurant as “mine”) c</td>
<td>2.33</td>
<td>.94</td>
<td>.70</td>
<td></td>
</tr>
<tr>
<td>PSYCOWN 5 (Does not make me feel that it is “mine”) c</td>
<td>2.79</td>
<td>.93</td>
<td>.66</td>
<td></td>
</tr>
<tr>
<td>Customer identification (IDENTIF)</td>
<td></td>
<td></td>
<td></td>
<td>.69</td>
</tr>
<tr>
<td>IDENTIF 1 (Visual item) d</td>
<td>2.84</td>
<td>1.65</td>
<td>.53</td>
<td></td>
</tr>
<tr>
<td>IDENTIF 2 (Verbal item) e</td>
<td>4.08</td>
<td>1.36</td>
<td>.53</td>
<td></td>
</tr>
<tr>
<td>Relationship intention (RELINT) *</td>
<td></td>
<td></td>
<td></td>
<td>.82</td>
</tr>
<tr>
<td>RELINT 1 (I intend to continue dining)</td>
<td>4.20</td>
<td>.59</td>
<td>.67</td>
<td></td>
</tr>
<tr>
<td>RELINT 2 (Willing to be a “regular”)</td>
<td>3.81</td>
<td>.85</td>
<td>.66</td>
<td></td>
</tr>
<tr>
<td>RELINT 3 (Continue the relationship)</td>
<td>4.06</td>
<td>.67</td>
<td>.76</td>
<td></td>
</tr>
<tr>
<td>Word-of-mouth (WOMOUTH) *</td>
<td></td>
<td></td>
<td></td>
<td>.89</td>
</tr>
<tr>
<td>WOMOUTH 1 (I will recommend)</td>
<td>4.54</td>
<td>.75</td>
<td>.80</td>
<td></td>
</tr>
<tr>
<td>WOMOUTH 2 (I will share)</td>
<td>4.43</td>
<td>.75</td>
<td>.78</td>
<td></td>
</tr>
<tr>
<td>WOMOUTH 3 (I will refer others)</td>
<td>4.29</td>
<td>.89</td>
<td>.77</td>
<td></td>
</tr>
<tr>
<td>Willingness to pay more (PAYMORE) *</td>
<td></td>
<td></td>
<td></td>
<td>.86</td>
</tr>
<tr>
<td>PAYMORE 1 (I will continue to dine in ...even if there may be some price increases)</td>
<td>4.09</td>
<td>.86</td>
<td>.74</td>
<td></td>
</tr>
<tr>
<td>PAYMORE 2 (Price increases will not deter)</td>
<td>4.14</td>
<td>.84</td>
<td>.66</td>
<td></td>
</tr>
<tr>
<td>PAYMORE 3 (I am willing to pay more)</td>
<td>3.66</td>
<td>1.04</td>
<td>.78</td>
<td></td>
</tr>
<tr>
<td>PAYMORE 4 (Rather pay a higher price)</td>
<td>3.41</td>
<td>1.13</td>
<td>.66</td>
<td></td>
</tr>
<tr>
<td>Competitive resistance (COMPRES) *</td>
<td></td>
<td></td>
<td></td>
<td>.74</td>
</tr>
<tr>
<td>COMPRES 1 (I disregard marketing offers)</td>
<td>3.13</td>
<td>1.14</td>
<td>.61</td>
<td></td>
</tr>
<tr>
<td>COMPRES 2 (Prices at other restaurants)</td>
<td>3.44</td>
<td>1.11</td>
<td>.62</td>
<td></td>
</tr>
<tr>
<td>COMPRES 3 (I will dine in my restaurant even if there are attractive offers from its competitor(s))</td>
<td>3.42</td>
<td>1.09</td>
<td>.67</td>
<td></td>
</tr>
<tr>
<td>COMPRES 4 (I would rather dine at a different restaurant than choosing my...) c</td>
<td>2.87</td>
<td>1.19</td>
<td>.26</td>
<td></td>
</tr>
</tbody>
</table>
Confirmatory factor analysis

Confirmatory factor analysis (CFA) was performed with LISREL 8.5 to check construct validity of the measures. CFA resulted in a poor fit: $\chi^2 (491) = 6092.90, (p = .00)$, RMSEA = .10, CFI = .94, NFI = .93, NNFI = .93, GFI = .75, and AGFI = .69. All indicators loaded significantly ($p < .01$) on the corresponding latent constructs ($\lambda = .33$ to .98).

Following recommendations and procedures described by Byrne (1998), one item (PSYCOWN 3) was removed from the measurement model based on significantly large modification indices associated with that item. The modified CFA resulted in a good fit: $\chi^2 (459) = 1767.59, (p = .085)$, RMSEA = .052, CFI = .98, NFI = .97, NNFI = .97, GFI = .91, and AGFI = .89. All indicators loaded significantly ($p < .01$) on the corresponding latent constructs ($\lambda = .31$ to .95).

Construct validity

CFA allowed checking construct validity of the measures. Anderson and Gering (1988) and Fornell and Larker (1981) recommended using average variance extracted (AVE) values for examining validity. According to Anderson and Gering’s (1988) recommendations, AVE value greater than .50 is acceptable for evidence of convergent validity. Another indicator of convergent validity is high and significant factor loadings for all latent variables in the study. Fornell and Larker (1981) suggested that AVE values
exceeding the squared correlations between all pairs of constructs indicated discriminant validity. Table 4.3 presents AVE values, construct correlations, and squared correlations between constructs. All AVE values in Table 4.3 exceeded squared correlations between all construct pairs, except for the correlation between CONTROL and PARTIC and PAYMORE and COMPRES, suggesting generally evidence of discriminant validity. AVE values in the table exceeded the recommended cut-off value of .50, except for PARTIC, SBELONG, and COMPRES. However, taken together, these results appear to generally suggest convergent and discriminant validity (F. O. Lorenz, personal communication, March, 22, 2006; Hulland, 1999).

Table 4.3

*Construct correlations, average variance extracted (AVE), and squared correlations*

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. CONTROL</td>
<td>0.52</td>
<td>0.53</td>
<td>0.16</td>
<td>0.36</td>
<td>0.24</td>
<td>0.06</td>
<td>0.04</td>
<td>0.04</td>
<td>0.17</td>
</tr>
<tr>
<td>2. PARTIC</td>
<td>0.73</td>
<td>0.43</td>
<td>0.14</td>
<td>0.26</td>
<td>0.24</td>
<td>0.05</td>
<td>0.03</td>
<td>0.03</td>
<td>0.04</td>
</tr>
<tr>
<td>3. IDENTIF</td>
<td>0.40</td>
<td>0.38</td>
<td>0.53</td>
<td>0.34</td>
<td>0.27</td>
<td>0.05</td>
<td>0.03</td>
<td>0.03</td>
<td>0.04</td>
</tr>
<tr>
<td>4. SBELONG</td>
<td>0.60</td>
<td>0.51</td>
<td>0.57</td>
<td>0.47</td>
<td>0.34</td>
<td>0.06</td>
<td>0.04</td>
<td>0.04</td>
<td>0.04</td>
</tr>
<tr>
<td>5. PSY COWN</td>
<td>0.49</td>
<td>0.49</td>
<td>0.52</td>
<td>0.58</td>
<td>0.67</td>
<td>0.20</td>
<td>0.12</td>
<td>0.14</td>
<td>0.16</td>
</tr>
<tr>
<td>6. RELINT</td>
<td>0.22</td>
<td>0.23</td>
<td>0.23</td>
<td>0.24</td>
<td>0.45</td>
<td>0.64</td>
<td>0.29</td>
<td>0.30</td>
<td>0.25</td>
</tr>
<tr>
<td>7. WOMOUTH</td>
<td>0.17</td>
<td>0.16</td>
<td>0.17</td>
<td>0.17</td>
<td>0.34</td>
<td>0.54</td>
<td>0.74</td>
<td>0.37</td>
<td>0.17</td>
</tr>
<tr>
<td>8. PAYMORE</td>
<td>0.19</td>
<td>0.19</td>
<td>0.18</td>
<td>0.20</td>
<td>0.38</td>
<td>0.55</td>
<td>0.61</td>
<td>0.63</td>
<td>0.48</td>
</tr>
<tr>
<td>9. COMPRES</td>
<td>0.20</td>
<td>0.19</td>
<td>0.20</td>
<td>0.21</td>
<td>0.40</td>
<td>0.50</td>
<td>0.41</td>
<td>0.69</td>
<td>0.48</td>
</tr>
</tbody>
</table>

Note: The diagonal (bold and shaded) elements are the AVE (average variance extracted) for each construct. Entries above the diagonal are the squared correlations between all pairs of constructs; entries below the diagonal are correlations between all constructs.
The structural model

Testing the structural model (based on the modified CFA) presented in Figure 2.1 generally indicated support for the proposed hypotheses. The completely mediating model of causal relationships between the antecedents of PSYCOWN and its consequences provided a good fit for the data: $\chi^2 (475) = 2105.95$ (p = .00), RMSEA = .057, CFI = .97, NFI = .96, NNFI = .97, GFI = .89, and AGFI = .87. The squared multiple correlations for latent constructs ranged from .11 for WOMOUTH to .43 for PSYCOWN. The $R^2$s represent the percent of the construct’s variance accounted for by the predicting constructs.

Kline (1998) suggested comparing the hypothesized completely mediated models to their partially mediated counterparts to examine the role of the mediating variable. A nested model chi-square difference test was conducted to compare the proposed model to a partially mediated model depicted in Figure 4.1.

*Figure 4.1. Partially mediated model.*
The partially mediated model produced the following results: $\chi^2 (459) = 1767.59$ (p = .085), RMSEA = .052, CFI = .98, NFI = .97, NNFI = .97, GFI = .91, and AGFI = .89. The results of the chi-square tests suggested that the partial mediation model provides the best fit for the data: chi-square difference (16) = 338.36, p < .05. The results of model comparison are presented in Table 4.4.

Table 4.4

Results of model comparison

<table>
<thead>
<tr>
<th>Model</th>
<th>$\chi^2$</th>
<th>df</th>
<th>CFI</th>
<th>PNFI</th>
<th>$\chi^2$ diff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete mediation</td>
<td>2105.95</td>
<td>475</td>
<td>.97</td>
<td>.87</td>
<td>338.36*</td>
</tr>
<tr>
<td>Partial mediation</td>
<td>1767.59</td>
<td>459</td>
<td>.98</td>
<td>.84</td>
<td></td>
</tr>
</tbody>
</table>

* p < .05

Morgan and Hunt (1994) examined different criteria when comparing nested models, such as overall model fit based on CFI, parsimony as reflected in parsimonious normed fit index (PNFI), and percentage of hypothesized significant paths. This practice has been adopted by other researchers and is commonly used in the structural equation modeling research (Yen & Gwinner, 2003). The criteria shown in Table 4.4 suggest little difference between the models as measured by CFI, with CFI measure slightly higher for partially mediated model (.98) than for the completely mediated model (.97). As the difference between PNFI measures suggests, the higher PNFI (.87) for the proposed completely mediated model in contrast to the lower PNFI (.84) for the partially mediated model indicates a parsimony difference in favor of the hypothesized completely mediated model.

Furthermore, in the case of the completely mediated model, with 8 hypotheses tested, only one hypothesis was rejected, resulting in support for 87.5% of the proposed relationships.
between the PSYCOWN and its antecedents and consequences. In contrast, despite the better fit of the partially mediated model (Figure 4.1), only 14 of 24 direct paths were significant, which was only 58% of the direct paths that could have been hypothesized in the partially mediated model. The results suggest that while both the completely mediated model and partially mediated model show good fit for the data as evidenced by RMSEA, CFI, NFI, and other indicators, parsimony favors the originally proposed completely mediating model.

**Hypothesis testing**

All hypothesis tests were conducted based on model in Figure 2.1 where PSYCOWN completely mediates the relationships between the antecedents and the consequences. All relationships between the latent constructs were found to be significant and positive in the predicted direction, except for the relationship between CONTROL and PSYCOWN. All path coefficients ranged from .19 (PARTIC → PSYCOWN) to .45 (PSYCOWN → RELINT) and were significant (p < .01). Table 4.5 presents the results of hypotheses testing.

Table 4.5

**Hypothesis test results.**

<table>
<thead>
<tr>
<th>Paths</th>
<th>Standardized Path Coefficient</th>
<th>t-value</th>
<th>Standard error</th>
<th>Hypothesis Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONTROL → PSYCOWN (H1)</td>
<td>.08</td>
<td>1.40</td>
<td>.06</td>
<td>No</td>
</tr>
<tr>
<td>PARTIC → PSYCOWN (H2)</td>
<td>.19</td>
<td>3.61</td>
<td>.07</td>
<td>Yes</td>
</tr>
<tr>
<td>IDENTIF → PSYCOWN (H3)</td>
<td>.25</td>
<td>5.69</td>
<td>.03</td>
<td>Yes</td>
</tr>
<tr>
<td>SBELONG → PSYCOWN (H4)</td>
<td>.30</td>
<td>6.52</td>
<td>.02</td>
<td>Yes</td>
</tr>
<tr>
<td>PSYCOWN → RELINT (H5)</td>
<td>.45</td>
<td>13.40</td>
<td>.03</td>
<td>Yes</td>
</tr>
<tr>
<td>PSYCOWN → WOMOUTH (H6)</td>
<td>.34</td>
<td>10.31</td>
<td>.03</td>
<td>Yes</td>
</tr>
<tr>
<td>PSYCOWN → PAYMORE (H7)</td>
<td>.38</td>
<td>11.55</td>
<td>.03</td>
<td>Yes</td>
</tr>
<tr>
<td>PSYCOWN → COMPRES (H8)</td>
<td>.40</td>
<td>11.42</td>
<td>.02</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Hypotheses 1 through 4 predicted the relationship between SBELONG, CONTROL, PARTIC, IDENTIF, and PSYCOWN. Hypothesis 1 proposed a relationship between CONTROL and PSYCOWN, which turned out to be insignificant, although in the predicted positive direction: ($\beta = .08, p < .01$). Consistent with Hypothesis 2, the relationship between PARTIC and PSYCOWN was supported: ($\beta = .19, p < .01$). Hypothesis 3 predicted a positive relationship between IDENTIF and PSYCOWN. This effect was supported as hypothesized ($\beta = .25, p < .01$). SBELONG was hypothesized to have a direct effect on PSYCOWN in Hypothesis 4, which was also supported ($\beta = .30, p < .01$).

Hypotheses 5 through 8 proposed relationships between PSYCOWN and the consequences. Hypothesis 5 predicted the effects of PSYCOWN on RELINT, and it was supported ($\beta = .45, p < .01$). Hypothesis 6 proposed a positive relationship between PSYCOWN and WOMOUTH, which was supported ($\beta = .34, p < .01$). The association between PSYCOWN and PAYMORE was presented by Hypothesis 7 and it was also supported ($\beta = .38, p < .01$). Finally, Hypothesis 8 predicted a positive relationship between PSYCOWN and COMPRES, and this hypothesis was supported ($\beta = .40, p < .01$). The results of hypotheses tests for the partially mediated model are presented in Appendix E, which contains path coefficients, $t$-values, and standard errors based on the partially mediated model.


Discussion

Developing long-term relationships with their customers appears to be an important strategy for hospitality companies (Bowen & Shoemaker, 2003; Oh, 2002). This study attempted to examine the factors that affect the development of such relationships beyond those discussed in the traditional RM literature (e.g., Bowen & Shoemaker, 1998; Morgan & Hunt, 1994). The study tested a conceptual model of PO to better explain the role that feelings of “mineness” play in restaurant customer behavior. The model tested the mediating role of PO in the process of developing company-customer relationship.

The results indicated a potential for the PO theory’s application in and contribution to customer behavior research. Results of the study supported in general the hypothesized structure of antecedents for PO. Customer participation, sense of belonging, and customer identification with a restaurant appeared to contribute to the formation of PO in accordance with the theory. The results supported earlier suggestions that PO can emerge in an organizational context “much as it does in other realms of the human condition” (Pierce, O’Driscoll, & Coghlan, 2004, p. 513).

An additional interesting and unexpected finding of the study was the lack of significant path from perceived control to PO. The results are unexpected because the bivariate correlation between perceived control and PO appeared to be relatively large (.49) and positive (see Appendix F). This finding is also inconsistent with earlier results obtained by Pierce et al. (2004), who showed a direct and positive relationship between perceived control and PO toward a firm in the context of organizational behavior. Therefore, the insignificant relationship between these constructs requires special attention and explanation. It is possible that the insignificant relationship between the variables is due to model
misspecification (Farris, Parry, & Ailawadi, 1992). That is, the model is missing another key variable or variables. This explanation appears to be reasonable due to underdevelopment of PO theory and little empirical research to determine the effects of other relevant variables. For example, Pierce et al. (2003) discussed numerous other attitudes and behaviors associated with the formation of PO, such as sense of responsibility, security, culture, and age. They also suggested that a PO object should possess such qualities as attractiveness, accessibility, openness, and manipulability, which are restaurant environment and experience features not included in this study.

Another plausible explanation has to do with respondent’s perceived lack of control over their dining experiences in the geographical area where the study was conducted. Several respondents’ commented about a lack of variety in dining choices in the locale. Such limitation may adversely influence customers’ perceptions of being in control and, thus, affect the level of PO toward a restaurant.

The relationships between PO and its consequences appeared to be positive and significant. This indicates a positive influence of feelings of “mineness” toward a restaurant on customers’ behavior. Thus, results of the study suggested that restaurant companies may benefit from the direct and significant relationship between PO and its consequences such as relationship intention, word-of-mouth communication, willingness to pay more, and competitive resistance. People with higher levels of PO toward the restaurant are more likely to continue their relationship with the restaurant and patronize the establishment in the foreseeable future. These results are consistent with previous findings in organizational behavior literature, which suggested a positive relationship between PO and organizational commitment (Vandewalle, Van Dyne, & Kostova, 1995).
Furthermore, customers who feel PO may be more likely to resist offers from the restaurant’s competitors and pay premium prices for the food and services received at the restaurant. It also appears that PO plays a role in customers’ decisions as the customers are likely to share their positive experiences with others about their dining experiences in the “restaurant of their ownership.” These positive consequences may contribute to the financial performance of the restaurant company. A similar positive effect of PO on organizational behavior in the related literature has been reported by Van Dyne and Pierce (2004). They found that PO was positively related to organizational citizenship (i.e., discretionary behavior beyond one’s formal job expectations that promotes effective functioning and well-being of the organization) (Organ, 1988). The supported the completely supported mediated model would also imply that participation, customer-company identification, and sense of belonging enhance PO, leading to more word-of-mouth communications, higher degree of relationship intention and willingness to pay more, and higher resilience to competitors’ offers for this sample.
CHAPTER V. SUMMARY AND CONCLUSION

Summary and conclusion

The goal of this study was to conceptualize PO and examine its role in restaurant customer behavioral intentions. The study did so based on PO theory exposed by Pierce et al. (2003) who laid the foundation for explaining the relationships between PO and its antecedents and behavioral consequences examined in this study. This study also attempted to investigate the effects of customer perceived control, customer participation, company-customer identification, and sense of belonging on word-of-mouth, relationship intention, willingness to pay more, and competitive resistance, through PO. A conceptual model was developed and tested to examine the proposed relationships.

The fit of the measurement model indicated a good fit after an item from the PO factor was dropped from the analysis. The structural model showed an acceptable fit to the data. Except for the path between perceived control and PO, all other path coefficients hypothesized were significant (p < .01) and positive. The results of tests also indicated mediating effects of PO. PO seems to mediate customers' feelings of identification with the company and sense of belonging with behavioral outcomes such as relationship intention, willingness to pay more, willingness to spread good messages about the restaurant, and resistance to competitive offers. Similar conclusions exist for the relationship between customers' participation and the four behavioral outcomes.

A review of relationships among the constructs provided more insight into their nature. The results showed that sense of belonging appeared to have the largest effect on PO
among the four antecedents of PO. PO appeared to more strongly affect the intention to continue the relationship with the restaurant than the other three consequences.

The results of this study provide evidence as to the role PO plays in understanding important customer behavioral outcomes. In addition, the results supported the potential of the PO framework in capturing particular affective and cognitive elements in customer-company relationships previously ignored in the hospitality marketing research. The proposed framework can also be used to identify strategies and tactics hospitality marketers may use to build stronger relationships with their customers.

Findings showed the relevance and importance of PO in the restaurant industry and a need for more research on in-depth examinations of its conceptualizations and operationalization. The model exhibited potential for future exploration and modification. Thus, future studies should focus on theoretical enrichment and empirical testing of the PO theory model.

Implications

A number of theoretical and managerial implications emerged from the findings of this study. Theoretical implications relate to a potential for the proposed conceptual framework of PO and its consequences. Managerial implications include recommendations for restaurant firms and their managers on practical applications of the framework.

Theoretical implications

While a number of authors (e.g., Fletcher, 1993; Heskett, 2002; Ladd, 1967) have emphasized the importance of feelings of ownership, empirical research on their behavioral
implications has been limited. The current research is one of the first attempts to address these issues. This study introduced the concept of PO and examined its proposed antecedents based on PO theory that has been recently developed by Pierce et al. (2001; 2003). Findings of this study offer an understanding into the formation of PO and its effect on customer behavioral intentions.

The proposed theoretical framework suggests that restaurant customers may experience feelings of PO toward their frequently patronized restaurants. Customers may consider their most frequently patronized restaurants to be “theirs.” The examination of reasons for developing such feelings toward a restaurant found that customer participation, company-customer identification, and sense of belonging were important factors in the formation of PO. Thus, greater customer involvement in co-creation of a dining experience through participation as well as feelings of belonging and identification with the restaurant (i.e., this is “my place”) provide a basis for PO formation.

Identifying PO as a mediating variable and determining its effect on consequences such as relationship intentions and word-of-mouth is critical to the research on consumer behavior and RM theory. Findings suggest that when customers’ sense of belonging and identification with the company’s values increase resulting in stronger feelings of “mineness,” those feelings lead to specific behavioral outcomes such as competitive resistance in the restaurant industry.

This study attempted to differentiate and measure four behavioral intentions commonly cited in consumer behavior literature: relationship intention, word-of-mouth communication, willingness to pay more, and competitive resistance. The significant relationships between PO and the consequences are consistent with previous attitude-
behavior research in psychology (Ajzen & Fishbein, 1970) on how attitudinal factors psychologically connect customers to service provider. This study, thus, adds to the amounting evidence on such relationships in the context of hospitality research.

The findings of this study support the proposed theoretical framework linking PO of a restaurant to patronage to that restaurant. The contribution of PO to explaining relationship intentions, willingness to pay more, word-of-mouth, and competitive resistance appears to be significant and relevant for future theory development. This study introduced a new variable into the RM paradigm, one that might help alleviate previous shortcomings of RM theory attempts to predict customer behavior (Bagozzi, 1995). Thus far, the RM paradigm has been dominated by models with trust and commitment as key mediating variables (Bowen & Shoemaker, 2003; Morgan & Hunt, 1994; Rao & Perry, 2002). Rao and Perry (2002), in their comprehensive review of RM research, concluded that social bonds (i.e., investments of time and energy that create positive interpersonal relationships, p. 600) are crucial for developing long-term profitable exchanges (Harker, 1999). They listed a number of most commonly cited social bonds in RM research besides trust and commitment. Their account included constructs such as interdependence, reciprocity, cooperation, power, communication, satisfaction, shared values, and equity. However, despite the recognized importance of feelings of “mineness” or PO in various areas of human activity, the RM literature has failed to embrace and examine the significance of this phenomenon in consumer relationships. The findings of this study showed the relevance of the PO as another type of social bond for future RM theory development.

This framework could enrich the theoretical understanding of customer relationships and explicate the relationship between PO and other concepts such as commitment, trust, and
loyalty, as well as other constructs commonly discussed in the RM literature. Building the bridge between the traditional conceptualizations of customer relationships with companies, as well as searching for alternative explanations for those relationships, is an important contribution to marketing theory in general and hospitality marketing theory in particular.

**Managerial implications**

Customer relationship marketing has been gaining importance among hospitality managers and firms (Bowen & Shoemaker, 2003). Stronger customer relationships have also been cited to improve financial performance of hospitality firms (Bowen & Chen, 2001). Factors affecting the formation of such relationships are of particular interest to hospitality practitioners and researchers (Bowen & Chen, 2001; Dube & Renaghan, 1999; Matilla, 2001). This study provides an insight into understanding such factors.

Results of the study indicated a significant effect of PO on behavioral intentions. Given the mediation role of PO, restaurant firms might consider emphasizing these special feelings in their messages to the customers. Thus, restaurant firms are advised to invest in marketing and operational strategies and tactics to evoke feelings of PO. Restaurant managers need to recognize that people tend to continue relationships with the objects of their (psychological) ownership. So, restaurant companies should attempt to identify such psychologically committed customers and treat them in a way that strengthens their beliefs that they belong to the group of preferred customers.

Customers often take pride in patronizing a particular restaurant, which they often call “my place” or “our place.” These feelings could be enhanced or evoked through carefully targeted advertising messages. In fact, advertising messages from the restaurant
industry aired on the national TV in the United States in the fall of 2005 appeared to reflect the notion of PO. For example, in Wendy’s advertising message the characters declared or referred to a Wendy’s burger as “My burger.” Similarly, in other industries, advertising agencies appear to have adopted the trend (e.g., America On-line’s commercial declares “You belong in AOL!”), thus directly appealing to the customers’ sense of belonging to their Internet service provider and to a group of other customers who feel as if they have a sense of “place” at AOL.

Customer devotion and experience of PO stems from the customers’ active participation/involvement in the dining experience. Customers often provide feedback to the restaurant staff and managers/owners with recommendations on the various aspects of operation. Managers should take these concerns seriously and accommodate customers’ desires and needs – indicating customers’ importance and immediate relevance for the success of their business. Such an attempt to integrate customer participation should be clearly communicated to the customers. For example, restaurant management may want to contact customers who made specific recommendations about restaurant experience improvements to acknowledge the value of their participation and to report whether the company proceeded with the recommendations. In fact, managers should encourage even stronger expressions of customer participation by offering gift certificates or other valuable tokens of appreciation for customers’ participation. Few customers would probably develop strong feelings of loyalty toward the restaurant if management pays little attention to the needs of the customers.

Furthermore, customer-company identification and value congruence appeared to be important in the formation of PO. Restaurant managers could develop a set of values
represented by the restaurant (e.g., environmentally friendly) or create a restaurant identity by learning about values of their customers. Bowen and Chen (2001) recommend conducting focus group studies in loyalty research. Restaurant managers and owners may apply similar marketing research methods, as they often know their best and most loyal customers who would provide valuable insight on what perceived values are associated with the restaurant. Enticing such customers to participate in a panel or a focus group may provide more insight into the customers’ and the restaurant’s identities. This restaurant identity should then clearly be communicated to the customers and the general public.

Restaurants provide meals away from home. The concept of home or “place” is central for human beings (Porteous, 1976). Humans tend to alter the surrounding environment to feel more at home (e.g., rearrange chairs around the table at the restaurant). Feeling at home is, in fact, a major component of the hospitality culture (“please make yourself feel at home”). Therefore, based on the significant effect sense of belonging had on PO, restaurant managers should consider tactics to evoke such feelings of belonging. For example, The Court Avenue Restaurant and Brewing (Des Moines, Iowa) company’s fan club members enjoy beer in mugs that have their names engraved on the bottom. They proudly display those “bottoms” to other members and regular customers during their visits. The mugs are displayed on the shelves and hooks above the bar. The customers leave their mugs in the restaurant and come back to enjoy beer in their own mugs again. Restaurant managers, owners, and designers may also develop restaurant concepts inspired by customer sense of belonging or feeling “at home.” For example, elements of décor, lighting, colors, or furniture may be designed to satisfy customers’ needs for belonging. Pierce et al. (2003) suggested that the object of PO should be attractive, accessible, open or hospitable, and
manipulable. Thus, restaurant designers and managers may provide the customers with the ability to manipulate lighting at their table or volume of the TV (e.g., Smokey Bones restaurants currently offer TV (volume) control units that are placed on the tables). These tactics may allow managers to evoke or strengthen sense of belonging to the restaurant experience.

**Contribution of the study**

This study makes unique contributions to our understanding of customer relationship marketing in the restaurant industry. It does so by testing PO theory and a mediating role of PO with empirical restaurant data. The study demonstrated empirical validity of PO theory and its proposed framework. First, this study operationalized the concept of PO and achieved generally high empirical reliability and validity of the scale. The framework and measurement scale can be used in future research on the same topic.

Second, determining antecedents of PO in the context of restaurant dining helped explain how PO was formed. Understanding factors affecting PO is important in light of the evidence supporting a significant relationship between PO and behavioral intentions. Investigation of such effects helps managers learn how to evoke feelings of PO and stimulate customer behavior.

Third, PO theory may be considered a component of a much larger and more general RM theory (Grönroos, 1995). The theory attempts to explicate the aspects of affective and cognitive elements of customer-company relationships. PO theory does this by examining the basic motives of human behavior, such as sense of belonging and the need for identification.
Finally, the findings of the study suggest possible modifications for restaurant dining experiences to evoke feelings of PO among customers. The formative mechanism of PO feelings suggests that restaurants can (1) modify elements of their physical and social environments to make customers feel “at home,” (2) develop a dining experience that engages customers and encourages their participation, (3) train the service staff to express the values and identity of the restaurant to customers to create a stronger association between the customers and the restaurant, and (4) induce customers to experience feelings of PO toward the restaurant.

Limitations and recommendations

The findings and implications of this study should be viewed in light of a number of limitations. First, the sample for the study represents university faculty and staff. Comments of the respondents indicated that despite frequent restaurant visits, many of those visits were business-related. Moreover, social pressures among the faculty and staff in a small geographic area could influence the choice of the restaurant.

Second, geographical limitations of the study (i.e., restaurants in the Central Iowa region) might have influenced the results of the research. Respondents’ comments, in fact, contained “complaints” about limited dining choices in the area. Future studies need to address these limitations by conducting studies in locations with diverse and multiple dining choices. Such limitations may adversely influence the respondents’ ability to develop feelings of PO toward a restaurant. For example, if a sushi restaurant for a respondent is “his/her kind of place” and is not available in the geographical area, development of PO toward a different restaurant may be impaired.
Finally, the research design of the study was cross-sectional. Results, therefore, represent “snapshots” of respondents’ present perceptions and feelings toward the subject of the study. Causal relationships among the constructs may be better examined in a longitudinal study. Cross-sectional data and the use of only one sample to test all models limit the ability to rule out alternative causal inferences (James, Mulaik, & Brett, 1982). Despite this limitation, the current cross-sectional study provided initial evidence for the relationships among the constructs.

This study was conducted based on a sample of the faculty and staff members of a university with limited dining choices in a single small region. Replicating the study in a different environment is needed to obtain more generalizable results. Thus, future research should consider a more diverse population with a greater number of available dining choices.

The measurement model exhibited an acceptable fit to the data. However, future research should focus on measurement item purification and refinement. This particularly refers to better conceptualization of PO and its distinction from other seemingly similar constructs such as customer loyalty and commitment. Qualitative methods like interviews or focus groups with restaurant customers about feelings of PO toward a restaurant may provide additional insight into the nature of the phenomenon. Moreover, future research needs to explore the relationship between the PO and other RM constructs such as trust, commitment, and customer loyalty.

Pierce et al. (2003) suggested that the object of PO possesses attributes such as attractiveness, accessibility, openness, and manipulability. Further exploration and development of such attributes for hospitality businesses or hospitality products could help hospitality managers evoke feelings of PO among their customers to gain a competitive edge.
For example, manipulability could refer to the greater ability of customers to customize or personalize menu items or the dining environment. What are the attributes that correspond to attractiveness, accessibility, openness, and manipulability suggested by Pierce et al. in the restaurant industry?

Finally, more questions need to be answered. Do customers differentiate between PO toward a particular restaurant property versus a restaurant brand? Many restaurant companies operate numerous units in different regions. Most of those units seem to be similar in their appearance and serve relatively standardized menu items to their customers. The customers may travel across regions and seek dining experience in the familiar restaurants/brands. Do they transfer their feelings of PO toward their local restaurant/brand or “place” to other restaurants of the same brand? The question is whether PO is likely to create a “corporate bonding instead of bonding with a frontline salesperson and consumer alone” (Sheth & Parvatiyar, 1995, p. 565).

Can the concept of PO be expanded and applied in other hospitality settings? Hotels are often called “homes away from home.” Future research needs to examine whether customers develop feelings of “mineness” toward (extended stay) hotels and similar hospitality facilities. What factors moderate the proposed relationships between PO antecedents and consequences? (What are situational or personal variables that affect, for example, the relationship between customer identification and PO? Do situational factors (e.g., visiting the restaurant with friends versus family members) influence the strength of the relationship between customer identification and PO?)

Women and men have different semantics associated with ownership. For example, women are more likely to associate ownership with emotional attachment, whereas men
appear to have a more utilitarian and instrumental approach toward their possessions (Dittmar, 1989). Hence, it is possible that women are more inclined to build stronger feelings of PO toward a restaurant than men. Thus, the effects of gender on PO formation need to be examined.

Would feelings of PO differ across various customer groups? Is the relationship between sense of belonging and PO different for the customers who dine out as a family with children versus those who dine alone or with a partner? How can technology affect the formation of PO in the restaurant industry? Recent technological advancements and expansion of the Internet allow hospitality managers to maintain contact with their customers through bulletin boards and e-mail. Communication of information that is relevant to the customers’ needs, such as potential menu item changes or modifications of the physical environment of the restaurant (i.e., décor or furniture) or special events and other similar managerial decisions may contribute to the development and reinforcement of feelings of “mineness” toward the restaurant. Overall, a more comprehensive theoretical framework needs to be developed based on the findings of this research.
REFERENCES


Dittmar, H. (1992). *Social psychology of material possessions: To have is to be*. New York: St. Martin’s Press.


APPENDIX A1. MEASUREMENT ITEMS, RESPONSE SCALES, AND SOURCES
### Appendix A1. Measurement items, response scales, and sources

<table>
<thead>
<tr>
<th>Measurement items</th>
<th>Response scales</th>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Perceived control</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CONTROL1</strong> I have some influence over the quality of the service provided to me by the service staff in my most frequently patronized restaurant.</td>
<td>1=Strongly disagree 3=Neither disagree/Nor agree 5=Strongly agree</td>
<td>Developed based on Narnasivayam (2004)</td>
</tr>
<tr>
<td><strong>CONTROL2</strong> I feel in control over my dining experience in my most frequently patronized restaurant.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CONTROL3</strong> I cause the staff to give me a quality dining experience in my most frequently patronized restaurant.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Customer participation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PARTIC1</strong> I express my service preferences to the wait staff in my most frequently patronized restaurant.</td>
<td>1=Strongly disagree 3=Neither disagree/Nor agree 5=Strongly agree</td>
<td>Developed based on Zeithaml and Bitner (1996) and Bitner et al. (1997)</td>
</tr>
<tr>
<td><strong>PARTIC2</strong> I tend to be cooperative with the service staff to make my dining experience more pleasant in my most frequently patronized restaurant.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PARTIC3</strong> I provide feedback to my most frequently patronized restaurant on menu options.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PARTIC4</strong> I tend to facilitate the service staff to serve me in a way to make my dining experience more pleasant in my most frequently patronized restaurant.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PARTIC5</strong> I provide feedback to my most frequently patronized restaurant on how to improve quality.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Customer identification</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>IDENTIF1</strong> Visual item (see Appendix A2)</td>
<td>1 = Not at all 7 = Very much</td>
<td>Adopted with modifications from Bergami, &amp; Bagozzi. (2000).</td>
</tr>
<tr>
<td><strong>IDENTIF2</strong> Please identify the degree to which your own values overlap with those of the restaurant.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Sense of belonging</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SBELONG1</strong> I feel “at home” in my most frequently patronized restaurant.</td>
<td>1=Strongly disagree 3=Neither disagree/Nor agree 5=Strongly agree</td>
<td>Adopted with modifications from Jones et al. (2000), Lalli (1992)</td>
</tr>
<tr>
<td><strong>SBELONG2</strong> I feel “attached” to my most frequently patronized restaurant.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SBELONG3</strong> I feel like a stranger in my most frequently patronized restaurant.*</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SBELONG4</strong> I feel I “belong” in my most frequently patronized restaurant.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SBELONG5</strong> I feel “at home” more in other restaurants than in my most frequently patronized restaurant.*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychological ownership</td>
<td>1=Strongly disagree 3=Neither disagree/Nor agree 5=Strongly agree</td>
<td>Adopted with modifications from Van Dyne and Pierce, 2004</td>
</tr>
<tr>
<td>-----------------------------------------------------------</td>
<td>-------------------------------------------------------------</td>
<td>-------------------------------------------------------</td>
</tr>
<tr>
<td>PSYCOWN1 I sense that my most frequently patronized</td>
<td></td>
<td></td>
</tr>
<tr>
<td>restaurant is “mine.”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PSYCOWN2 I feel “personal ownership” of my most</td>
<td></td>
<td></td>
</tr>
<tr>
<td>frequently patronized restaurant.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PSYCOWN3 I feel personally connected to my most</td>
<td></td>
<td></td>
</tr>
<tr>
<td>frequently patronized restaurant.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PSYCOWN4 It is hard for me to think about my most</td>
<td></td>
<td></td>
</tr>
<tr>
<td>frequently patronized restaurant as “mine.”*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PSYCOWN5 My most frequently patronized restaurant does</td>
<td></td>
<td></td>
</tr>
<tr>
<td>not make me feel that it is “mine.”*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relationship continuity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RELINT1 I intend to continue dining in my favorite</td>
<td>1=Strongly disagree 3=Neither disagree/Nor agree 5=Strongly agree</td>
<td>Developed based on Kumar et al., 2003</td>
</tr>
<tr>
<td>restaurant.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RELINT2 I am willing to be a “regular” customer to my</td>
<td></td>
<td></td>
</tr>
<tr>
<td>most frequently patronized restaurant in the future.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RELINT3 I intend to continue the relationship with my</td>
<td></td>
<td></td>
</tr>
<tr>
<td>most frequently patronized restaurant.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Word-of-mouth</td>
<td>1=Very unlikely 5=Very likely</td>
<td>Developed based on (Oh, 2002)</td>
</tr>
<tr>
<td>WOMOUTH1 I will recommend my most frequently patronized</td>
<td></td>
<td></td>
</tr>
<tr>
<td>restaurant to others.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WOMOUTH2 I will share my positive experiences in my</td>
<td></td>
<td></td>
</tr>
<tr>
<td>most frequently patronized restaurant with others.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WOMOUTH3 My most frequently patronized restaurant is the</td>
<td></td>
<td></td>
</tr>
<tr>
<td>one that I will refer others to for a good dining</td>
<td></td>
<td></td>
</tr>
<tr>
<td>experience.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Willingness to pay more</td>
<td>1=Very unlikely 5=Very likely</td>
<td>Developed based on (Fullerton, 2003) Foster &amp; Cadogan</td>
</tr>
<tr>
<td>PAYMORE1 I will continue to dine in my most frequently</td>
<td></td>
<td>(2000)</td>
</tr>
<tr>
<td>patronized restaurant even if there may be some price</td>
<td></td>
<td></td>
</tr>
<tr>
<td>increases.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PAYMORE2 Some price increases will not deter me from</td>
<td></td>
<td></td>
</tr>
<tr>
<td>choosing my most frequently patronized restaurant</td>
<td></td>
<td></td>
</tr>
<tr>
<td>again.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PAYMORE3 I am willing to pay more for the benefits I</td>
<td></td>
<td></td>
</tr>
<tr>
<td>get from my most frequently patronized restaurant.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PAYMORE4 I would rather pay a higher price charged by</td>
<td></td>
<td></td>
</tr>
<tr>
<td>my most frequently patronized restaurant than</td>
<td></td>
<td></td>
</tr>
<tr>
<td>patronizing other similar restaurant(s).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Competitive resistance</td>
<td>1=Very unlikely 5=Very likely</td>
<td>Newly developed</td>
</tr>
<tr>
<td>COMPRES1 I disregard marketing offers of other</td>
<td></td>
<td></td>
</tr>
<tr>
<td>restaurants in favor of my most frequently patronized</td>
<td></td>
<td></td>
</tr>
<tr>
<td>restaurant.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Reduced prices at other restaurants do not stop me from choosing my most frequently patronized restaurant.

I will dine in my most frequently patronized restaurant even if there are attractive offers from its competitor(s).

I would rather dine at a different restaurant than choosing my most frequently patronized restaurant again.*

* Items are reverse coded in data coding.
APPENDIX A2. SURVEY INSTRUMENT
Please think about your most frequently patronized restaurant and other restaurants in the local area (i.e., Ames, Des Moines, or other nearby cities) when answering questions.

What is your most frequently patronized restaurant for evening meals / dinners? [ ]

**Part One**

**TO WHAT EXTENT DO YOU AGREE OR DISAGREE WITH THE FOLLOWING STATEMENTS?**

In the following questions, please think of your most frequently patronized restaurant to be the one you listed above. Please provide your opinion by clicking on one of the buttons on the scale below that best corresponds to your opinion.

I feel "at home" in my most frequently patronized restaurant. [ ] [ ] [ ] [ ] [ ] [ ]

I feel "attached" to my most frequently patronized restaurant. [ ] [ ] [ ] [ ] [ ] [ ]

I feel like a stranger in my most frequently patronized restaurant. [ ] [ ] [ ] [ ] [ ] [ ]

I feel I "belong" in my most frequently patronized restaurant. [ ] [ ] [ ] [ ] [ ] [ ]

I feel "at home" more in other restaurants than in my most frequently patronized restaurant. [ ] [ ] [ ] [ ] [ ] [ ]
I have some influence over the quality of the service provided to me by the service staff in my most frequently patronized restaurant.

I feel in control over my dining experience in my most frequently patronized restaurant.

I motivate the staff to give me a quality dining experience in my most frequently patronized restaurant.

My most frequently patronized restaurant is capable of providing a dining experience I want.

My most frequently patronized restaurant has the necessary facilities to provide me with the dining experience I desire.

My most frequently patronized restaurant has service staff capable of providing a pleasant dining experience.

I express my service preferences to the service staff in my most frequently patronized restaurant.

I tend to be cooperative with the service staff to make my dining experience more pleasant in my most frequently patronized restaurant.

I provide feedback to my most frequently patronized restaurant's service staff or owner on menu options.

I tend to help the service staff to serve me in a way to make my dining experience more pleasant in my most frequently patronized restaurant.

I provide feedback to my most frequently patronized restaurant on how to improve quality.
**Instructions:** People sometimes develop a strong sense of attachment or "psychological ownership" for their favorite brands. Such feelings of "psychological ownership" are often expressed as in "THIS IS MY (OUR) BRAND!" The following questions deal with such a "sense of psychological ownership" that you may feel about the restaurant you named above as most frequently patronized. Please think about your feelings of "psychological ownership" toward the above named restaurant and indicate the degree to which you personally agree or disagree with the following statements.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Disagree</th>
<th>Neither Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I sense that my most frequently patronized restaurant is &quot;mine.&quot;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel &quot;personal ownership&quot; of my most frequently patronized restaurant.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel personally connected to my most frequently patronized restaurant.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>It is hard for me to think about my most frequently patronized restaurant as &quot;mine.&quot;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My most frequently patronized restaurant does not make me feel that it is &quot;mine.&quot;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Part two**

Please answer the following questions using the scale ranging from very unlikely to very likely.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Very Unlikely</th>
<th>Unlikely</th>
<th>Neither Likely</th>
<th>Likely</th>
<th>Very Likely</th>
</tr>
</thead>
<tbody>
<tr>
<td>I will recommend my most frequently patronized restaurant to others.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
I will share my positive experiences in my most frequently patronized restaurant with others.

My most frequently patronized restaurant is the one that I am likely to refer others to for a good dining experience.

I will continue to dine in my most frequently patronized restaurant even if their prices increase.

Some price increases will not deter me from choosing my most frequently patronized restaurant again.

I am likely to pay more for the benefits I get from my most frequently patronized restaurant.

I am likely to pay a higher price charged by my most frequently patronized restaurant than patronizing other similar restaurant(s).

I am likely to disregard marketing offers of other restaurants in favor of my most frequently patronized restaurant.

Reduced prices at other restaurants will not stop me from choosing my most frequently patronized restaurant.

I will dine in my most frequently patronized restaurant even if there are attractive offers from its competitor(s).

I am likely to dine in a different restaurant than in my most frequently patronized restaurant again.
Part three

Please answer the following questions.

I consider myself to be a loyal patron of my most frequently patronized restaurant.

I consider my most frequently patronized restaurant one of my first choices when going out for dinner.

I have a preference for my most frequently patronized restaurant in this locality.

I regularly dine in my most frequently patronized restaurant.

My most frequently patronized restaurant is my regular place for dinner.

When I go out for dinner, I dine more likely in my most frequently patronized restaurant than in other restaurants.

I intend to continue dining in my favorite restaurant.

I am willing to be a "regular" customer to my most frequently patronized restaurant in the future.

I intend to continue the relationship with my most frequently patronized restaurant.
Part four

**Instructions.** Imagine that one of the circles at the left in each row below represents your own self-definition or identity and the other circle at the right represents your most frequently patronized restaurant's identity. Please indicate which case (A, B, C, D, E, F, G, or H) best describes the level of overlap between your own and the restaurant's identities.

(Please check only one box).

<table>
<thead>
<tr>
<th>Me</th>
<th>Restaurant</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td></td>
<td>[ ]</td>
</tr>
<tr>
<td>B</td>
<td></td>
<td>[ ]</td>
</tr>
<tr>
<td>C</td>
<td></td>
<td>[ ]</td>
</tr>
<tr>
<td>D</td>
<td></td>
<td>[ ]</td>
</tr>
<tr>
<td>E</td>
<td></td>
<td>[ ]</td>
</tr>
</tbody>
</table>

Far apart
Close together, but separate
Very small overlap
Small overlap
Moderate overlap
2. Please identify the degree to which your own values overlap with those of the restaurant.

<table>
<thead>
<tr>
<th>Not at all</th>
<th>Moderate</th>
<th>Very Much</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>C</td>
<td>C</td>
</tr>
</tbody>
</table>

Part five

On average, how much do you spend eating out dinners per month per person? $_

How much do you spend on eating out dinners in your most frequently patronized restaurant per month per person? $_

On average, how often do you eat out in any restaurants per month? ___ times

On average, how often do you eat dinners in your most frequently patronized restaurant?
For how long have you been patronizing your most frequently patronized restaurant?

- Less than 3 months
- 4-6 months
- 7-11 months
- 1-3 years
- 4-5 years
- More than 5 years!

Your gender:  
- Male
- Female

You are: ___________ years old

Your marital status:  
- Married
- Not married

Your education level is:  
- Less than high school
- College graduate
- High school graduate
- Some college including vocational schools
- Post graduate (Master’s or doctorate)

Your household income is:  
- Under $30,000
- $30,001 - $60,000
- $60,001 - $100,000
- Over $100,000

Comments:  

As a token of appreciation for your participation, your name will be entered in a drawing for one of six gift certificates usable at Target.

Please enter your email for the drawing  

Thank you!
APPENDIX B. ISU WEB-BASED TRAINING AND HUMAN SUBJECTS
DATE: May 23, 2005

TO: Vahagn Asatryan
FROM: Human Subject Research Compliance Office

RE: IRB ID # 05-253

STUDY REVIEW DATE: May 19, 2005

The Institutional Review Board has reviewed the project, "Psychological Ownership Theory: An alternative approach to customer loyalty" requirements of the human subject protections regulations as described in 45 CFR 46.101(b)(2). The applicable exemption category is provided below for your information. Please note that you must submit all research involving human participants for review by the IRB. Only the IRB may make the determination of exemption, even if you conduct a study in the future that is exactly like this study.

The IRB determination of exemption means that this project does not need to meet the requirements from the Department of Health and Human Service (DHHS) regulations for the protection of human subjects, unless required by the IRB. We do, however, urge you to protect the rights of your participants in the same ways that you would if your project was required to follow the regulations. This includes providing relevant information about the research to the participants.

Because your project is exempt, you do not need to submit an application for continuing review. However, you must carry out the research as proposed in the IRB application, including obtaining and documenting (signed) informed consent if you have stated in your application that you will do so or required by the IRB.

Any modification of this research must be submitted to the IRB on a Continuation and/or Modification form, prior to making any changes, to determine if the project still meets the Federal criteria for exemption. If it is determined that exemption is no longer warranted, then an IRB proposal will need to be submitted and approved before proceeding with data collection.

cc: AESHM
Haemoon Oh
Applicable exemption category(s):

(1) Research conducted in established or commonly accepted educational settings, involving normal educational practices, such as (i) research on regular and special education instructional strategies, or (ii) research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods.

(2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless: (i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

(3) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior that is not exempt under paragraph (b)(2) of this section, if: (i) the human subjects are elected or appointed public officials or candidates for public office; or (ii) Federal statute(s) require(s) without exception that the confidentiality of the personally identifiable information will be maintained throughout the research and thereafter.

(4) Research involving the collection or study of existing data, documents, records, pathological specimens, or diagnostic specimens, if these sources are publicly available or if the information is recorded by the investigator in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects.

(5) Research and demonstration projects which are conducted by or subject to the approval of Department or Agency heads, and which are designed to study, evaluate, or otherwise examine: (i) Public benefit or service programs; (ii) procedures for obtaining benefits or services under those programs; (iii) possible changes in or alternatives to those programs or procedures; or (iv) possible changes in methods or levels of payment for benefits or services under those programs.

(6) Taste and food quality evaluation and consumer acceptance studies, (i) if wholesome foods without additives are consumed or (ii) if a food is consumed that contains a food ingredient at or below the level and for a use found to be safe, or agricultural chemical or environmental contaminant at or below the level found to be safe, by the Food and Drug Administration or approved by the Environmental Protection Agency or the Food Safety and Inspection Service of the U.S. Department of Agriculture.

ORC 04-21-04
ISU NEW HUMAN SUBJECTS RESEARCH FORM

SECTION I: GENERAL INFORMATION

Principal Investigator (PI): Vahagn Asatryan
Phone: 515-294-7474
Fax: 515-294-6364

Degrees: Ph. D. Candidate
Correspondence Address: 31 MacKay

Department: AESHM
Email Address: avahagn@iastate.edu

Center/Institute: Iowa State University
College: Family and Consumer Sciences

PI Level: Graduate Student
Title of Project: Psychological ownership theory: An alternative approach to customer loyalty

Project Period (Include Start and End Date): [mm/dd/yy] 5/15/05 to [mm/dd/yy] 5/31/05

FOR STUDENT PROJECTS

Name of Major Professor/Supervising Faculty: Dr. Haemoon Oh
Phone: 515-294-7474
Department: AESHM
Email Address: hmoh@iastate.edu

Type of Project: Research
Signature of Major Professor/Supervising Faculty: 5/5/05

KEY PERSONNEL

List all members of the research team including the principal investigator, his/her degrees, their position at ISU (or other organization) and role on the project, their training and most recent date of their training if known. Please use additional space as necessary. For projects involving animals, please include the veterinary, animal caretakers and technical staff. For projects involving human subjects, please include anyone who will have contact with the subjects.

<table>
<thead>
<tr>
<th>NAME &amp; DEGREE(S)</th>
<th>POSITION AT ISU &amp; ROLE/SPECIFIC DUTIES ON PROJECT</th>
<th>TRAINING &amp; DATE OF TRAINING</th>
</tr>
</thead>
<tbody>
<tr>
<td>e.g., John Jones, MD, PHD</td>
<td>M.D. at Mary Greeley Medical Center, Co-Principal Investigator. For animal studies please list specific duties. e.g., will perform surgery, will perform blood draws, responsible for animal care, will perform biogases, daily monitoring, etc.</td>
<td>ISU Human Subjects Training, 10/15/02; Radiation Safety Training, 10/01/02; Blood Borne Pathogen Training, 11/13/02; Eleven years of laboratory use of blood borne pathogens.</td>
</tr>
<tr>
<td>1. Vahagn Asatryan, MBA</td>
<td>Graduate Student at ISU. Principal Investigator</td>
<td>ISU Human Subjects Training, 7/10/02</td>
</tr>
<tr>
<td>2. Haemoon Oh, PhD.</td>
<td>Associate Professor - Apparel, Educational Studies, and Hospitality</td>
<td>ISU Human Subjects Training, 9/17/03</td>
</tr>
</tbody>
</table>

Research Compliance 04/10/03
FUNDING INFORMATION

If internally funded, please provide account number: [Enter]
If externally funded, please provide funding source and account number:
If funding is pending please provide OSPA Record ID on GoldSheet:
Title on GoldSheet if Different Than Above:
Other: e.g., funding will be applied for later. Funding will be applied for later.

SCIENTIFIC REVIEW

Although the compliance committees are not intended to conduct peer review of research proposals, the federal regulations include language such as "consistent with sound research design," "rationale for involving animals or humans" and "scientifically valuable research," which requires that the committees consider in their review the general scientific relevance of a research study. Proposals that do not meet these basic tests are not justifiable and cannot be approved. If a compliance review committee(s) has concerns about the scientific merit of a project and the project was not competitively funded by peer review or was funded by corporate sponsors, the project may be referred to a scientific review committee. The scientific review committee will be ad hoc and will consist of your ISU peers and outside experts as needed. If this situation arises, the PI will be contacted and given the option of agreeing that a consultant may be contacted or withdrawing the proposal from consideration.

☒ Yes ☐ No Has or will this project receive peer review?

If the answer is "yes," please indicate who did or will conduct the review: Dissertation Committee Members including ISU faculty Dr. Mary Gregoire, Dr. Amit Sharma, Dr. Frederick Lorenz, and Dr. Sridhar Ramaswami.

If a review was conducted, please indicate the outcome of the review:

NOTE: RESPONSE CELLS WILL EXPAND AS YOU TYPE AND PROVIDE SUFFICIENT SPACE FOR YOUR RESPONSE...

COLLECTION OR RECEIPT OF SAMPLES

Will you be: (Please check all that apply.)
☐ Yes ☐ No Receiving samples from outside of ISU? See examples below.
☐ Yes ☐ No Sending samples outside of ISU? See examples below.

Examples include: genetically modified organisms, body fluids, tissue samples, blood samples, pathogens.

If you will be receiving samples from or sending samples outside of ISU, please identify the name of the outside organization(s) and the identity of the samples you will be sending or receiving outside of ISU:

No samples will be received.

Please note that some samples may require a USDA Animal Plant Health Inspection Service (APHIS) permit, a USPHS Centers for Disease Control and Prevention (CDC) Import Permit for Etiologic Agents, a Registration for Select Agents, High Consequence Livestock Pathogens and Toxins or Listed Plant Pathogens, or a Material Transfer Agreement (MTA) (http://www.ets.usda.gov/mts/shipping.htm).
STUDY OBJECTIVES

Briefly explain in language understandable to a layperson the specific aim(s) of the study.

The objectives of this study are to understand (1) the roots of psychological ownership; 2) prerequisites of psychological ownership, 3) role of perceived control, sense of belonging, customer participation, and sense of identification in the formation process of psychological ownership, and 4) consequences of psychological ownership in the restaurant industry.

BENEFIT

Explain in language understandable to a layperson how the information gained in this study will benefit participants or the advancement of knowledge, and/or serve the good of society.

This is a new attempt to that address the linkage between psychological ownership and loyalty in the restaurant industry. The result of this study will assist restaurant managers in creation of more meaningful dining experiences that evoke long-term customer loyalty.

ASSURANCE

- I certify that the information provided in this application is complete and accurate and consistent with any proposal(s) submitted to external funding agencies.
- I agree to provide proper surveillance of this project to ensure that the rights and welfare of the human subject or welfare of animal subjects are protected. I will report any problems to the appropriate compliance review committee(s).
- I agree that I will not begin this project until receipt of official approval from all appropriate committees.
- I agree that modifications to the originally approved project will not take place without prior review and approval by the appropriate committee(s), and that all activities will be performed in accordance with all applicable federal, state, local and ISU policies.

CONFLICT OF INTEREST

A conflict of interest can be defined as a set of conditions in which an investigator’s or key personnel’s judgment regarding a project (including human or animal subject welfare, integrity of the research) may be influenced by a secondary interest (e.g., the proposed project and/or a relationship with the sponsor). ISU’s Conflict of Interest Policy requires that investigators and key personnel disclose any significant financial interests or relationships that may present an actual or potential conflict of interest. By signing this form below, you are certifying that all members of the research team, including yourself, have read and understand ISU’s Conflict of Interest policy as addressed by the ISU Faculty Handbook (http://www.provost.iastate.edu/faculty) and have made all required disclosures.

☐ Yes ☐ No Do you or any member of your research team have an actual or potential conflict of interest?

☐ Yes ☐ No If yes, have the appropriate disclosure form(s) been completed?

SIGNATURES

Signature of Principal Investigator:

Date:

Research Compliance 04/10/03
Signature of Department Chair  5/2005

PLEASE NOTE: Any changes to an approved protocol must be submitted to the appropriate committee(s) before the changes may be implemented.

Please proceed to SECTION II.
SECTION II: ENVIRONMENTAL HEALTH AND SAFETY INFORMATION

☐ Yes ☐ No Does this project involve human cell or tissue cultures (primary OR immortalized), or human blood components, body fluids or tissues? If the answer is “no”, please proceed to SECTION III: APPLICATION FOR IRB APPROVAL. If the answer is “yes,” please proceed to Part A: Human Cell Lines.

PART A: HUMAN CELL LINES

☐ Yes ☐ No Does this project involve human cell or tissue cultures (primary OR immortalized cell lines/strains) that have been documented to be free of bloodborne pathogens? If the answer is “yes,” please attach copies of the documentation. If the answer is “no,” please answer question 1 below.

1) Please list the specific cell lines/strains to be used, their source and description of use.

<table>
<thead>
<tr>
<th>CELL LINE</th>
<th>SOURCE</th>
<th>DESCRIPTION OF USE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2) Please refer to the ISU “Bloodborne Pathogens Manual,” which contains the requirements of the OSHA Bloodborne Pathogens Standard. Please list the specific precautions to be followed for this project below (e.g., retractable needles used for blood draws):

Not applicable

Anyone working with human cell lines/strains that have not been documented to be free of bloodborne pathogens is required to have Bloodborne Pathogen Training annually. Current Bloodborne Pathogen Training dates must be listed in Section I for all Key Personnel. Please contact Environmental Health and Safety (294-5359) if you need to sign up for training and/or to get a copy of the Bloodborne Pathogens Manual (http://www.ehsiastate.edu/bs/bbp.htm).

PART B: HUMAN BLOOD COMPONENTS, BODY FLUIDS OR TISSUES

☐ Yes ☐ No Does this project involve human blood components, body fluids or tissues? If “yes”, please answer all of the questions in the “Human Blood Components, Body Fluids or Tissues” section.

1) Please list the specific human substances used, their source, amount and description of use.

<table>
<thead>
<tr>
<th>SUBSTANCE</th>
<th>SOURCE</th>
<th>AMOUNT</th>
<th>DESCRIPTION OF USE</th>
</tr>
</thead>
<tbody>
<tr>
<td>E.g., Blood</td>
<td>Normal healthy volunteers</td>
<td>2 ml</td>
<td>Approximate quantity, assays to be done.</td>
</tr>
</tbody>
</table>

2) Please refer to the ISU “Bloodborne Pathogens Manual,” which contains the requirements of the OSHA Bloodborne Pathogens Standard. Specific sections to be followed for this project are:

Research Compliance 04/10/03
Anyone working with human blood components, body fluids or tissues is required to have Bloodborne Pathogen Training annually. Current Bloodborne Pathogen Training dates must be listed in Section I for all Key Personnel. Please contact Environmental Health and Safety (294-5359) if you need to sign up for training and/or to get a copy of the Bloodborne Pathogens Manual (http://www.ehs.iastate.edu/hs/blp.htm).

FOR ENVIRONMENTAL HEALTH AND SAFETY USE ONLY

__________________________________________
Signature of Biological Safety Officer

__________________________________________
Date

Please proceed to Section III.
SECTION III: STUDY SPECIFIC INFORMATION

PART A: PROJECT INVOLVEMENT

1) ☐ Yes ☑ No Is this project part of a Training Center, Program Project Grant?

Director Name:

Overall IRB ID:

2) ☐ Yes ☑ No Is the purpose of this project to develop survey instruments?

3) ☐ Yes ☑ No Does this project involve an investigational new drug (IND)? Number:

4) ☐ Yes ☑ No Does this project involve an investigational device exemption (IDE)? Number:

5) ☐ Yes ☑ No Does this project involve existing data or records?

6) ☐ Yes ☑ No Does this project involve secondary analysis?

7) ☐ Yes ☑ No Does this project involve pathology or diagnostic specimens?

8) ☐ Yes ☑ No Does this project require approval from another institution? Please attach letters of approval.

PART B: MEDICAL HEALTH INFORMATION OR RECORDS

1) ☐ Yes ☑ No Does your project require the use of a health care provider’s records concerning past, present, or future physical, dental, or mental health information about a subject? The Health Insurance Portability and Accountability Act established the conditions under which protected health information may be used or disclosed for research purposes. If your project will involve the use of any past or present clinical information about someone, or if you will add clinical information to someone’s treatment record (electronic or paper) during the study you must complete and submit the Application for Use of Protected Health Information.

PART C: ANTICIPATED ENROLLMENT

Number of Subjects Total: 850

<table>
<thead>
<tr>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>383</td>
<td>467</td>
</tr>
</tbody>
</table>

Check if any enrolled subjects are:

☐ Minors (Under 18)

☐ Pregnant Women/ Fetuses

☐ Cognitively Impaired

☐ Prisoners

List Estimated Percent of the Anticipated Enrollment that will be Minorities:

- American Indians: 0%
- Asian or Pacific Islander: 12%
- Black or African American: 5%
- Latino: 5%
- Hispanic: 1%

PART D: SUBJECT SELECTION

Please use additional space as necessary to adequately answer each question.

1) Describe procedures for identifying subjects (e.g., ads, fliers, word of mouth, email list, etc.)

For the study, the population of faculty and staff at ISU will be contacted via e-mail. Email addresses of faculty and staff will be obtained from the Registrar’s Office at ISU. Upon obtaining email addresses, the questionnaire will be emailed to all respondents described above. The body of the email will be a cover letter explaining benefits of the study, voluntary participation, and anonymity.

2) Attach a copy of any recruitment material such as ad, fliers, e-mail messages, etc. See attached

3) How will the subjects be selected? (e.g., where will the names come from?)
The names of faculty and staff will come from email addresses provided by ISU. For the pilot study, the e-mails of the subjects will be obtained from the HRIM department.

4) Please list the inclusion/exclusion for subject selection and include an explanation.

All participants must be ISU faculty or staff. For the pilot study, all participants will be students enrolled in HRIM program at ISU.

Please answer each question. If the question does not pertain to this study, please type not applicable (N/A).

PART E: RESEARCH PLAN

Include sufficient detail for IRB review of this project independent of the grant, protocol, or other documents.

1) Describe study procedures to which subjects will be exposed (e.g. for blood draws, include frequency and amount, who will be drawing the blood and their training).

Participants will be asked to complete questionnaires identifying their behaviors and feelings regarding their dining experiences.

2) For studies involving pathology/diagnostic specimens, indicate whether specimens will be collected prospectively and/or already exist "on the shelf" at the time of submission of this review form. If prospective, describe specimen procurement procedures; indicate whether any additional medical information about the subject is being gathered, and whether specimens are linked at any time by code number to the subject's identity.

Not applicable

3) For studies involving deception, please justify the deception and indicate the debriefing procedure, including the timing and information to be presented to subjects.

Not applicable

PART F: CONSENT PROCESS

1) Explain how the subjects will be contacted (e.g., letter, phone, email, in person, etc.) If the subjects are under 18, include how the parents or guardians will be approached as well.

Only adult subjects (18 years or older) will be contacted for this study. Subjects will be contacted directly via email. For the pilot study, the subjects will be contacted directly by the researcher.

2) Describe how informed consent will be obtained (e.g., who will contact the subjects, how many times, etc.) Describe in detail the entire consent process.
The cover letter will be the body of email sent to ISU faculty and staff. For the pilot study, the cover letter will be the body of email sent to the students in HRIM program at ISU. The cover letter (attached) will discuss voluntary participation, goals and benefits of the study, and contact information of investigators.

PART G: CONSENT AND ASSENT PROCESS FOR ENROLLING MINORS

1) If your study involves minors, please explain how parental consent will be obtained prior to enrollment of the minor(s).

No minors involved

2) Please explain how assent will be obtained from minors, prior to their enrollment. Also, please explain if the assent process will be documented (e.g., a simplified version of the consent form, combined with the consent document).

"Assent" according to the federal regulations “…means a child’s affirmative agreement to participate in research. Mere failure to object should not, absent affirmative agreement, be construed as assent.”

No minors involved

PART H: DATA ANALYSIS

1) Describe how the data will be analyzed (e.g., statistical package, statistical evaluation, statistical measures used to evaluate results)

SPSS will be used for quantitative data analysis of the questionnaire. Descriptive statistics including means, standard deviations, and frequencies will be calculated for all closed-ended items on the questionnaire. Factor analysis and Cronbach’s alpha will be calculated to establish construct validity of various measurement items. Structural equation modeling and LISREL will be used for the analysis of the model.

2) If applicable, please indicate the anticipated date that identifiers will be removed from completed survey instruments and/or audio or visual tapes will be erased:

Questionnaires and computer data will be kept until a manuscript has been published to allow researchers access to data, if needed. No identifiers will be used on the questionnaires.

Month/Day/Year (5/31/06)

PART I: BENEFITS

1) Describe if there will be a benefit to the subject or if the benefit is to society. Please note that compensation is not a benefit according to the federal regulations.

Benefits of this study include the following:
- Help hospitality (restaurant) managers understand formation of psychological ownership and loyalty among consumers
- Provide insights into design of dining experiences that stimulate creation of loyalty
- Help managers understand when marketing strategies will be successful

Research Compliance 04/10/03
PART J: RISKS

The concept of risk goes beyond physical risk and includes risks to subjects' dignity and self-respect as well as psychological, emotional, legal, social or financial risk.

1) □ Yes ☒ No Is the probability of the harm or discomfort anticipated in the proposed research greater than that encountered ordinarily in daily life or during the performance of routine physical or psychological examinations or tests?

2) □ Yes ☒ No Is the magnitude of the harm or discomfort greater than that encountered ordinarily in daily life, or during the performance of routine physical or psychological examinations or tests?

3) Describe any risks or discomforts to the subjects and how they will be minimized and precautions taken.

   No risks or discomforts are anticipated.

4) If this study involves vulnerable populations, including minors, pregnant women, prisoners, educationally or economically disadvantaged, what additional protections will be provided to minimize risks?

   Vulnerable populations are not included in this study.

PART K: COMPENSATION

1) □ No ☒ Yes Will subjects receive compensation for their participation? If yes, please explain.

Do not make the payment an inducement, only a compensation for expenses and inconvenience. If a person is to receive money or another token of appreciation for their participation, explain when it will be given and any conditions of full or partial payment. (E.g., volunteers will $5.00 for each of the five visits in the study or a total of $25.00 if he/she completes the study. If the subject withdraws from participation, they will receive $5.00 for each of the visits completed.) It is considered undue influence to make completion of the study the basis for compensation.

   As a token of appreciation, upon completion and submission of the questionnaire, respondents' email addresses will be placed in a random drawing for six $50 cash prizes in early May. Winning subjects will be contacted via email. The researchers will not be able to match responses with email addresses.

PART L: CONFIDENTIALITY

1) Describe below the methods you will use to ensure the confidentiality of data obtained (e.g., who has access to the data, where the data will be stored, security measures for web-based surveys and computer storage, how long data (specimens) will be retained, etc.)

   Questionnaires will not contain identifiers. The two researchers identified above, are the only ones who will have access to questionnaire data. All print data will be stored in a locked file cabinet. Computer data will be stored on the researcher's personal computer. All data will be kept for one year after completion of the study.
Checklist for Attachments

The following are attached (please check ones that are applicable):

- [ ] A copy of the informed consent document OR [x] Letter of information with elements of consent to subjects
- [ ] Letter of the assent form if minors will be enrolled
- [x] Letter of approval from cooperating organizations or institutions allowing you to conduct research at their facility
- [x] Data-gathering instruments (including surveys)
- [ ] Recruitment fliers or any other documents the subjects will see

Two sets of materials should be submitted for each project – the original signed copy of the application form, one copy and two sets of accompanying materials. Federal regulations require that one copy of the grant application or proposal must be submitted for comparison.

FOR IRB USE ONLY:

Initial action by the Institutional Review Board (IRB):

- [x] Project approved. Date: 5/14/05
- [ ] Pending further review. Date: 
- [ ] Project not approved. Date: 

Follow-up action by the IRB:

[Signature]
IRB Approval Signature

Date: 5/19/05
APPENDIX C1. KAISER-MAYER-OLKIN TEST AND BARTLETT'S TEST OF SPHERICITY
Appendix C1. Results of Kaiser-Mayer-Olkin test and Bartlett’s Test of Sphericity (N=1,045)

<table>
<thead>
<tr>
<th>Scale</th>
<th>Measure of Sampling adequacy</th>
<th>Bartlett’s Test $\chi^2$ (df) $^a$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. CONTROL (3)$^b$</td>
<td>.69</td>
<td>921.47 (3)</td>
</tr>
<tr>
<td>2. PARTIC (5)</td>
<td>.75</td>
<td>1721.53 (10)</td>
</tr>
<tr>
<td>3. IDENTIF (2)</td>
<td>.50</td>
<td>384.41 (1)</td>
</tr>
<tr>
<td>4. SBELONG (5)</td>
<td>.82</td>
<td>1805.89 (10)</td>
</tr>
<tr>
<td>5. PSYCOWN (5)</td>
<td>.84</td>
<td>4209.47 (10)</td>
</tr>
<tr>
<td>6. RELCONT (3)</td>
<td>.70</td>
<td>1498.57 (3)</td>
</tr>
<tr>
<td>7. WOMOUTH (3)</td>
<td>.75</td>
<td>2066.42 (3)</td>
</tr>
<tr>
<td>8. PAYMORE (4)</td>
<td>.76</td>
<td>2473.02 (6)</td>
</tr>
<tr>
<td>9. COMPRES (4)</td>
<td>.74</td>
<td>1403.54 (6)</td>
</tr>
</tbody>
</table>

$^a$ $p < .01.$

$^b$ Indicates number of items
APPENDIX C2. KURTOSIS AND SKEWNESS TESTS
Appendix C2. Kurtosis and Skewness (N=1,045)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Kurtosis</th>
<th>Skewness</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CONTROL</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CONTROL1 Influence over the quality of service</td>
<td>-.74</td>
<td>-.16</td>
</tr>
<tr>
<td>CONTROL2 I feel in control over my dining experience</td>
<td>-.15</td>
<td>-.58</td>
</tr>
<tr>
<td>CONTROL3 I cause the staff to give me a quality dining experience</td>
<td>-.38</td>
<td>-.27</td>
</tr>
<tr>
<td><strong>PARTIC</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PARTIC1 I express my service preferences to the wait staff</td>
<td>-2.85</td>
<td>-.87</td>
</tr>
<tr>
<td>PARTIC2 I tend to be cooperative with the service staff</td>
<td>-.94</td>
<td>-.02</td>
</tr>
<tr>
<td>PARTIC3 I provide feedback on menu options.</td>
<td>-2.9</td>
<td>-.41</td>
</tr>
<tr>
<td>PARTIC4 I tend to facilitate the service staff to serve me in a way to make my dining experience more pleasant.</td>
<td>-2.85</td>
<td>-.87</td>
</tr>
<tr>
<td>PARTIC5 I provide feedback to my most frequently patronized restaurant on how to improve quality.</td>
<td>-2.7</td>
<td>-.7</td>
</tr>
<tr>
<td><strong>CUSTOMER IDENTIFICATION</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IDENTIF1 Visual item</td>
<td>-.16</td>
<td>.88</td>
</tr>
<tr>
<td>IDENTIF2 Please identify the degree to which your own values overlap with those of the restaurant.</td>
<td>-.69</td>
<td>.15</td>
</tr>
<tr>
<td><strong>SENSE OF BELONGING</strong></td>
<td></td>
<td></td>
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<tr>
<td>SBELONG1 I feel “at home” in my most frequently patronized restaurant.</td>
<td>1.12</td>
<td>-.85</td>
</tr>
<tr>
<td>SBELONG2 I feel “attached” to my most frequently patronized restaurant.</td>
<td>-2.16</td>
<td>-.27</td>
</tr>
<tr>
<td>SBELONG3 I feel like a stranger in my most frequently patronized restaurant.*</td>
<td>1.17</td>
<td>-.98</td>
</tr>
<tr>
<td>SBELONG4 I feel I “belong” in my most frequently patronized restaurant.</td>
<td>-.25</td>
<td>-.41</td>
</tr>
<tr>
<td>SBELONG5 I feel “at home” more in other restaurants than in my most frequently patronized restaurant.*</td>
<td>-.14</td>
<td>-.55</td>
</tr>
<tr>
<td>Variables</td>
<td>Kurtosis</td>
<td>Skewness</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>----------</td>
<td>----------</td>
</tr>
<tr>
<td><strong>PSYCHOLOGICAL OWNERSHIP</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PSYCOWN1 I sense that my most frequently patronized restaurant is “mine.”</td>
<td>-.32</td>
<td>.31</td>
</tr>
<tr>
<td>PSYCOWN2 I feel “personal ownership” of my most frequently patronized restaurant.</td>
<td>-.21</td>
<td>.38</td>
</tr>
<tr>
<td>PSYCOWN3 I feel personally connected to my most frequently patronized restaurant.</td>
<td>-.97</td>
<td>-.02</td>
</tr>
<tr>
<td>PSYCOWN4 It is hard for me to think about my most frequently patronized restaurant as “mine.”</td>
<td>.15</td>
<td>.74</td>
</tr>
<tr>
<td>PSYCOWN5 My most frequently patronized restaurant does not make me feel that it is “mine.”</td>
<td>-.18</td>
<td>.19</td>
</tr>
<tr>
<td><strong>RELATIONSHIP CONTINUITY</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RELCONT1 I intend to continue dining in my favorite restaurant.</td>
<td>2.69</td>
<td>-.59</td>
</tr>
<tr>
<td>RELCONT2 I am willing to be a “regular” customer to my most frequently patronized restaurant in the future.</td>
<td>.84</td>
<td>-.739</td>
</tr>
<tr>
<td>RELCONT3 I intend to continue the relationship with my most frequently patronized restaurant</td>
<td>1.80</td>
<td>-.69</td>
</tr>
<tr>
<td><strong>WORD-OF-MOUTH</strong></td>
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<td></td>
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<tr>
<td>WOMOUTH1 I will recommend my most frequently patronized restaurant to others.</td>
<td>5.08</td>
<td>-2.06</td>
</tr>
<tr>
<td>WOMOUTH2 I will share my positive experiences in my most frequently patronized restaurant with others.</td>
<td>2.82</td>
<td>-1.50</td>
</tr>
<tr>
<td>WOMOUTH3 My most frequently patronized restaurant is the one that I will refer others to for a good dining experience.</td>
<td>1.66</td>
<td>-1.35</td>
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<tr>
<td><strong>WILLINGNESS TO PAY MORE</strong></td>
<td></td>
<td></td>
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<tr>
<td>PAYMORE1 I will continue to dine in my most frequently patronized restaurant even if there may be some price increases.</td>
<td>.56</td>
<td>-.83</td>
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<tr>
<td>PAYMORE2 Some price increases will not deter me from choosing my most frequently patronized restaurant again.</td>
<td>1.42</td>
<td>-1.10</td>
</tr>
<tr>
<td>PAYMORE3 I am willing to pay more for the benefits I get from my most frequently patronized restaurant.</td>
<td>-.46</td>
<td>-.44</td>
</tr>
<tr>
<td>PAYMORE4 I would rather pay a higher price charged by my most frequently patronized restaurant than patronizing other similar restaurant(s).</td>
<td>-.74</td>
<td>-.32</td>
</tr>
</tbody>
</table>
Variables | Kurtosis | Skewness
---|---|---
**COMPETITIVE RESISTANCE**
COMPRES1 I disregard marketing offers of other restaurants in favor of my most frequently patronized restaurant. | -.96 | .01
COMPRES2 Reduced prices at other restaurants do not stop me from choosing my most frequently patronized restaurant. | -.71 | -.38
COMPRES3 I will dine in my most frequently patronized restaurant even if there are attractive offers from its competitor(s). | -.78 | -.29
COMPRES4 I would rather dine at a different restaurant than choosing my most frequently patronized restaurant again. | -.85 | .10

* Indicates reversely coded item.

Note: A kurtosis and skewness value between ± 1.0 is considered excellent and between ± 2.0 acceptable (George & Mallery, 2001).
APPENDIX D. THE CORRELATION MATRIX
**Appendix D. The correlation matrix**

<table>
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<tr>
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<tbody>
<tr>
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<td>SBELONG1</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
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<td>0.30</td>
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<td>0.45</td>
<td>0.18</td>
<td>0.67</td>
<td>0.46</td>
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</table>

*All correlations were significant at p < .01, except for correlations between COMPRES4 and PARTIC1 and PARTIC2.*

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<tr>
<th></th>
<th>14</th>
<th>15</th>
<th>16</th>
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<td></td>
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<tr>
<td>15</td>
<td>PSYCOWN2</td>
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<td>1.00</td>
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APPENDIX E. PATH COEFFICIENTS, T-VALUES, AND STANDARD ERRORS FOR THE PARTIALLY MEDIATED MODEL
Appendix E. Path Coefficients, \( t \)-values, and Standard Errors, Partially Mediated Model

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APPENDIX F. CORRELATION MATRIX OF CONSTRUCTS
Appendix F. The correlation matrix of the constructs*

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* All correlations were significant at p < .01.
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