AN EMPIRICAL INVESTIGATION INTO THE EFFECTS OF SELECTED PRICE HEURISTICS ON TOURISTS' PURCHASE DECISIONS IN THREE DIFFERENT CULTURES

A Dissertation

by

JI YOUN JEONG

Submitted to the Office of Graduate and Professional Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

Chair of Committee,	John L. Crompton
Committee Members,	Gary Ellis
	James Petrick
	Jane Sell
Head of Department,	Scott Shafer

May 2017

Major Subject: Recreation, Park, and Tourism Sciences

ABSTRACT

The central goal of this research was to investigate whether selected price heuristics are culturally specific or universal. The dissertation's three experiments explore selected price heuristics in the context of tourism services among samples from the U.S., Korea and China; the U.S. represents an individualist and low context culture, while Korea and China represent collectivist and high context cultures.

Study 1 investigated potential tourists' price decisions when confronted with inexpensive functional items (buying a sandwich and a pizza) and an expensive hedonic option (purchasing tickets for a show); in two consuming situations (consuming alone or with another person); in two social group contexts (with an acquaintance or with a family member). The collectivist cultures showed social groups and cultures had a significant impact on price decisions, although they differed in their reactions when the group was a family member or an acquaintance. Hence, these variables had mixed influence on the U.S. sample's responses.

Study 2 measured the extent to which 9-ending digits were used in prices by suppliers of five tourism services both within and across the three different cultures represented by New York City, Seoul, and Shanghai. 9- and 8-ending prices were dominant in New York City and in Shanghai, respectively, but these culture specific endings were complemented by the universality of the 0- and 5-digit endings of prices which were ranked first and second, respectively, in Seoul, second and third in Shanghai, and third and second in New York.

Study 3 investigated the relative strength of symbolic meanings of 9-ending prices (i.e. low quality, enhanced value, discount price, and misleading action) among samples from the U.S., Korea and China, and their effectiveness in influencing tourists' purchases. The analyses found no differences among the three cultures' samples in either their relative importance across cultures, or in the likelihood of tourists selecting 9-ending rather than even-ending prices when purchasing a sandwich, a pizza or show tickets. In the context of a hotel room, the 9-ending discount was perceived to be a greater discount than even-ended prices, but its effectiveness could not be explained by the different symbolic meanings associated with 9-ending prices.

DEDICATION

This dissertation is dedicated to my beloved and supportive husband, Suk Lae Kim, and my adorable son, Danny, for their endless encouragement, unconditional trust, and true love.

ACKNOWLEDGEMENTS

First, I would like to sincerely thank my supervisor, Dr. John Crompton, for his patient guidance, support, advice and inspiration to my research throughout my Ph.D. course. Dr. Crompton's enthusiasm and commitment to the research is what I need to carry on in my future career. I also truly appreciate the help and suggestions from my committee members, Dr. James Petrick, Dr. Gary Ellis, and Dr. Jane Sell.

Also, I appreciate the professors who helped me collect the survey data.

I would like to present my deep gratitude to my family, for their numerous supports and sacrifices. Finally, I sincerely thank my husband, Suk Lae Kim, and my son, Danny, who always stand by me in joy and sorrow. Words cannot express how grateful I am for the love and trust they have shown me.

CONTRIBUTORS AND FUNDING SOURCES

Contributors

This work was supervised by a dissertation committee composed of Professor John Crompton, Professor James Petrick, and Professor Gary Ellis of the Department of Recreation, Park, and Tourism Sciences, and Professor Jane Sell of the Department of Sociology.

Survey questionnaires were collected by Professor John Crompton at Texas A&M University and Professor Dennis Howard at University of Oregon in the U.S. In Korea the questionnaires were distributed and collected by Professor Seoho Um at Kyunggi University; Professor Seungdam Choi at Hanyang University; Professor Seokho Lee at Open University; Professor Bong Koo Lee at Dong-eui University; and Professor Youngah Park at Catholic University of Daegu. In China, the questionnaires were distributed and collected by Professor Jian Peng at Minzu University; Professor Humie Liu at Zhejiang University; Professor Pan Liyong at Zhejiang University; Professor Shubo Wu at Central South University of Forestry and Technology; Professor Seongseop Kim at The Hong Kong Polytechnic University; and Professor Kam Hung at Hong Kong Polytechnic University.

Funding Sources

This work was not financially supported by any institutions.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

CHAPTER I

INTRODUCTION

Kahneman (2011) suggests that heuristics and biases can originate either from innate processes or from learned skills. If price heuristics are universal then it suggests they are innate, whereas if they are specific to cultures it suggests they are learned. This dissertation examined and compared the influence of price heuristics in samples from three different cultures: U.S., China, and Korea. The U.S. is characterized as an individualistic and low context culture, while China and Korea are recognized as collectivist cultures and high context cultures (Hofstede, 1994; Hall, 1976).

Collectivist cultures emphasize conformity and social contributions (Hofstede, 1994; McAuliffe et al., 2003; Ariely, 2009). Hence, people in collectivist cultures tend to subsume their behaviors to the mores of their group and to make decisions that are consistent with those of other members in the culture. In contrast, individualist cultures allow high levels of independence and encourage self-reliance, so people in individualist cultures are likely to make independent judgments, rather than conform to a majority view (Hofstede, 1994). For example, in a study reported by Ariely (2009), when a group of Americans ordered beers at a bar, each of them was prone to select a different beer to impress others by showing their independence. In contrast, Hong Kong customers tended to select the same beers to impress others by showing their conformity. Interestingly, the customer groups from both cultures experienced a decrease in satisfaction from their choices because they did not select their primary preferences.

Differences in interpretation of communications among cultures have been identified (Hall, 1976). Western/individualist-culture countries are categorized as low context cultures, because people in these countries tend to interpret communications literally. In contrast, those in non-western/collectivist-culture countries are categorized as high context cultures, because people in these countries often seek hidden meanings and to identify more implicit, non-verbal cues in communications (Hall, 1976; Copeland & Griggs, 1986).

Indeed, people in different cultures sometimes see, understand, and react to the same phenomenon differently. This may mean they develop and use heuristics differently, and so have different responses to changes in price based on their cultural background. If tourists' heuristics and biases toward prices result from cultural learning, then pricing strategies have to recognize that visitors will react to tourism prices differently, and that they need to be tailored to each culture.

1.1 Macro context of the research

Tourism is the world's second largest industry. It produces substantial economic benefits for a country's residents. The World Travel & Tourism Council (WTTC, 2015) reports that "travel & tourism generated US $7.6 trillion (10% of global GDP) and 277 million jobs (1 in 11 jobs) for the global economy in 2014" (p 1). The economic value attributed to tourism means it is a major invisible export industry (Commission for

Architecture and the Built Environment [CABE] 2009). Additionally, tourism is labor intensive, so its economic benefits are likely to impact local residents directly.

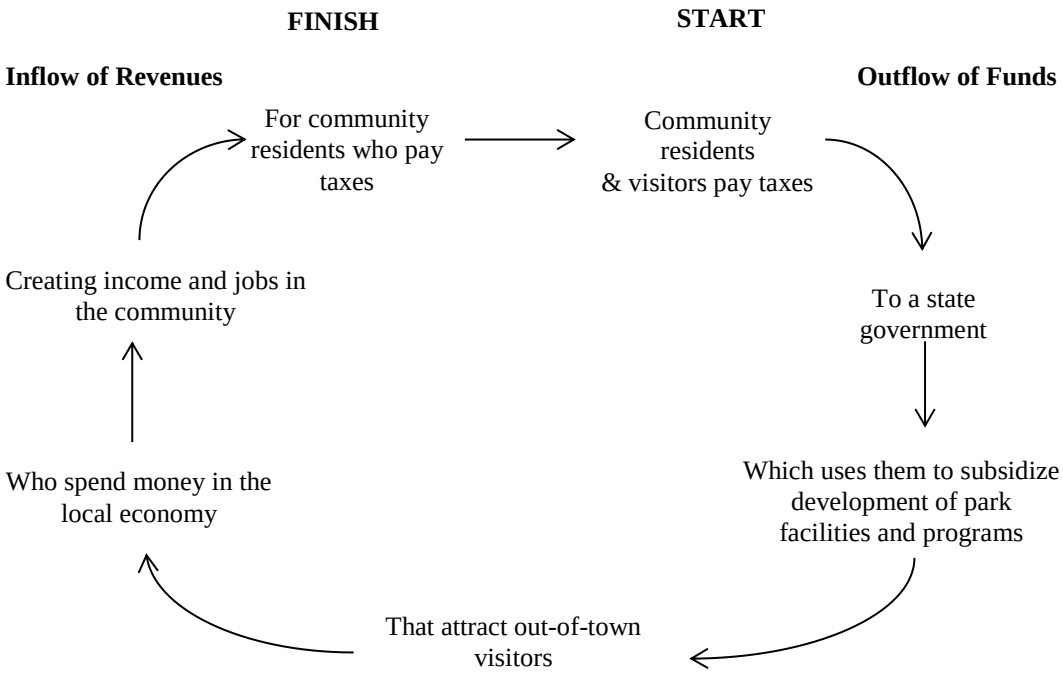


Figure 1. The conceptual rationale for undertaking economic impact studies

Tourism facilities and programs attract out-of-town visitors who spend money in the local community (Figure 1). This new money from outside the community creates income and jobs for those in the local community. Thus, local residents who pay taxes that fund tourism developments, and business owners who invest in tourism projects

provide a return to the community on their investments in the form of new jobs and higher income (Crompton, 2006). Thus, a primary goal of marketing is to increase this return on investment to local residents and businesses by increasing the amount of visitors' spending.

Tourism economic impacts can be estimated by multiplying visitors' spending by the number of visitors and applying a regional multiplier. Hence, tourism economic impacts may be increased by: (i) increasing the level of visitors' spending; (ii) attracting more visitors, and/or; (iii) strengthening the economic infrastructure in a host community so more of the new money spent by visitors is retained in the local economy rather than leaking out elsewhere (Jeong & Crompton, 2015; Crompton, Jeong, & Dudensing, 2016). The focus of this dissertation is on the first of these components. The experiments measured the effectiveness of pricing strategies that are designed to increase visitors' spending within an economy, so a community's return on investments in the tourism industry will be higher.

Increasing prices often have a negative impact in that they may lead to a counter-reaction, resulting in a decrease in visitors' total spending in a local area and/or reduction in the number of visitors. However, the price / quality heuristic and 9-ending price heuristic may mitigate any negative impact. They may increase visitors' willingness to pay by changing feelings about a price increase so visitors spend more without being conscious that they are doing so.

1.2 Behavioral focus on pricing

The experiments in this dissertation addressed tourists' responses to price from a behavioral economics perspective. Behavioral economics recognizes there is scope for marketing managers to intervene and change customers' responses to prices by understanding the heuristics that are an integral part of their cognitive thinking processes.

While the tools of traditional economics suggest how people ought to act, behavioral economics focuses on how people actually act. Traditional economics assumes that the marketplace is perfect and efficient, that consumers are fully informed, that they are logically and rationally, and that prices are determined rationally by the relationships between supply and demand. However, it has been consistently demonstrated that these assumptions are optimistic and the core principles of utility, supply and demand in traditional economic analyses are incomplete.

Consumers' economic decisions frequently are not rational because they have neither full information about supply options, nor are they aware of the full range of utility outputs of satisfaction or benefits that may be available (Ariely, 2009). In lieu of rational decisions customers develop strategies for making efficient decisions which are derived from both their imperfect memories, and their limited sets of past experiences and contexts. They seek to minimize cognitive effort in the decision-making processes and they do this by using heuristics (Kahneman, 2011). Heuristics work simply and efficiently by reducing the cognitive burden when people are involved in a complex problem (Shah & Oppenheimer, 2008). Since heuristics are a simplified thinking process

and a function of memorized experiences and particular contexts, they invariably contain systematic cognitive biases.

The potential for bias that results from disregarding full information and using simplified thinking processes was illustrated by a well-known study incorporating an "invisible gorilla". In this experiment, when subjects were asked to watch a video of other people passing basketballs, more than half of them did not notice a gorilla wandering around in the scene. This demonstrated that people often fail to recognize or perceive unexpected stimuli even though such stimuli are very obvious and clear (Neisser, 1979; Neisser & Becklen, 1975). In the same way, heuristics are used to efficiently make a judgment as to whether or not a price is acceptable based on their imperfect cognition. In summary, people's decisions are based on cognitive processing of imperfect information, and heuristics that are used to facilitate that process efficiently frequently contain systematic biases.

A central goal of this dissertation research is to investigate whether price heuristics are culturally specific or universal. With the process of globalization, many tourism services target international visitors from multiple countries. The challenge in setting prices is to increase visitors' willingness to pay by creating positive feelings about a price, but people from different cultures may use different heuristics in their decision process and, consequently, respond differently toward a given price framing. This would require tourism managers to adopt more diverse pricing strategies that reflect the multi-faceted responses of visitors from different cultures.

1.3 The potential role of culture and social contexts in influencing price heuristics

For several decades, psychologists have recognized there are two modes of thinking (Kahneman, 2011). These dual process theories identify parallel processors of information. The labels System 1 and System 2 often are used to describe them: "System 1 operates automatically and quickly with little or no effort and no sense of voluntary control", while "System 2 allocates attention to the effortful mental activities that demand it, including complex computation" (Kahneman, 2011, p. 21-22) (Figure 2).

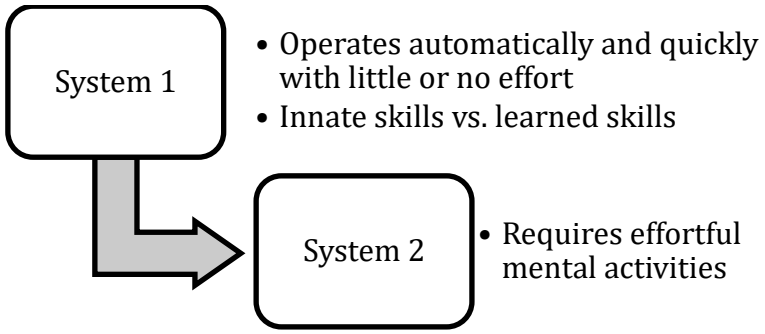


Figure 2. Dual-system models of judgment

System 1 judgments are made in many contexts because "we think associatively, we think metaphorically, we think casually" (p. 23). Kahneman concluded: "The intuitive System 1 is more influential than your experience tells you, and it is the secret author of many of the choices and judgments you make" (p. 13). System 1 makes

extensive use of heuristics which are “rules of thumb” that people use to simplify their decision-making. They may be innate which reflects “we are born to perceive the world around us” (p. 21); or they may be learned since “other mental activities become fast and autonomic through prolonged practice…and learned associations” (p. 22).

In other words, if a price heuristic is innate as suggested by System 1, then it should be universal across cultures. If it is not universal, then it suggests it is learned and interpreted differently in different cultures.

1.4 Overview of the experiments

The three experiments used in the current study explore price heuristics in different cultures. Studies 1 and 3 used a total of 2,346 usable questionnaires from three countries: 486 from the U.S.; 866 from Korea; and 994 from China. Study 1 explored recognition of the price/perceived quality relationship in all three cultures. It investigated subjects’ price decisions when confronted with inexpensive functional items (buying a sandwich and a pizza) and an expensive hedonic option (purchasing tickets for a show); in two consuming situations (consuming alone or with another person); in two social group contexts (with an acquaintance or with a family member). The subjects were drawn from three cultures: U.S. (individualistic, low-context culture), and Korea and China (collectivist, high-context cultures).

Studies 2 and 3 measured the effectiveness of an odd-ending price strategy in the context of tourism services from the perspectives of supply (Study 2) and demand (Study

3). In the U.S., the use of 9-ending prices has been a long-standing practice (Rudolf,1954; Schindler & Kirby, 1997; Twedt, 1967). However, it is not widely embraced in Asian countries such as China and Korea (Nguyen et al., 2007; Simmons & Schindler, 2003).

In Study 2, the usage rates of rightmost digits from 0 to 9 were explored in a sample city in each of the three countries: New York City in U.S., Seoul in Korea, and Shanghai in China. If sellers perceive odd-ending prices to be effective, they are likely to use 9-ending prices most frequently. If there are cultural interpretations of price endings in the three cultures, then they are likely to use cultural specific price endings rather than 9-ending prices which dominate in the U.S.

Study 3 investigated potential tourists' price decisions when confronted with odd and even price options relating to inexpensive functional items (buying a sandwich alone and a pizza with a travel companion) and an expensive hedonic option (purchasing tickets with a travel companion for a show). They were also asked to respond to a scenario involving discounted hotel rooms to see if a 9-ending discounted price was effective when compared to even-ended price discounts.

The questionnaires used to collect the data are reproduced in Appendices A through D. The Korean and Chinese translations were done by natives of those countries who were fluent in English. After the translations had been done, others who were fluent in the language checked their accuracy. A summary of the hypotheses that were tested is shown in Table 1.

Studies 1 and 3 used the U.S. dollar as the currency unit for the experiments in all three countries' samples. This recognized that most tourism services in the U.S. accept only U.S. dollars, even though many visitors come from foreign countries. To strengthen the assumption that study subjects from Korea and China were familiar with the U.S. dollar only those subjects with a university-level education were included in the sample. In Study 2, each country's currency was used to measure the culture's sellers' perspectives of price-ending formats: the dollar for the U.S., the won for Korea, and the yuan for China.

Table 1. Hypotheses of Study 1, Study 2, and Study 3

Study No.	Hypotheses	
Study 1	H1-A	There will be differences within U.S., Korean and Chinese samples in the acceptability of prices between buying a service to use alone and buying it to share with others.
	H1-B(i)	In the U.S. sample, there will be no differences in the acceptability of prices between buying a tourism service for an acquaintance and buying it for a family member.
	H1-B(ii)	In the Korean and Chinese samples, there will be difference in the acceptability of prices between buying a tourism services for an acquaintance and buying it for a family member.
	H1-C	There will be an increased propensity to select a higher priced option when buying an inexpensive service for others than when buying an expensive service for them.
Study 2	H2-A(i)	There will be significant differences in the frequency with which odd-ending prices are used between suppliers of five tourism services in the U.S. and those in Korea and China.
	H2-A(ii)	There will be significant differences in the frequency with which odd-ending prices are used between franchise hotel operators in the U.S. and those in Korea and China.
	H2-B	There will be significant differences in the frequency with which odd number endings are used when a price's left digit is changed by the 9-ending right digit, compared to when the left digit is not changed by the 9-ending right digit.
	H2-C(i)	There will be increased frequency of odd-ending prices by suppliers of low-price tourism services, compared to those that are high-price.
	H2-C(ii)	There will be increased frequency of odd-ending prices by hotels rated as 1, 2, or 3 stars, compared to hotels with 4 or 5 stars.

Table 1. Continued

Study No.	Hypotheses	
Study 3	H3-A	There will be differences in the relative importance tourists assign to meanings associated with 9-ending prices among the three cultures.
	H3-B(i)	Tourists in high-context cultures are less likely to select 9-ending prices than to select even-ending prices.
	H3-B(ii)	Decisions relating to selection of 9-ending prices will be influenced by the symbolic meanings associated with them.
	H3-C	In the context of a hotel room, a 9-ending price will be perceived as offering a significantly greater discount than an even-numbered price.
	H3-D	The effectiveness of a 9-ending discount will be attributable to different symbolic meanings that tourists ascribe to 9-endings.

CHAPTER II

STUDY 1: CULTURE AND TRAVEL GROUP INFLUENCES ON PRICE-QUALITY

2.1 Introduction

The U.S. is the world's leading tourism earner with $205 billion in 2015, and the number two destination in international arrivals with 78 million. China leads global outbound travel and Korea is ranked eighth in that category (WTO, 2016) and both countries have been termed collectivist cultures. In contrast, the U.S. is an individualist culture (Hofstede, 1980). As contact between these cultures increases, an understanding of the implications of the profound differences between them is important.

Differences between collectivist and individualist cultures have been identified in leisure motivations (Walker, 2009; Walker, Deng & Dieser, 2005); travel motivations (Chen, 2000); tourist information search and tolerance for risk (Money & Crotts, 2003); perceptions of travel risk and safety (Reisinger & Mavondo, 2006); different types of tourism behavior (Manrai & Manrai, 2011) different expectations of tourists and service providers (Kim & McKercher 2011); and evaluation of hotel service quality (Crotts & Erdman, 2000; Mattila, 1999). However, to the best of the authors' knowledge, cultural influence on price decisions has not previously been investigated.

Traditionally, the neoclassical concepts of supply, demand and utility have provided the guiding conceptual framework for pricing decisions. The "law" of market demand in this framework states the quantity of a service will fall when price increases and rise when price decreases. That is because traditional economics assumes the

marketplace is perfect and efficient; consumers are fully informed; they behave logically; and that prices are determined rationally by the relationship between supply and demand. Economists typically have discounted behaviors that violate these principles as idiosyncratic and atypical.

However, the focus in the last couple of decades has shifted from how economists believe people ought to behave, to how they actually behave (Kahneman, 2011). One of the heuristics which in some contexts explains the inability of traditional economic theory to predict demand shifts is recognition of the relationship between price and quality. This recognizes that a higher price sometimes increases demand, because it enhances positive perceptions of quality (Rao and Monroe 1989; Scitovszky 1945). While traditional economics assumes consumers perceive prices only as costs, in the real marketplace people recognize price is often related to quality in a given context (Dickson and Sawyer 1986). Hence, while in some contexts a higher price may be perceived as a bigger sacrifice to obtain a given utility (Chapman 1986; Monroe & Krishnan 1985), in other cases it may be perceived as a heuristic that guarantees better quality or outcome benefits (Zeithaml, 1988; Rahgubir, Inman and Grande 2004).

Thus, the same individual may make a different service selection situationally depending on how he/she weights quality or price (Olshavsky 1985). For example, a low price may be regarded as good value in cases where the focus is on short-term monetary cost (Schechter 1984; Bishop 1984) but viewed as lower value if the purchase is viewed as a long-term investment (Dodds & Monroe 1985).

The experiments reported in this study incorporated three behavioral influencers on pricing decisions in the tourism field. They explored use of the price-perceived quality heuristic; the influence of different cultures' societal norms; and the influence of the social composition of travelling groups on tourists' decisions to select a lower or higher priced option when purchasing meals and show tickets. The authors believe this is the first time the effect of any of these influencers on tourists' pricing decision has been explored.

2.2 Literature review

The genesis of the study was derived from three different theoretical perspectives: price-perceived quality relationship; cultural influence; and social group influence.

2.2.1 Price/perceived quality relationship

By definition, many tourism services cannot be touched or felt in advance. The decisions of those who have no experience with a given service are based on expectations and cues put forward by a service supplier. Price is one cue. It has been noted, "Setting the right price in services is more than a matter of generating dollars today. It is also a matter of sending the right message about the service. Prices are evidence" (Berry & Parasuraman, 1991, p. 164). In some instances, it is a market signal. Market signals have been defined as "activities which, by design or accident, alter the benefits of, or convey information to, other individuals in the market" (Spence, 1974, p.

1). Signals function as information cues when the attributes of a service are unknown and unobservable prior to purchase. The void created by these attributes may be filled by price, because price is observable and in most people's minds is correlated with quality. The relationship is undergirded by the aphorism: You get what you pay for.

Recognition of the price/perceived quality relationship first appeared in the academic literature in 1945. The author noted "the word 'cheap' usually means inferior quality nowadays", and that "a commodity offered at a lower price than competing commodities will be both attractive to the consumer on account of its greater cheapness and less attractive on account of its suspected inferior quality" (Scitovszky, 1945, p. 101). He further stated tthe rejection of low priced services is a form of risk avoidance, the risk being that inexpensive services may be less likely to give the desired level of satisfaction.

Numerous studies have hence been reported in the marketing literature. Indeed, it has been characterized as "one of the most commonly studied extrinsic cues in marketing" (Volckner & Hofman, 2007, p. 182). Reviews of this literature have consistently confirmed general acceptance of the price/perceived quality relationship. In an early review of 38 published articles, Rao and Monroe (1989) reported the relationship was consistently present in studies that used relatively lower priced, frequently purchased goods, "but whether the strength of the association increases for higher priced, less frequently purchased goods has not yet been documented adequately" (p. 181). Seventeen years later, a meta-analysis of 71 studies concluded, "Consumers use price as an important indicator of quality" (Volckner & Hofman, 2007, p. 194).

Since price is often used as a heuristic or cue to infer level of quality, people's decisions may differ when a service is either shared with others or made known to them. Reference group theory (Bearden & Etzel, 1982) directs that individuals want their choices to be accepted and confirmed by others. For example, Wakefield and Inman (2003) reported there was a significant difference in the tendency for lower priced services to be preferred when people planned to consume them *alone,* compared to when they planned to share them *with others.* They suggested "social influence may be greater when similar others are immediately involved, as when people shop and eat together' (p. 206). This response reflects a desire to conform and suggests that tourists' decisions related to price levels will be influenced by social and cultural group norms.

2.2.2 Cultural influence

People in different cultures sometimes see, understand, and react differently to the same situation or phenomenon. These differences were illustrated in a study reported by Ariely (2009). He found that when a group of Americans ordered beers at a bar, each of them tended to select a different beer to impress others by showing their independence. In contrast, Hong Kong customers tended to select the same beers to impress others by showing their conformity. Interestingly, the customer groups from both cultures experienced a decrease in satisfaction from their choices because they did not select their primary preference.

There is a mutually reinforcing process between culture and behavior. The aggregation of people's behavior leads to a distinctive cultural personality (Triandis, 2001). In turn, cultural personality influences individuals' behaviors. Hofstede (1980), in

his analyses of data from 40 countries, found that cultural personalities could be arranged along a bipolar continuum anchored by collectivistic cultures and individualistic cultures. Subsequently he offered the following description of the two poles:

> Individualism pertains to societies in which the ties between individuals are loose: everyone is expected to look after himself or herself and his or her immediate family. Collectivism as its opposite pertains to societies in which people from birth onwards are integrated into strong cohesive in-groups, which throughout people's lifetime continue to protect them in exchange for unquestioning loyalty (Hofstede, 1991, p.51).

The use of dichotomies as a heuristic device produces stereotypes and distorted pictures of a complex social reality. They pigeonhole whole cultures (Sinha & Tripathi, 1994). The use of a continuum in this conceptualization recognizes that the extent to which people are influenced by the prevailing culture varies. Kim et al. (1994) explained: "Although collective entities, by and large, shape individuals' attitudes, beliefs, emotions and behaviors, they do not determine them. Individuals possess characteristics that are often unique and self-directed. They often accept, select or reject cultural influences" (p. 5). Similarly, others have noted, "there are elements of both independence and interdependence in every self" (Fiske et al., 1998, p. 925) and "interdependent selves do not attend to the needs, desires and goals of *all* others. Attention to others is not indiscriminate; it is highly selective and will be most

characteristic of relationships with in-group members" (Markus & Kitayama, 1991, p.229).

Individualist cultures allow high levels of independence. The values stressed are generally those of self-assurance, self-expression, self-actualization and self-reliance. Hence, members of individualist cultures are likely to make independent judgments rather than conform to a majority view. They are primarily motivated by their own preferences and needs. They feel autonomous. If the goals of their group do not match their personal goals, then they think it is "obvious" that their goals have priority (Triandis, 1995). Members of individualist cultures tend to identify themselves independently rather than as a member of a group (Triandis & Gelfand, 1998). This suggests they may *not* give more consideration to the price-perceived quality relationship when they share those services with another.

In contrast, collectivist cultures emphasize connectedness to other members of in-groups, conformity and social contribution (McAuliffe et al., 2003; Ariely, 2009). In-groups are "groups of individuals about whose welfare a person is concerned, with whom that person is willingly to cooperate without demanding equitable returns, and separation from whom leads to anxiety" (Triandis ,1998, p. 75). People's social behaviors are a consequence of the norms, duties and obligations imposed on them (Triandis, 1995). They tend to adjust their preferred course of action so it is consistent with the needs and expectations of others. Group goals are weighed more heavily than personal goals when the two are in conflict. East Asian collectivist cultures, which are

the focus of this study, have been found toespecially value “virtuous action” (Hofstede, 1991).

People in collectivist cultures tend to be frugal and pragmatic when buying for personal use, because their social norms emphasize savings and non-materialism. On the other hand, they are not frugal when purchasing gifts for others, because the importance of the relationship stressed by their culture encourages them to purchase high quality gifts to show their respect for others (Yau, 1994; Sciutte & Ciarlante, 1998). In this study, it was hypothesized that subjects from the U.S. (an individualist culture) and Korea and China (collectivist cultures) would react to price options differently when they were alone and when they were in the company of others.

People in collectivist cultures tend to be governed by the cultural norms of a societal group and their desire for harmonious relationships with the group, rather than focusing only on themselves (McAuliffe, Jetten, Hornsey & Hogg, 2003). However, Hofstede (1994) pointed out: “Collectivism is not altruism, but in-group egotism. In a collectivist society a poor relative can expect to be helped, but not necessarily a poor stranger” (p. xiii). Triandis (1995) confirmed: “Social behavior is very different when a collectivist is interacting with an in-group than when she is interacting with an out-group member; it is only slightly different in the case of individualists” (p. 74). Thus, in this study it is hypothesized that the influence of collectivist societies will be strongest when family members rather than acquaintances are involved. Acquaintances are likely to be perceived as in-group members by some, while others view them as out-group: “In such ambiguous relationships collectivists and individualists are most likely to differ in their

behavior. Collectivists are inclined to see ambiguous groups as out-groups; individualists tend to view groups characterized by such ambiguity as quasi-in-groups.' (Trandis, 1995, p. 9).

In the context of price, it has been suggested that collectivist influence may be stronger if the price levels of a service under consideration are relatively low. In this situation consumers may be more likely to select a high-price option because the monetary losses are small (Monroe, 1973). Thus, social benefits can be obtained by choosing a higher price option with a minimum amount of monetary sacrifice. In contrast, if the service is relatively expensive, then there may be more reluctance to incur the larger monetary cost associated with selecting a high-priced option. Hence, the experiments reported here incorporated price options for both low price restaurant purchases and a high price show purchase.

2.2.3 Social influence of the travel group

"Whereas culture at the global level certainly affects the way in which small groups operate, culture can also be analyzed at a more microsocial level" (Hogg et al., 2004, p. 266). While the collectivist/individualistic continuum may exert a macro societal influence on tourists' decisions, the nature of the social travel group may exert influence at the micro level. Like the macro influence of culture, social groups provide regularities, expectations, and boundaries that define a group's membership, and they are prescriptive not merely descriptive (Hogg et al., 2004).

Social identity theory postulates that people construct group norms from in-group members and in-group behaviors, and internalize and enact these norms as part of their

social identity (Tajfel & Turner, 1979; Turner, 1982). Group decision making is influenced by social identity processes. As groups become more cohesive, there should be a greater tendency for members to conform to the normative leanings of the group (Hogg et al., 2004). The expectation is that social identity processes in small groups will be more evident in collectivist than individualist societies (Hinkle & Brown, 1990). Hence, in this study the influence of the social travel group was expected to be stronger in the Korea and China samples than in the U.S. sample.

It has long been recognized that for a majority of people leisure activities are social activities (Burch, 1969; Field, 1971; Cheek, 1971). In an early study in the tourism field, Crompton (1981) found that social groups exerted four types of influence on individuals' selection of a destination: (i) directly persuading another member of their social group to accompany them on a vacation; (ii) choice of destination and choice of attractions at a selected destination; (iii) predisposition to vacation and/or to go to a particular destination; and (iv) enhancing the vacation experience, exemplified by the observation "it's not what you do that makes a vacation, it's who you go with" (p.564).

In subsequent tourism studies the rather fuzzy notion of "influence" was complemented by the more definitive concept of "social surrogate", whereby individuals relinquish any formative role in decisions and simply go along with the suggestions made by others in their travel group (Gitelson & Kersletter, 1994; Decrop, 2005). An indication of the magnitude of social surrogates' influence was provided by Stone (2016) who reported that among his 404 respondents 25% delegated destination choice and 50% delegated dining and activity decisions to social surrogates while traveling.

Wakefield and Ingham (2003) noted, “The role of social influence in price sensitivity has not been heretofore examined” (p. 205). Nevertheless, research on reference group influence suggests individuals will be less price sensitive in social consumption situations (Gainer, 1995; Netemeyer, Bearden & Teel, 1992). It has been found that those making a purchase decision are likely to choose alternatives that are best received by those others who will evaluate their choices, since they want to create a good impression (Simonson, 1989; Stone, 2016). They are likely to be concerned with what others think about the purchase: “In particular, we expect that individuals will be less likely to select the lowest priced alternative in the presence of others due to perceived negative connotations, such as being perceived as ‘cheap’ or unable to afford the higher priced alternative” (Wakefield & Inman, 2003, p. 206).

The influence of social context may be more pervasive in tourism decisions than in a typical retail purchase situation, because retail products tend to be purchased for personal use while tourism experiences usually are shared with members of a traveling group (Filiatrault & Ritchie, 1988). Thus, individuals may give more consideration to the opinions and preferences of others in their group when purchasing a tourism service, resulting in a more complicated decision-making process (Ritchie, 1997). Further, Wakefield and Inman (2003) observed, “Price information processing has not been examined with reference to hedonic benefits”, and suggest “Social and hedonic situations (e.g. visiting an amusement park with friends) may lead individuals to be less price sensitive when compared to non-social and functional situations (e.g. shopping for groceries alone” (p. 200).

2.3 Hypotheses, design and procedures

The current study investigated subjects' price decisions when confronted with inexpensive functional items (buying a sandwich and a pizza) and an expensive hedonic option (purchasing tickets for a show); in two consuming situations (consuming alone or with another person); in two social group contexts (with an acquaintance or with a family member). The subjects were drawn from three cultures: U.S. (individualistic culture), and Korea and China (collectivist cultures). Based on the literature review, four hypotheses were tested:

H1-A. There will be differences within U.S., Korean and Chinese samples in the acceptability of prices between buying a service to use alone and buying it to share with others.

H1-B(i). In the U.S. sample there will be no differences in the acceptability of prices between buying a tourism service for an acquaintance and buying it for a family member.

H1-B(ii). In the Korean and Chinese samples, there will be difference in the acceptability of prices between buying a tourism services for an acquaintance and buying it for a family member.

H1-C. There will be an increased propensity to select a higher priced option when buying an inexpensive service for others than when buying an expensive service for them.

Each subject was presented with one of four different questionnaires translated into their language. The same travel context was used in all of the questionnaires: A

three-day pleasure vacation trip to New York City which involved staying at a hotel, dining, shopping and sightseeing. This standardization was intended to control for extraneous variance that could be attributable to different vacation destinations and itineraries, rather than the variables of interest in the study.

Subjects were given one of two different scenarios: A trip with a casual acquaintance (Questionnaires 1and 3); or a trip with a close family member (Questionnaires 2 and 4). In this latter scenario, each subject was requested to identify the relationship of the family member with whom he/she would most like to take on the trip. This was intended to reinforce that the context of the purchase was a relationship with a close family member.

On all four of the questionnaires, three scenario questions were posed and in each question subjects were requested to make a decision to purchase a lower or a higher priced option. Question 1 asked which option they would purchase when eating a sandwich (a relatively inexpensive functional purchase) alone; Question 2 asked which priced show (a relatively expensive hedonic service) they would purchase when seeing it with either a casual acquaintance or a family member; and Question 3 asked which priced pizza (a relatively inexpensive functional purchase) they would purchase when eating it with either a casual acquaintance or a family member. Tourism experiences are comprised of a portfolio of tangible products (such as meals) and less tangible experiences (such as shows); and functional purchases (such as sandwiches and pizzas) and hedonic purchases (such as shows). The scenarios were designed to address these differences.

As a control variable, the effect of different price frames (lower price with lower leftmost digit or with the same leftmost digit) on subjects' price decisions were investigated. Questionnaires 1 and 2 used prices in which the leftmost digit for both price options was different while the leftmost digit for the options in Questionnaires 3 and 4 was the same. The analyses conducted on data from Questionnaires 1 and 2, were replicated on Questionnaires 3 and 4.

In summary, the scenarios were designed to identify price option preferences in (i) different consuming situations (consuming alone or together), (ii) different social group contexts (with an acquaintance or a family member), and (iii) different price level services (an inexpensive meal or an expensive show).

2.4 Sampling

Even though probability sampling is always preferred, it is generally difficult and expensive to operationalize. For this reason, convenience samples of college students in the three different cultures were used for these experiments. Traditionally, there has been some divergence of opinion on the appropriateness of using undergraduate college students in social science research. However, this practice has been increasingly accepted in the major journals. Peterson (2011) reported that in the *Journal of Consumer Behavior* over a quarter century the percentage of articles using college students increased from 29% to 89%, while in the *Journal of Consumer Psychology* it was 86%. Similar large percentages were reported in the *Personality and Social Psychology*

Bulletin (86%) and the *Journal of Personality and Social Psychology* (63%) (Sherman et al., 1999).

It has long been recognized that tourists' decisions vary according to socioeconomic variables (Kim, Cheng & O'Leary 2007). Hence, a rationale for using student samples is that the homogeneity of their age and education profile can reduce sources of extraneous variation.

A total of 2,346 usable questionnaires were collected in three countries: 486 from the U.S.; 866 from Korea; and 994 from China (Table 2). The U.S. samples of college students were collected from two universities; the Korean samples were collected at eight different universities; while the Chinese samples were collected at four universities. Only those questionnaires in which all of the questions were fully answered were considered usable.

Table 2. The sources and sizes of samples collected in the three cultures

Countries	Data Collector	University	Questionnaire types				Total
			1	2	3	4	
US	Dr. John L. Crompton	Texas A&M University	94	94	88	92	368
	Dr. Dennis Howard	University of Oregon	33	28	27	30	118
	Total		**127**	**122**	**115**	**122**	**486**
Korea	Dr. Seoho Um	Kyunggi University	55	54	51	54	214
	Dr. Seungdam Choi	Hanyang University	25	25	25	25	100
	Dr. Seokho Lee	Kyung-Hee University Sejong University Sookmyung Women's University Kyunggi University Gachon University	41	38	39	39	157
	Dr. Bong Koo Lee	Dong-eui University	45	45	49	50	189
	Dr. Youngah Park	Catholic University of Daegu	50	50	54	52	206
	Total		**216**	**212**	**218**	**220**	**866**
China	Dr. Jian Peng	Minzu University	50	50	49	49	198
	Dr. Humei Liu Dr. Pan Liyong	Zhejiang University	59 49	54 39	57 50	55 47	410
	Dr. Shubo Wu	Central South University of Forestry and Technology	50	50	49	49	198
	Dr. Seongseop Kim Dr. Kam Hung	The Hong Kong Polytechnic University	57	39	44	48	188
	Total		**265**	**232**	**249**	**248**	**994**
GRAND TOTAL			**608**	**566**	**582**	**590**	**2,346**

2.5 Tests for internal consistency

Chi-Square tests were undertaken to evaluate the homogeneity of the samples collected from the different locations in each country. The degree of internal consistency was believed to be indicative of the level of confidence that could be ascribed to the convenience samples' responses being reasonably representative of students within each culture.

The responses to Question 1 were compared among the sub-samples in each country (Table 3). The responses of the two U.S. sub-samples to Questionnaires 1 and 2 (p-value = 0.59), and to Questionnaires 3 and 4 (p-value = 0.61) were not significantly different. While the Korean sub-samples responses to Questionnaires 1 and 2 were not significantly different (p-value= 0.09), those of Questionnaires 3 and 4 were (p-value < 0.01). The source of the difference was the 50 subjects from Hanyang University. The Chi-Square test was redone with 816 Korean subjects (94.23%) omitting the Hanyang subjects. The analysis suggested the other sub-samples were relatively homogeneous in their responses (p-value = 0.46). Among the Chinese sub-samples, significant sub-sample differences occurred in Questionnaires 3 and 4 (Table 3). The source of the differences was the 92 subjects from Hong Kong (p-value= 0.01). When the test was redone without that group (90.74%) the results showed the other sub-samples were homogeneous (p-value= 0.89).

Table 3. Results of Chi-Square testing from differences among sub-samples

Countries	Collectors	Questionnaires 1 and 2			Questionnaires 3 and 4		
		$7.99 Lower leftmost digit than another	**$8.40 Higher leftmost digit than another**	**Total**	**$7.60 Same leftmost digit**	**$$7.99 Same leftmost digit**	**Total**
U.S.	Texas A&M	89.36% (168)	10.64% (20)	(188)	85.00% (153)	15.00% (27)	(180)
	Oregon	86.89% (53)	13.11% (8)	(61)	87.72% (50)	12.28% (7)	(57)
	P-value	0.59		(249)	0.61		(237)
Korea	Catholic of Daegu	78.00% (78)	22.00% (22)	(100)	80.19% (85)	19.81% (21)	(106)
	Dong-Eui	84.44% (76)	15.56% (14)	(90)	79.80% (79)	20.20% (10)	(99)
	Kyunggi	78.90% (86)	21.10% (23)	(109)	72.38% (76)	27.62% (29)	(105)
	Hanyang	64.00% (32)	36.00% (18)	(50)	**54.00% (27)**	**46.00%* (23)**	(50)
	Five universities from Professor S.L.	78.48% (62)	21.52% (17)	(79)	74.36% (58)	25.64% (20)	(78)
	P-value	0.09		(428)	**<0.01***		(438)
China	Central South	69.00% (69)	31.00% (31)	(100)	74.49% (73)	25.51% (25)	(98)
	Hong Kong PolyU	79.12% (76)	20.83% (20)	(96)	**54.35% (50)**	**45.65%** (42)**	(92)
	Minzu	72.00% (72)	28.00% (28)	(100)	71.43% (70)	28.57% (28)	(98)
	Zhejiang from Professor H.L.	79.65% (90)	20.35% (23)	(113)	75.00% (84)	25.00% (28)	(112)
	Zhejiang from Professor P.L.	75.00% (66)	25.00% (22)	(97)	71.13% (69)	28.87% (28)	(97)
	P-value	0.33		(497)	**0.01****		(497)

* $p < 0.01$

** $p < 0.5$

In summary, the two U.S. samples offered homogeneous responses. In the Korea sample the Hanyang sub-sample was an outlier, while in the China sample the Hong Kong sub-sample was an outlier. However, when the outliers in both samples were removed (Hanyang and Hong Kong) it had only minimal impact on overall homogeneity since they constituted such a relatively small number of the total sample. Further, the outliers occurred in only one of the two analyses, and the directionality of the outlier responses was consistent with those of all the other sub-samples in their culture. Hence, a decision was made to retain them in the subsequent analyses.

An additional concern was the possibility of there being a residual bias in the samples' propensity to favor lower or higher priced services before being exposed to the experimental treatments. If this existed, then it would provide an alternative explanation for any differences revealed by analyses of the treatments. Accordingly, Chi-Square tests were conducted to see whether there were differences in responses between samples to Question 1 (when eating alone) on Questionnaires 1 and 2. No significant differences in any of the sample groups were found (p-value =0.49 for the U.S; p-value = 0.72 for the Korean; p-value =0.05 for the Chinese). Similarly, Chi-Square tests on the responses to Question 1 on Questionnaires 3 and 4 revealed no significant differences (p-value=0.58 for the U.S; p-value = 0.14 for the Korean; and p-value =0.40 for the Chinese) (Table 4). If such differences had emerged, then it would suggest inherent sampling bias (i.e. that the sample completing one of the questionnaires included a proportion of subjects who would inherently have preferred lower or higher priced services). These results alleviate

some concerns about inherent sampling bias among those completing the four questionnaires.

2.6 Results

H1-A. There will be differences within U.S., Korean and Chinese samples in the acceptability of prices between buying a service to use alone and buying it to share with others.

Hypothesis 1-A was investigated with a Chi-Square test that compared samples' price option preferences for Question 1 (consuming an inexpensive sandwich alone) and Question 3 (consuming an inexpensive pizza with another) within their cultures. It was anticipated that subjects in all three cultures would show more preference for the higher price option when purchasing an inexpensive meal to consume with a companion, than when purchasing it to consume alone.

The analysis displayed in Table 5 confirmed the hypothesis. In all three samples, there were statistically significant differences ($p < 0.01$), indicating a greater proclivity to select the lower price when consuming an inexpensive meal alone than with others. Table 6 showed similar results for the Korean and the Chinese samples. Irrespective of whether the leftmost digit was the same or different, the Asian samples overwhelmingly selected the lower priced option when eating alone. However, there were no significant differences ($p = 0.52$) in price selection among the U.S. sample when consuming alone and eating with another (Table 6).

Table 4. Chi-Square test for sampling bias between questionnaires

Countries	Options*	Questionnaire Types			
		1	**2**	**3**	**4**
U.S	Lower price	87.40% (111)	90.16% (110)	89.96% (100)	84.43% (103)
	Higher price	12.60% (16)	9.84% (12)	13.04% (15)	15.57% (19)
	p-value	0.49		0.58	
Korea	Lower price	77.31% (167)	78.77% (167)	71.10% (155)	77.27% (170)
	Higher price	22.69% (49)	21.23% (45)	28.90% (63)	22.73% (50)
	p-value	0.72		0.14	
China	Lower price	71.32% (189)	79.31% (184)	67.87% (169)	71.37% (177)
	Higher price	28.68% (76)	20.69% (48)	32.13% (80)	28.63% (71)
	p-value	0.05		0.40	

* Questionnaires 1 and 2 provided subjects with the two price options of $7.99 and $8.40 (a lower price has a lower leftmost digit than a higher price), while Questionnaires 3 and 4 provided subjects with the two price options of $7.60 and $7.99 (a lower price has the same leftmost with a higher price)

Table 5. Chi-Square test for samples' selections on services
when lower prices have a lower leftmost-digit than higher prices (Questionnaires 1 and 2)

	Consuming alone		**Consuming together**				P-value of consuming alone or together
			With an acquaintance		**With a family member**		
Inexpensive service	purchasing a sandwich		purchasing a pizza				
	Lower price ($7.99)	Higher price ($8.40)	Lower price ($19.99)	Higher price ($22.00)	Lower price ($19.99)	Higher price ($22.00)	P-value of with whom
U.S.	88.76% (221)	11.25% (28)	81.89% (104)	18.11% (23)	78.69% (96)	21.31% (26)	0.53	**<0.01**
Korea	78.04% (334)	21.96% (94)	58.33% (126)	41.67% (90)	56.60% (120)	43.40% (92)	0.72	**<0.01**
China	75.05% (373)	24.95% (124)	56.23% (149)	43.77% (116)	53.88% (125)	46.12% (107)	0.60	**<0.01**
P-value among cultures	**<0.01**		**<0.01**		**<0.01**			
Expensive priced service			purchasing show tickets					
			Lower price ($299)	Higher price ($330)	Lower price ($299)	Higher price ($330)	P-value of with whom	
U.S.[a]			77.17% (98)	22.83% (29)	77.87% (95)	22.13% (27)	0.89	N/A*
Korea[b]			60.19% (130)	39.81% (86)	44.81% (95)	55.19% (117)	**<0.01**	N/A*
China[c]			73.21% (194)	26.79% (71)	65.52% (152)	34.48% (80)	0.06	N/A*
P-value among cultures			**<0.01**		**<0.01**			

a. The p-value of difference in purchasing a pizza and show tickets *with an acquaintance* is 0.35, and the p-value with *a family member* is 0.88.
b. The p-value of difference in purchasing a pizza and show tickets *with an acquaintance* is 0.70, and the p-value with *a family member* is 0.01
c. The p-value of difference in purchasing a pizza and show tickets *with an acquaintance* is <0.01, and the p-value with *a family member* is 0.01
*N/A because comparisons of tourists' decisions on price level between consuming alone and together were appropriate only for the inexpensive options i.e. sandwich and pizza. Comparing responses to the inexpensive options with expensive show tickets would introduce obvious bias.

Table 6. Chi-Square test for samples' selections on services
when lower prices have the same leftmost-digit (Questionnaires 3 and 4)

	Consuming alone		**Consuming together**					Chi-Square of consuming alone and together
			With an acquaintance		**With a family member**			
Inexpensive service	Eating sandwich		Eating pizza					
	Lower price ($7.60)	Higher price ($7.99)	Lower price ($18.00)	Higher price ($19.99)	Lower price ($18.00)	Higher price ($19.99)	Chi-Square of with whom	
U.S.	85.65% (203)	14.35% (34)	87.83% (101)	12.17% (14)	77.87% (95)	22.13% (27)	**0.04**	**0.52**
Korea	74.20% (325)	25.80% (113)	68.81% (150)	31.19% (68)	48.64% (107)	51.36% (113)	**<0.01**	**<0.01**
China	69.92% (346)	30.38% (151)	53.01% (132)	46.99% (117)	49.60% (123)	50.40% (125)	0.45	**<0.01**
Chi-Square among cultures	**<0.01**		**<0.01**		**<0.01**			
Expensive priced service			Seeing a show					
			Lower price ($270)	Higher price ($299)	Lower price ($270)	Higher price ($299)	Chi-Square of with whom	
U.S.[a]			87.83% (101)	12.17% (14)	79.51% (97)	20.49% (25)	0.08	N/A*
Korea[b]			62.84% (137)	37.16% (81)	43.64% (96)	56.36% (124)	**<0.01**	N/A*
China[c]			66.67% (166)	33.33% (83)	60.68% (149)	39.92% (99)	0.13	N/A*
Chi-Square among cultures			**<0.01**		**<0.01**			

a. The p-value of difference in purchasing a pizza and show tickets *with an acquaintance* is 1.00, and the p-value with *a family member* is 0.57.
b. The p-value of difference in purchasing a pizza and show tickets *with an acquaintance* is 0.19, and the p-value with *a family member* is 0.29.
c. The p-value of difference in purchasing a pizza and show tickets *with an acquaintance* is <0.01, and the p-value with *a family member* is 0.02.
*N/A because comparisons of tourists' decisions on price level between consuming alone and together were appropriate only for the inexpensive options i.e. sandwich and pizza. Comparing responses to the inexpensive options with expensive show tickets would introduce obvious bias.

The preferences for the lower priced option were much stronger among the U.S. sample than in the Korean and Chinese samples in all cases of consuming alone and together (p-value <0.01). That may mean the U.S. sample tended to perceive price as a cost while the Korean and Chinese samples were more likely to perceive it as an indicator of quality.

H1-B(i) In the U.S. sample there will be no differences in the acceptability of prices between buying a tourism service for an acquaintance and buying it for a family member.

The hypothesis was investigated by comparing the responses on Question 3 (purchasing a pizza) in Questionnaire 1 (traveling with an acquaintance) and in Questionnaire 2 (traveling with a family member) (Table 5); and by comparing those in Questionnaires 3 (traveling with an acquaintance) and 4 (traveling with a family member) (Table 6). It was anticipated the U.S. sample would not differentiate between types of travel companions.

There was overwhelming support for the lower priced option for purchase of the pizza among the U.S. sample regardless of with whom they would share it (Tables 5 and 6). There were no differences in price selection irrespective of whether the companion was an acquaintance or a family member when the lower prices had a lower leftmost digit. However, when the lower prices had the same leftmost digit (Table 6), the proportion selecting the higher price option increased markedly when the purchase was for a family member rather than for an acquaintance. This increase was significant (0.04) in the pizza scenario in Table 6, so the results for the hypothesis were mixed.

When the analysis was replicated in the show ticket context, the hypothesis was unequivocally confirmed. Lower priced options were selected more frequently regardless of whom would share the experience.

H1-B(ii) In the Korean and Chinese samples, there will be difference in the acceptability of prices between buying a tourism services for an acquaintance and buying it for a family member.

When the Chi-Square analysis was repeated with the Korean and Chinese samples, it was anticipated the hypothesis would be confirmed with there being a greater preference for lower prices when buying a service for a casual acquaintance than when buying it for a meaningful family member.

Among the Chinese sample no significant differences emerged (see Tables 5 and 6). This finding was replicated in the Korean sample for the low-cost pizza scenario (see Table 6). The Korean subjects selected the lower priced option regardless of with whom the experience was shared. However, as shown in Table 7 (in which the leftmost digit of the price options was the same) the higher priced option was selected more frequently by those subjects eating pizza with a family member, than with an acquaintance. ($p < 0.01$) This propensity to select higher priced services for a family member also was revealed when they purchased a show ticket (p-value <0.01) (see Tables 5 and 6). Thus, the results suggested the hypothesis should be rejected for the China sample, but were partially confirmed for the Korean sample.

H1-C There will be an increased propensity to select a higher priced option when buying an inexpensive service for others than when buying an expensive service for them.

The hypothesis was tested by analyzing the responses to Questions 2 and 3. The ticket price in Question 2 represented an expensive price for a hedonic product, while buying the pizza in Question 3 represented an inexpensive functional product. It was expected the samples would show a lower preference for the higher price option when sharing a service with an acquaintance than with a family member, especially for a relatively expensive service.

The results displayed in Tables 5 and 6 show subjects in the U.S. sample were not influenced by magnitude of expense, irrespective of whether the purchase was for an acquaintance or a family member. Among the Chinese sample significant differences (p-value < .05) emerged (see Tables 5 and 6). When purchasing an expensive show ticket, lower priced options were selected significantly more frequently in all cases (p-value <0.01; p-value =0.01 in Table 5; and p-value <0.01; p-value =0.02 in Table 6). Thus, the hypothesis was not confirmed for the U.S. sample but was confirmed for the Chinese sample.

This finding was replicated in the Korean sample for the low-cost pizza scenario with a family member in Table 5 (p-value =0.01). The directionality of the statistical difference was antithetical to that postulated in the hypotheses with the higher priced option being more prevalent in the expensive show context (55%) than in the inexpensive pizza scenario (43%). However, in other cases, the Korean sample was not

significantly influenced by the service price level (p-value =0.70 in Table 5; p-value =0.19 and 0.29 in Table 6)

2.7 Discussion

The experiments were predicated on the assumption that there was widespread recognition of the price/perceived quality relationship in all three cultures. As the scenarios moved from consuming alone, with an acquaintance, to with a close family member, subjects in each culture had a greater propensity to select the higher price option. This was consistent with the hypotheses and appeared to confirm the assumption.

The testing of Hypothesis 1-A revealed that in all three samples when a low priced sandwich and pizza were purchased, a majority of subjects selected the lower price option whether or not they were with a companion. However, there was a statistically significantly greater tendency to purchase the higher price option when it was being consumed with a companion than when eating it alone. This was consistent with Wakefield and Inman's (2003) review of the literature which concluded, "We expect consumers to be less concerned about price in social consumption contexts" (p.206), and with findings that individuals who know they will share consumption with others are likely to alter their choice of brands (Gainer, 1995).

Results of Hypothesis 1-B(i) showed there was an overwhelming tendency for the U.S. sample to select the lower price option when making purchases for both the pizza and the show for both an acquaintance and family member. This was consistent

with Trandis' (1995) observation that individualists treat in-groups and out-groups similarly and do not pay much attention to them. The percentage selecting the higher option was much lower than that displayed by the Korea and China samples. It reflected the expectation associated with an individualist culture where the emphasis is on self-reliance and personal goals, rather than on group responsibilities.

In contrast to the U.S. sample, a majority of the Korea sample selected the higher price option in both the pizza and show scenarios when their companion was a family member. The tests of Hypothesis 1-B(ii) revealed that this did not occur with acquaintances where the low cost option dominated for both the pizza and show, and the difference from the response with the family member was statistically significant (p-value > 0.5).

Results from the Korea sample (displayed in Tables 5 and 6) were distinctively different from those of the China sample, even though they are frequently regarded as both having a collectivist culture. Results for the China sample did not differentiate between acquaintance and family. A slightly larger percentage selected the higher price option when family were involved, but it was not significant for either the pizza or the show. However, the lack of significance reflected the greater propensity of the China sample to select the higher price option for an acquaintance. For the pizza purchase, the percentage of the China sample who selected the higher price with an acquaintance was substantially higher than in the Korea sample, while for the show purchase the percentages were similar. Only in the show purchase for family did the China sample fail

to match the Korea sample. This suggests that the collectivist influence in China extends beyond the family to a wider circle than in Korea.

Hypothesis 1-C was intended to provide insight into the conflicting expectations made by Monroe (1973) and Wakefield and Inman (2003). In his early review of literature, Monroe (1973) suggested that subjects would select a higher price option for inexpensive purchases when consuming with others because the monetary trade-off for doing this was relatively small. However, this would not extend to expensive purchases where the monetary cost of selecting a higher price would be high. In contrast, Wakefield and Inman (2003) argued customers were less price sensitive when purchasing high priced hedonic items than when making low cost functional purchases. Their position is consistent with the Weber-Fechner law that, when adapted to price, states users perceive price differences in proportional and relative terms, not absolute terms (Monroe & Lee, 1999). The Wakefield and Inman contention was reinforced by the empirical findings reported by Childers and Rao (1993) in Thailand. They found that individuals were most sensitive to what others think of their chosen brand when it is an hedonic item and is publicly consumed.

The data for Hypothesis 1-C indicated that among the U.S. sample there was no significant variation in price option selections between the purchase of the inexpensive pizza and the high priced show. In both instances, for both family and acquaintances, the U.S. sample overwhelmingly selected the low-price option.

When purchasing for an acquaintance, the Korean responses were not significantly different (p-value > .05). However, there was a tendency (statistically

significant) for more of the sample to select the higher priced option for family in the expensive show scenario, which was supportive of the Wakefield and Inman (2003) expectation.

The China sample results differed from the other two groups. A significantly larger percentage of the sample selected the higher price option for inexpensive pizza, than for the expensive show in both the family and the acquaintance contexts. This appeared to add credence to Monroe's (1973) hypothesis in that they secured social benefits only when the monetary cost was low. Hence, the mixed results to this hypothesis meant that each of the conflicting suggestions could at best claim only partial support for their expectations.

While several analyses revealed statistically significant trends within the three samples, care should be taken not to offer an over-optimistic interpretation of the data. In each case, there were substantial numbers of the sample who did not conform to the trend shift. For example, in Hypothesis 1-B(ii) the percentage of the Korean sample who selected the higher price pizza option when the companion was a family member rather than an acquaintance increased by an impressive 20 percentage points (31.2% to 51.4%) which was highly statistically significant. However, there still remained almost half of the sample (48.6%) who continued to select the low-price option. This reinforces the importance of conceptualizing the magnitude of cultural influence as varying along a continuum. This suggests there are individualists residing in collectivist dominated societies such as Korea, and collectivists living in individualist cultures such as the U.S.

In Hofstede's original study, he concluded "about half of the country-to-country difference" (1994, p. xii) could be explained by four dimensions, one of which was the collectivism-individualism dimension. This dimension accounted for perhaps 15% of the difference. He reported there was a high correlation of .82 between individualism and a country's wealth. In the years since Hofstede's study was undertaken, Korea and China have experienced an increase in affluence at a rate that is perhaps unparalleled in human history suggesting that the collectivist influence in those societies may have weakened in recent decades. However, the results of this study suggested that the collectivist influence remained influential.

Although the use of students from each culture controlled for age and education, it obviously limits generalization to a non-student population. Sears (1986, p. 515) has suggested that compared with older adults, "college students are likely to have less-crystallized attitudes, less-formulated senses of self, stronger cognitive skills, and stronger tendencies to comply with authority." Further, research by Sinha, Sinha, Verma and Sinha (2001) has found that education has a positive effect individualism.

Wakefield and Inman (2003) noted that "pricing research has infrequently ventured outside the grocery store to investigate consumers' reactions to price variation", and they especially lamented that "little attempt has been made to contrast consumers' price sensitivity in functional versus hedonic consumption occasions" (p. 200). Hence, by addressing cultural and social group influences on price decisions relating to functional and hedonic elements of a tourism trip, it is believed this study was a pioneering effort.

CHAPTER III

STUDY 2: THE USE OF ODD-ENDING NUMBERS IN THE PRICING OF TOURISM SERVICES IN THREE DIFFERENT CULTURES

3.1 Introduction

Almost 50 years ago, Friedman (1967) reported that more than 80% of American retail food prices ended in the numbers 5 or 9. Subsequently, the widespread use of 9-ending prices in the U.S. has been demonstrated across a broad range of products including gasoline (Bacon, 1991; Lewis, 2015), retail food (Baumgartner & Steiner, 2007), women's clothing (Schindler & Kibarian, 1996), and fast food restaurants (Parsa & Naipaul, 2007). Multiple psychological explanations for this prevalence have been proposed, but it is generally accepted that odd-ending prices enhance price competitiveness in two ways: (i) they lower leftmost digits; and (ii) odd-numbered rightmost digits have connotations of discounting (Hackl, Kummer, & Winter-Ebmer, 2014; Nguyen, Heeler, & Taran, 2007).

Odd-ending prices frequently are used on online shopping sites where price comparisons are relatively easy. Because tourism services are increasingly purchased online, it seems likely that many tourists may be influenced by odd-number ending prices when selecting a service from an array of differently priced options. However, little is known about the effects of odd-ending prices on tourism services, because empirical studies reported in the literature have been conducted almost exclusively on relatively low-priced retail products (Kleinsasser & Wagner, 2011).

Tourism services differ from retail products in at least eight ways. First, services such as hotels, restaurants, music concerts, sports events and live theater performances, are generally more expensive than the retail items that have been the focus of most research (Baumgartner & Steiner, 2007). Second, the decision-making process is longer because tourists deal with a higher level of perceived risk attributable to their substantive commitment of time, effort and money (Teare,1990). Third, tourists plan and save money over a longer time period which leads them to have a greater level of involvement in the selection of tourism services (Gursoy & Gavcar, 2003; Havitz & Dimanche, 1997). Fourth, tourism services tend to be more carefully chosen and subjected to more cognitive processing because bad decisions are irreversible, while unsatisfying retail products often can be returned or refunded relatively easily (Mills, 1986). Fifth, the opinions of others often are considered when traveling as a group, so decisions related to tourism services are more complex than when purchasing retail goods for personal use (Ritchie, 1997; Pearce, 2005). Sixth, the fairness of tourism service prices is more difficult to ascertain than general merchandise prices because there is relatively low price transparency in the tourism sector. Tourism services typically engage in dynamic pricing and widespread price differentiation, charging different prices to different customers for the same service. Seventh, people have fewer cues about the costs of services than goods, so it is more difficult to embrace the Principle of Dual Entitlement which posits that people judge price fairness by its relationship to costs (Bolton & Alba, 2006). Eighth, motives for purchasing tourism services tend to be hedonic whereas those which underlie purchases of retail products

tend to be functional, suggesting that consumers' price sensitivities to tourism services are likely to be lower than those associated with retail products (Wakefield & Inman, 2003). These differences suggested it would be fruitful to expand the empirical investigation of odd-ending price research into the area of tourism services.

3.2. Literature review

3.2.1 The influence of culture on heuristics and price endings

Tourism is a global phenomenon, so many tourism service suppliers target international visitors from multiple countries. A challenge in setting prices is to enhance visitors' willingness to pay by creating positive feelings about a price. However, people from different cultures may use different heuristics in their decision processes and, consequently, respond differently towards a given price framing.

For several decades, psychologists have recognized there are two modes of thinking (Kahneman, 2011). These dual process theories identify parallel processors of information. The labels System 1 and System 2 are often used to describe them: "System 1 operates automatically and quickly with little or no effort and no sense of voluntary control", while "System 2 allocates attention to the effortful mental activities that demand it, including complex computation" (Kahneman, 2011 p. 21-22).

System 1 judgments are made in many contexts because "we think associatively, we think metaphorically, we think casually" (p.23). Kahneman concludes: "The intuitive System 1 is more influential than your experience tells you, and it is the secret author of

many of the choices and judgments you make" (p.13). System 1 makes extensive use of heuristics which are "rules of thumb" that people use to simplify their decision-making. They may be innate which reflects "we are born to perceive the world around us" (p. 21); or they may be learned since "other mental activities become fast and autonomic through prolonged practice…and learned associations" (p. 22).

Odd-ending prices in the U.S. have been widely adopted because they have been effective in triggering a heuristic among consumers that causes them to perceive a price is lower than they would conclude if they invested the cognitive effort of System 2 to investigate it. If this heuristic is innate, then it should be universal across cultures. If it is not universal, then it suggests price endings are learned and interpreted differently in different cultures.

Countries have been classified into high and low context cultures based on consumers' interpretations of communications (Hall, 1976). In general, western/individualist-culture countries, such as the U.S. are categorized as low context cultures, because people in these countries tend to interpret communications literally. In contrast, non-western/collectivist-culture countries, such as China and Korea, are categorized as high context cultures because people in these countries often seek hidden meanings and to identify more implicit, non-verbal cues in communications (Hall, 1976; Copeland & Griggs, 1986).

The primary reasons suppliers use odd-ending prices in western cultures is to create an illusion of a substantially lower price. Consumers from these cultures tend to understand meanings by what is delivered in the message itself, and so may perceive

odd-ending prices as good deals because those endings connote lower prices and discounts. In contrast, people in non-western/collectivist cultures may be less prone to accept the illusion of cheapness or gain created by odd-endings; be more likely to read the seller's true deceptive intentions of using odd-ending prices; and react negatively to this tactic (Nguyen, Heeler, & Taran, 2007)

In summary, the literature suggests consumers' responses to odd-ending prices may differ because of culturally different approaches to interpreting communications (Nguyen et al., 2007; Schindler, 2009; Suri & Anderson, 2004). Tourists from non-western/collectivist cultures may be less likely than those from individualist cultures to respond positively to odd-ending prices. The connotation of discount associated with odd-ending prices may be much stronger among people from low context and individualist cultures, while connotations of low quality and deceptive practice of odd-ending prices may be stronger among people from high context and collectivist cultures.

A major city in both China and Korea was selected to explore whether the use of 9-ending prices was as dominant in high context cultures as it was in the U.S. China was selected in order to test the universality of the number 9 in a culture where there was a strong competing heuristic (Heeler & Nguyen, 2001; Schindler, 2009). In that country, the similar pronunciations of the Chinese characters for the number 8 and for wealth/prosperity/good fortune, have resulted in the number 8 being widely favored. It was manifested at the Beijing Olympic Games where the opening ceremony commenced on 8/8/08 at 8 seconds after 8pm local time (Williams, 2008). It explains why a telephone number comprised exclusively of 8-digits was sold for 2.23 million yuan

($280,000) to Sichuan Airlines (BBC, 2003), and why international airlines such as Air Canada, British Airways, KLM, United Airlines, and Cathay Pacific, routinely use 88 or 888 as flight numbers on their China routes.

In contrast to the U.S. and China, there appeared to be no cultural attachment to any given digit in Korea. Thus, Korea was selected as a high context culture which provided an evaluation of the universality of odd-ending price effects without there being a dominant competitor digit.

3.2.2 Explanations for the effectiveness of odd-ending prices

3.2.2.1 Left-digit effect

It has consistently been suggested that the leftmost digit has a relatively greater influence on customers' judgments of prices than other digits. For example, Thomas and Morwitz (2005) demonstrated that prices ending in 9 were perceived to be substantially smaller than even-ending prices that were one cent higher. That is because consumers are likely to encode each price on their internal maps into different categories according to the leftmost digit when comparing prices. For example, $9.99 and $10.00 may be cognitively mapped as $9.00 and $10.00, respectively. Thus, an odd number ending price (e.g. $9.99), which is slightly lower than an even number ending price (e.g. $10), appears to give the larger discount of $1 than the actual discount amount of $0.01. As a result, odd-ending prices have been suggested to lead to increased sales (Schindler & Kibarian, 1996; Thomas & Morwitz, 2005).

Three complementary explanations have been offered to account for this left-digit effect. First, consumers tend to round down prices (Gabor & Granger, 1964).

Second, consumers are more likely to remember and recall only the leftmost digit exactly (Brenner & Brenner, 1982) and tend to assume the right-digits invariably will end in 9, even though some prices do not end in 9 (Schindler & Kibarian, 1993). Third, people tend to read price numbers by processing them from left-to-right, so the leftmost digit is mapped as the most significant internal reference (Poltrock & Schwartz, 1984; Thomas & Morwitz, 2005).

In summary, sellers often lower the leftmost digit of prices by using odd-ending prices, so they can reframe and change the contexts of consumers' perceptions of prices with a minimum amount of effort. This discount can often change consumers' perceptions of the magnitude of a price.

3.2.2.2 Right-digit effect

Although customers' perceptions may be influenced by leftmost price digits, these effects do not provide a complete explanation for the effectiveness of odd-ending prices. For example, experiments have shown a service priced at $39 induced disproportionately larger sales not only than a $44 price, but also than a $34 price (Stiving & Winer, 1997). The leftmost digit effect cannot explain the superiority of a $39 price in sales over a $34 price. This result can likely be attributed to the right-digit effect. Even though its effect may be substantially lower than the left-digit effect (Thomas & Morwitz, 2005), the right-digit is likely to influence perceptions and judgments of tourism service prices by communicating its own meaning to consumers. Information theory suggests odd-number ending prices deliver the message that customers are being offered a good deal because they connote low, recently decreased,

or discount prices; while those ending with even numbers communicate high, recently increased, full, or regular prices (Bliss 1952; Dodds & Monroe, 1985; Quigley & Notarantonio, 1992; Schindler 1991; 2006).

In addition to information about the price itself, the rightmost digits may also have connotations relating to product quality and/or retailers' integrity. Since some service users are likely to use price as a cue to evaluate a service's quality (Rao & Monroe, 1989), odd-ending prices may give an impression of *low quality* and left-over or out-of-date items (Kreul, 1982; Stiving, 2000; Schindler & Kibarian, 2001). Odd-endings may be interpreted in some cultures as a *trick to mislead* consumers. For example, it was shown that Polish respondents perceived odd-number ending prices in this way, so odd-ending prices are not used frequently in Poland (Suri & Anderson, 2004).

3.3 Hypotheses

The previous discussion established that odd-ending prices were ubiquitous in retailing in the U.S. Prices in markets are set by the interaction of supply and demand. Thus, sellers' decisions to use odd-endings are likely to reflect their perceptions of how tourists will respond to a pricing format. Hypothesis 2-A(i) was designed to test if the ubiquity of odd-ending prices in retailing in the U.S. extended to the tourism sector and into high context cultures. If service suppliers believe odd-ending prices will lead to greater sales, then they are likely to be widely used. In contrast, this strategy is unlikely

to be adopted if they perceive odd-ending prices will communicate a lack of integrity and result in a decrease in visitors' trust:

H2-A(i). There will be significant differences in the frequency with which odd-ending prices are used between suppliers of five tourism services in the U.S. and those in Korea and China.

There is evidence in some international contexts that U.S. corporations' pricing decisions have been perceived as "an offensive approach when dealing with cultural factors instead of taking advantage of them" (Odongo, Agneta & Orinda, 2012. p. 66). In contrast to this critical observation, Hypothesis 2-A(ii) offered a positive view and tested the proposition that franchise hotels whose marketing departments were headquartered in the U.S. would use 9-digit price endings less frequently in Korea and China, reflecting a sensitivity to the local cultures.

H2-A(ii). There will be significant differences in the frequency with which odd-ending prices are used between franchise hotels in the U.S. and those in Korea and China.

Odd-ending price effects are associated with the effects of both left-digits and right-digits. However, the literature review indicated the most pronounced effect occurs when the left digit is changed by the use of a 9-ending right digit (Thomas & Morwitz, 2005):

H2-B. There will be significant differences in the frequency with which odd number endings are used when a price's left digit is changed by the 9-ending

right digit, compared to when the left digit is not changed by the 9-ending right digit.

Involvement is the level of arousal, interest, and engagement tourists exhibit in their purchase behavior (Havitz & Dimanche, 1997). It was noted in the opening section of the paper that tourists are likely to have a high level of involvement because they invest substantial resources into purchase decisions which is a characteristic of System 2 processing. This suggests they will be less likely to rely of the heuristic associated with System 1. In contrast, low price services are not given as much thoughtful attention so the heuristic will be more prominently used. Further, Prospect theory's tenet of diminishing effects (Kahneman & Tversky, 1979) directs that a saving of (say) $10 on a service costing $500 is likely to have minimal influence on a purchase decision. If the $10 savings is on a $50 purchase, then it is likely to be much more salient. Hence, the discount connotation of 9-ending services is more likely to be used by suppliers of relatively low-price tourism services.

H2-C(i). There will be increased frequency of odd-ending prices by suppliers of low-price tourism services, compared to those that are high-price.

H2-C(ii). There will be increased frequency of odd-ending prices by hotels rated as 1, 2, or 3 stars, compared to hotels with 4 or 5 stars.

3.4 Sources of data

Since sellers' decisions on price endings are likely to reflect their experience and expectations of potential consumers' responses, the frequency of price ending digits may be regarded as a proxy of tourists' acceptability of price endings. The major cities of New York City, Seoul, and Shanghai were selected as representative cities in the U.S., Korea, and China, respectively. They are the largest cities in their countries: New York City with 8.49 million, Seoul with 10.01 million, and Shanghai with 24.15 million. Also, the three cities are the top destination cities in their respective countries, and are all among the world's top 20 destination cities ranked by the number of international overnight visitors: New York City with 11.86 million, Seoul with 9.84 million, and Shanghai with 5.68 million (Hedrick-Wong & Choong, 2015). Hence, it was assumed service suppliers in these cities were likely to consider foreign tourists as important target markets.

Using popular search engines (google.com for the U.S., baidu.com for China, and naver.com for Korea), the homepages of each service business and websites containing price information were used to report prices of selected tourism services in the three cities (Table 7). These search engines and online sites provided convenient access to sellers' price information.

Table 7. Online sites used to collect price information in New York City (U.S.), Seoul (Korea), and Shanghai (China)

City (Population Size)*	New York City in the U.S. (8.49 million)	Seoul in Korea (10.01 million)	Shanghai in China (24.15 million)
Currency	US Dollar	Won (1 US Dollar = 1160.98 Won) (1 Won = 0.00086 US Dollar)	Yuan (1 US Dollar = 6.48 Yuan) (1 Yuan = 0.15 US Dollar)
Basic search engines	- google.com	- naver.com	- baidu.com
Websites for price information	- Ticket master (http://www.ticketmaster.com/) - NYC.com (http://www.nyc.com) - Yelp.com (http://www.yelp.com/)	- Naver shopping (shopping.naver.com) - Interpark (http://ticket.interpark.com/) - Visit Seoul (http://www.visitseoul.net/kr/subindex.do?_method=eat2&m=0002000001001&p=01) - Booking.com (www.booking.com)	- Damai. cn (http://en.damai.cn/) - Smart shanghai.com (http://www.smartshanghai.com/smartticket/) - 247 ticket (https://247tickets.cn/) - Booking.com (www.booking.com)
Franchise Hotels	- Hilton (www.hilton.com) - InterContinental (www.intercontinental.com/) - Marriott (www.marriott.com/)		

*Population size in 2014.

Table 8. The frequency and percentage of ending-digits of service prices in NYC

	Ending digit of prices										
	0	1	2	3	4	5	6	7	8	9	total
Music Concerts	12[a]	8	13	11	10	12	12	10	11	11	110
	1.01[b]	0.68	1.10	0.93	0.84	1.01	1.01	0.84	0.93	0.93	9.29
	10.91[c]	7.27	11.82	10.99	9.09	10.91	10.91	9.09	10.00	10.00	
	11.43[d]	11.11	13.54	14.10	10.10	5.31	16.22	10.42	14.47	4.20	
Sport Events	22	10	9	8	7	23	7	9	9	23	127
	1.86	0.84	0.76	0.68	0.59	1.94	0.59	0.76	0.76	1.94	10.73
	17.32	7.87	7.09	6.30	5.51	18.11	5.51	7.09	7.09	18.11	
	20.95	13.89	9.38	10.26	7.07	10.18	9.46	9.38	11.84	8.78	
Live Theaters	7	1	7	2	1	40	1	11	1	38	109
	0.59	0.09	0.60	0.17	0.08	3.38	0.09	0.93	0.08	3.21	9.21
	6.42	0.92	6.42	1.83	0.92	36.70	0.92	10.09	0.92	34.86	
	6.67	1.39	7.29	2.56	1.01	17.70	1.35	11.46	1.32	14.50	
Restaurants	54	12	28	20	33	56	23	11	19	15	271
	4.56	1.01	2.36	1.69	2.79	4.73	1.94	0.93	1.60	1.27	22.89
	19.93	4.43	10.33	7.38	12.18	20.66	8.49	4.06	7.01	5.54	
	51.43	16.67	29.17	25.64	33.33	24.78	31.08	11.46	25.00	5.73	
Hotels	10	41	39	37	48	95	31	55	36	175	567
	0.84	3.46	3.29	3.13	4.05	8.02	2.62	4.65	3.04	14.78	47.89
	1.76	7.23	6.88	6.53	8.47	16.75	5.47	9.70	6.35	30.86	
	6.67	56.94	40.63	47.44	48.48	42.04	31.89	57.29	47.37	66.79	
Total	105	72	86	78	99	226	74	96	76	262	1,184
	8.87	6.08	8.11	6.59	8.36	19.09	6.25	8.11	6.42	22.13	100.00

a Frequency
b Percentage (%)
c Row percentage (%)
d Column percentage (%)

Table 9. The frequency and percentage of ending-digits of service prices in Seoul

	Ending digit of prices										
	0	1	2	3	4	5	6	7	8	9	total
Music Concerts	29[a]	6	8	5	9	28	9	8	4	4	110
	2.10[b]	0.43	0.58	0.36	0.65	2.03	0.65	0.58	0.29	0.29	7.97
	26.32[c]	5.45	7.27	4.55	8.18	25.45	8.18	7.27	3.64	3.64	
	6.42[d]	8.45	6.50	6.41	7.96	13.53	8.49	16.67	3.39	6.25	
Sport Events	79	2	18	4	16	12	1	2	3	1	138
	5.72	0.14	1.30	0.29	1.16	0.87	0.07	0.14	0.22	0.07	10.00
	57.25	1.45	13.04	2.90	11.59	8.70	0.72	1.45	2.17	0.72	
	17.48	2.82	14.63	5.13	14.16	5.80	0.94	4.17	2.54	1.56	
Live Theaters	104	9	10	10	9	14	1	1	1	1	160
	7.54	0.65	0.72	0.72	0.65	1.01	0.07	0.07	0.07	0.07	11.59
	65.00	5.63	6.25	6.25	5.63	8.75	0.63	0.63	0.63	0.63	
	23.01	12.68	12.82	12.82	7.96	6.76	0.94	2.08	0.85	1.56	
Restaurants	202	24	26	30	16	110	26	11	28	40	513
	14.64	1.74	1.88	2.17	1.16	7.97	1.88	0.80	2.03	2.90	37.17
	39.38	4.68	5.07	5.85	3.12	21.44	5.07	2.14	5.46	7.80	
	44.69	33.80	21.14	38.46	14.16	53.14	24.53	22.92	23.73	62.50	
Hotels	38	30	61	29	63	43	69	26	82	18	459
	2.75	2.17	4.42	2.10	4.57	3.12	5.00	1.88	5.94	1.30	33.26
	8.28	6.54	13.29	6.32	13.73	9.37	15.03	5.66	17.86	3.92	
	8.41	42.25	49.59	37.18	55.75	20.77	65.09	54.17	69.49	28.13	
Total	452	71	123	78	113	207	106	48	118	64	1,380
	32.75	5.14	8.91	5.65	8.19	15.00	7.68	3.48	8.55	4.64	100.00

a Frequency
b Percentage (%)
c Row percentage (%)
d Column percentage (%)

Table 10. The frequency and percentage of ending-digits of service prices in Shanghai

	Ending digit of prices										
	0	1	2	3	4	5	6	7	8	9	total
Music Concerts	48	0	22	1	0	3	2	0	161	0	237
	4.01	0.00	1.84	0.08	0.00	0.25	0.17	0.00	13.44	0.00	19.78
	20.25	0.00	9.28	0.42	0.00	1.27	0.84	0.00	67.93	0.00	
	34.04	0.00	24.18	2.50	0.00	2.78	2.50	0.00	31.20	0.00	
Sport Events	22	0	2	0	0	9	16	0	27	0	76
	1.84	0.00	0.17	0.00	0.00	0.75	1.34	0.00	2.25	0.00	6.34
	28.95	0.00	2.63	0.00	0.00	11.84	21.05	0.00	35.53	0.00	
	15.60	0.00	2.20	0.00	0.00	8.33	20.00	0.00	5.23	0.00	
Live Theaters	44	4	17	3	23	33	10	3	150	1	288
	3.67	0.33	1.40	0.25	1.92	2.73	0.83	0.25	12.52	0.08	24.04
	15.28	1.39	5.90	1.04	7.99	11.46	3.47	1.04	52.08	0.35	
	31.21	11.76	18.68	7.50	37.10	30.56	12.50	5.88	29.07	1.33	
Restaurants	12	0	14	1	1	12	4	0	55	6	
	1.00	0.00	1.17	0.08	0.08	1.00	0.33	0.00	4.59	0.50	105
	11.43	0.00	13.33	0.95	0.95	11.43	3.81	0.00	52.38	5.71	8.76
	8.51	0.00	15.38	2.50	1.61	11.11	5.00	0.00	10.66	8.00	
Hotels	15	30	36	35	38	51	48	48	123	68	492
	1.25	2.50	3.01	2.92	3.17	4.26	4.01	4.01	10.27	5.68	41.07
	3.05	6.10	7.32	7.11	7.72	10.37	9.76	9.76	25.00	13.82	
	10.64	88.24	39.56	87.50	61.29	47.22	60.00	94.12	23.84	90.67	
Total	141	34	91	40	62	108	80	51	516	75	1,198
	11.77	2.84	7.60	3.34	5.18	9.02	6.68	4.26	43.07	6.26	100.00

a Frequency
b Percentage (%)
c Row percentage (%)
d Column percent (%)

A total of 3,762 prices were collected, comprised of 1,184 from NYC, 1,380 from Seoul, and 1,198 from Shanghai. Tables 8, 9, and 10 show the number of prices ending in each digit (0 through 9) gathered in five categories: music concerts, sport events, live theaters, restaurants, and hotels in each of the three cities. Hotel rates for the nights of June 24 (Friday) and June 25 (Saturday), representing a weekend during peak vacation season, were selected because it was believed at that time there would be a relatively small proportion of less price-sensitive business visitors whose travel budgets were provided by their employers. The price of a standard room from each hotel was collected.

Similarly, the ticket prices for three types of attractions (music concerts, sport events, and live theaters) that were available during the investigation period (June 9 – June 20) were gathered. To prevent over-representation of a given service supplier's price endings, prices provided by each service supplier were included only once. For example, if the same shows or events were available at the same prices on various dates, only the price for one show-time was counted. Selection of restaurants for inclusion in the study was based on popularity and recommendations (from New York Times, 2015; Asia Today, 2015; and Timeout Shanghai, 2014). Prices of 3 to 5 main dishes from each restaurant were selected.

Additionally, prices of a set of global franchise hotels were analyzed in the three cities to test Hypothesis 2-B(ii). This complementary analysis recognized the pricing strategies of global chain hotels may be more strongly influenced by consumers' responses in the U.S where their marketing headquarters are located, than those of local

businesses. At the same time, it was recognized that using price samples from homogeneous global franchises may reduce extraneous sources of variance that may explain differences in results across countries. For this analysis, the three leading international hotel franchises, as rated by Hotel News Now (2015) were selected: Hilton, InterContinental, and Marriott. For statistical analyses, a sample of at least 100 data points was deemed to be desirable. To prevent overrepresentation of a given hotel's price endings, 40 prices from each hotel chain were collected by arraying the room prices of all hotels for each franchise within 5 miles of each of the three cities *in the same order* in which they were displayed on the homepage and proportionately selecting rooms from each hotel property.

Each country's indigenous currency was used, so sellers' perspectives would not be distorted by currency exchange rates: the dollar for the U.S., the won for Korea, and the yuan for China. Prices were coded as they were provided, so decimal prices such as cent-digits in the U.S. and Jiao-digits in China were included only when they actually appeared in the price. The Korean Won currency uses large denominations (₩1,200 = $1) and so does not include any decimal prices.

The ending-digits of prices were defined by methods adopted by others in the price-ending literature. The first salient rightmost digit of a price was considered to be the ending digit of the price (Schindler, 2009; Simmons & Schindler, 2003). In other words, when a price was read from right to left, the rightmost digit other than zero was considered the ending digit of the price. However, if this salient digit was the leftmost digit of the price, the next rightmost digit (zero) was regarded as the ending digit of the

price. For example, the ending-digits of the prices of $19.99, ₩30,000, and ¥180 are 9, 0 and 8, respectively.

3.5 Results

Tests of Hypotheses 2-A(i) and 2-A(ii) were designed to investigate whether price endings were specific to cultures. Tables 8, 9, and 10 report the frequency of ending digits in the five tourism service categories in each city. Figure 3 displays the aggregated percentage of the use of each digit from 0 to 9 shown in the last row of Tables 8, 9, and 10. The tables show that 9-ending digits dominated in New York City where they were used much more frequently than in Seoul or Shanghai; 0-ending digits were dominant in Seoul while in Shanghai 8-ending digits were dominant. These results suggest tourism service suppliers in high context cultures (Seoul and Shanghai) did not see 9-ending digits as being effective price ending practices. As expected, the positive connotations of the number 8 in China, led to the 8-ending digit being dominant in Shanghai.

The dominance of the 0-ending digit in Seoul was not anticipated. Its prominence was reinforced by its strong presence in New York City where it was the third most used after the 9 and 5 digits, and in Shanghai where it was the second most adopted after the 8 digit.

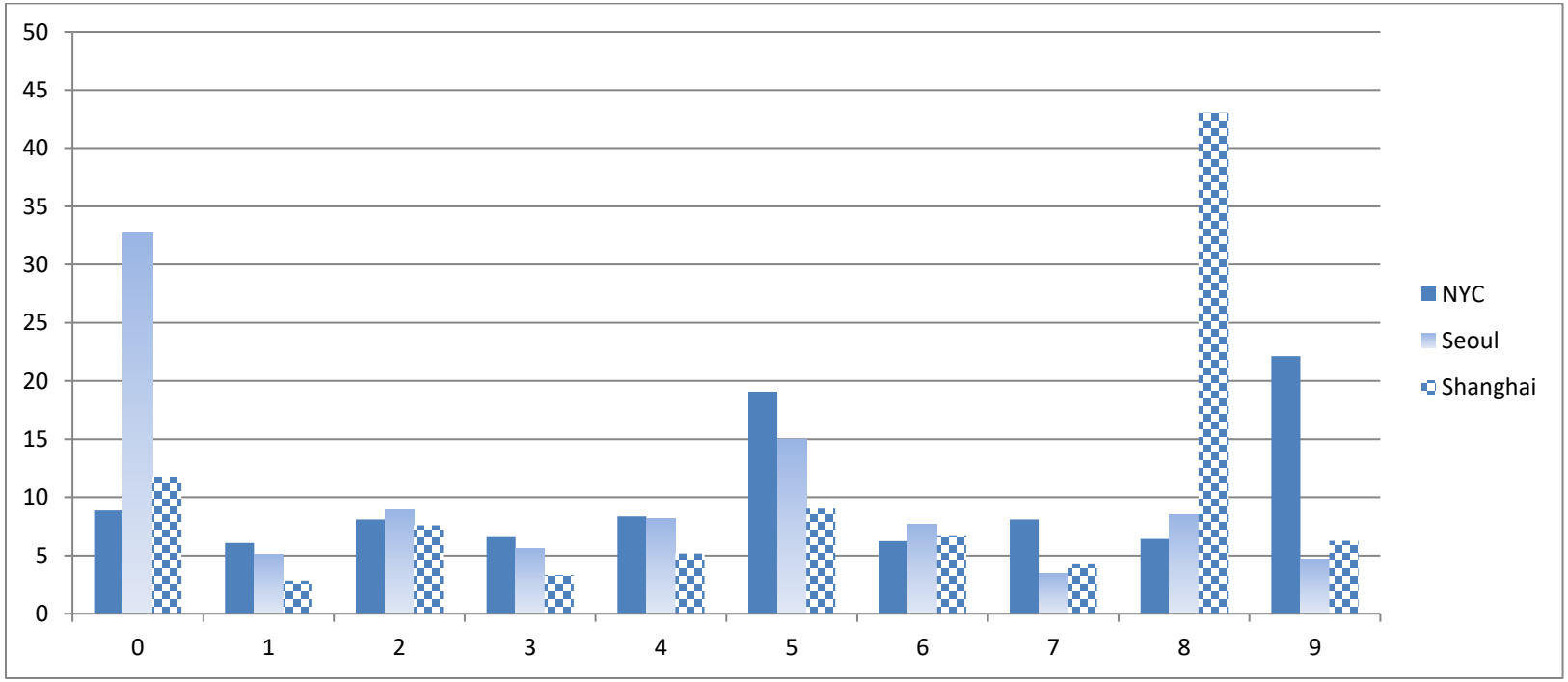


Figure 3. The percentage of each ending-digit of tourism service prices

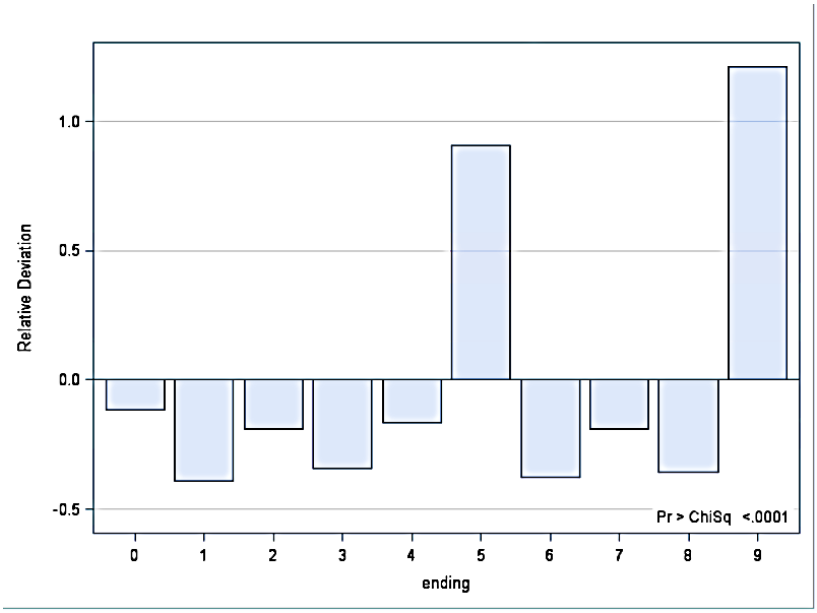


Figure 4. Deviation from 10 % of the usage rate of each ending digit in NYC

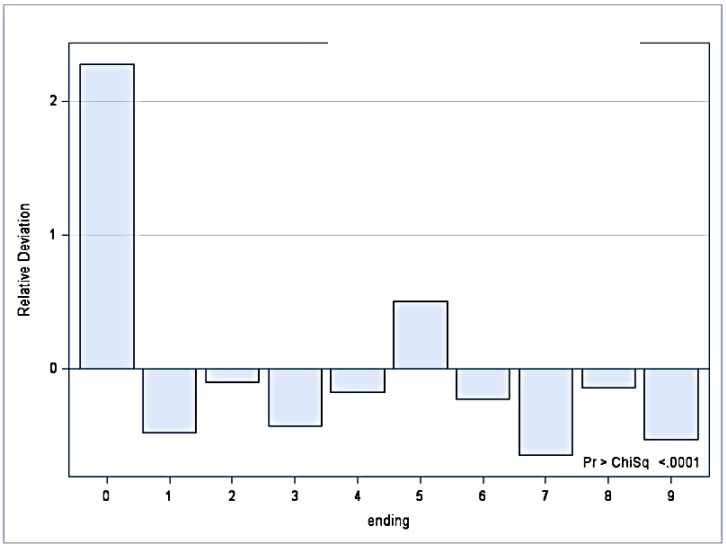


Figure 5. Deviation from 10 % of the usage rate of each ending digit in Seoul

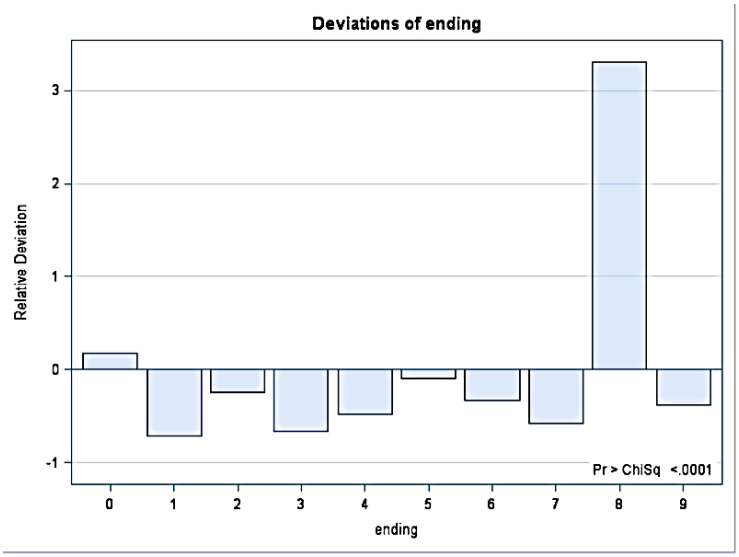


Figure 6. Deviation from 10 % of the usage rate of each ending digit in Shanghai

Figures 4, 5, and 6 compare the usage rate of each ending digit from 0 to 9 with the expected usage rate of 10%, which would occur if all digit endings were regarded as being equally effective. A Chi-Square goodness-of-fit test was used to see whether there was statistically significant overrepresentation of any ending-digits in a city. Figure 4 reveals that more than 10% of the price samples in New York City ended in 5 and 9 digits, indicating there was a significant departure from an equal distribution of each digit ($x^2 = 348.92$, $p < 0.001$). The over-representation of the 9 digit was especially strong in sport events ($x^2 = 34.18$, $p < 0.001$), live theaters ($x^2 = 191.09$, $p < 0.001$), and hotels ($x^2 = 349.47$, $p < 0.001$).

Figure 5 shows the 0-digit was used significantly more than 10% in the samples of price endings in Seoul, indicating that distribution of each ending digit was not equal

(x^2 = 922.43, p <0.001). In all the service categories in Table 9, with the exception of hotels, the digits of 0 and 5 were significantly over-represented: music concerts (x^2 = 72.55, p <0.001); sport events (x^2 = 369.25, p <0.001); live theaters (x^2 = 551.13, p <0.001); and restaurants (x^2 = 627.21, p <0.001).

Figure 6 shows the 8-digit price ending was used more prevalently than 10% in the Shanghai samples, indicating that distribution of each ending digit was not equal (x^2 = 1534.12, p <0.001). This was consistent across all five service categories: musical concerts (x^2 = 939.43, p <0.001); sport events (x^2 = 111.47, p <0.001); live theaters (x^2 = 631.38 , p <0.001); restaurants (x^2 = 226.18, p <0.001); and hotels (x^2 = 159.46, p <0.001).

These analyses compared the frequency of ending digits *within* each of the cities. Table 11 displays the comparisons of each ending digit *across* the three cities. The results confirmed a statistically significant association between cultures and ending digits of tourism service prices (x^2 = 1,114.39, p <0.001).

Table 11. Chi-Square test for the three cities by ending digits of prices

	Ending digit of prices										
	0	1	2	3	4	5	6	7	8	9	total
NYC	105[a]	72	96	78	99	226	74	96	76	**262**	1,184
	220[b]	56	98	62	86	170	82	61	223	126	
	49.87[c]	4.77	0.03	4.31	1.89	18.24	0.74	19.54	97.30	146.11	
Seoul	**452**	71	123	78	113	207	106	48	118	64	1,380
	256	65	113	72	101	198	95	71	260	147	
	149.97	0.57	0.75	0.52	1.55	0.37	1.18	7.74	77.10	46.94	
Shanghai	141	34	91	40	62	108	80	51	**516**	75	1,198
	222	56	99	62	87	172	83	62	226	128	
	29.72	8.87	0.60	8.05	7.31	23.98	0.09	1.98	371.71	21.75	
Total	698	177	310	196	274	541	260	195	710	401	3,762 100.00

a Frequency
b Expected
c Cell Chi-Square
_ Underlined numbers are *larger* than expected at the largest cell Chi-Square level across the cities (used dominantly in a certain city than other cities)

Additionally, the cell Chi-Square values are displayed in Table 11. Unlike the Chi-Square test which is carried out on a *whole* set of rows and columns, the cell Chi-Square test is undertaken independently on *each* table cell value. As expected, some digits were significantly more frequently used in each city than in the other cities. The differences in the use of ending digits across the cities were mainly caused from the dominant use of 9-digit in New York City (x^2 = 146.11), 0-digit in Seoul (x^2 = 149.97), and the 8-digit in Shanghai (x^2 = 371.71). These results generally supported Hypothesis 1-1.

Table 12 displays comparison of the prices of the three leading global chain hotels within and across the three cities. The row percentage in Table 12 indicates the digits of 6 (20%) and 9 (16%) were used more frequently than other digits in New York City, while the digits of 5 (37%) and 8 (27%) were used more in Seoul and Shanghai respectively. This confirms that distribution of digit-endings was not equal *within* the cities (New York City, x^2= 34.17, $p < 0.001$; Seoul, x^2= 106.17, $p < 0.001$; and Shanghai, x^2= 62.33, $p < 0.001$). The dominant uses of 9-digit ending prices in New York City and of the 8-digit ending prices in Shanghai were consistent with previous results. However, it was not anticipated that the dominant ending digit prices in Seoul among chain hotels would be the 5-digit rather than the 0-digit. Also, in New York City the 6-digit was the most frequently used by chain hotels in price endings. The authors can posit no explanation for this. Thus, Hypothesis 2-B was only partially confirmed.

Table 12. Chi-Square test for the three cities by each ending digit in prices of global chain hotels

	Ending digit of prices										
	0	1	2	3	4	5	6	7	8	9	total
NYC	1[a]	10	7	11	18	10	**24**	7	13	19	120
	6[b]	5	10	8	13	24	14	9	18	12	
	4.49[c]	5.00	0.74	0.86	1.92	8.44	7.14	0.58	1.55	4.61	
	0.83[d]	0.83	5.83	9.17	15.00	8.33	20.00	5.83	10.83	15.83	100
Seoul	7	4	6	7	11	**45**	12	7	9	12	120
	6	5	10	8	13	24	14	9	18	12	
	0.07	0.20	1.39	0.21	0.31	17.56	0.29	0.58	4.75	0.01	
	5.83	3.33	5.00	5.83	9.17	37.50	10.00	5.83	7.50	10.00	100
Shanghai	11	1	16	7	10	18	6	14	**33**	4	120
	6	5	10	8	13	24	14	9	18	12	
	3.44	3.2	4.15	0.21	0.70	1.65	4.57	2.33	11.73	5.03	
	9.17	0.83	13.33	5.83	8.33	15.00	5.00	11.67	27.50	3.00	100
Total	19	15	29	25	39	73	42	28	55	35	360
	5.28	4.17	8.06	6.94	10.83	20.28	11.67	7.78	15.28	9.72	100

a Frequency
b Expected
c Cell Chi-Square
d Row percentage
_ Underlined numbers are *larger* than expected at the most largest cell Chi-Square level across the cities (used dominantly in a certain city than other cities)

Comparisons *across* the cities showed different use patterns of price ending digits (x^2= 97.72, p < 0.001) which confirmed Hypothesis 2-A(ii). The 6-digit in New York City (x^2= 7.14), the 5-digit in Seoul (x^2= 17.56), and the 8-digit in Shanghai (x^2= 11.73) were dominant in each city. Surprisingly, there was no significant difference in frequency of the use of 9-digit price endings among the cities because both New York City and Seoul used the 9-digit relatively frequently, suggesting franchise hotel prices in Seoul to some extent reflected the U.S preference for 9-digit price endings.

Hypothesis 2-B proposed that 9-ending prices would be used significantly more frequently when they were associated with changes in leftmost digits. If the 9-ending digit was placed next to the leftmost digit (that is, if the 9-ending digit was placed in the second leftmost digit place [SLP]), it was considered likely to have a left digit effect as well as a right digit effect because 9-endings of the *rightmost digit* lower the *leftmost digit* (e.g., from $90 to $89, from ₩20,000 to ₩19,000, and from ¥600 to ¥590). In contrast, if the 9-ending digit was not in the SLP (e.g., $1,590, ₩155,900, and ¥22.9) it was regarded as having only a right digit effect because the 9 ending of the rightmost digit has less influence on the leftmost digit. Thus, 9-endings in the SLP were regarded as having a combined left and the right digit effect, while those not in the SLP were regarded as having only a right digit effect.

Table 13. Chi-Square test for the three cities by each ending digit in the second leftmost digit place

	Ending digit of prices										
	0	1	2	3	4	5	6	7	8	9	total
NYC	105[a]	31	48	40	53	71	40	40	39	**84**	551
	159[b]	22	47	26	36	65	33	22	106	35	
	13.19[c]	3.41	0.04	7.64	8.38	0.50	1.39	14.59	42.71	69.60	
	19.06[d]	5.63	8.71	7.26	9.62	12.89	7.26	7.26	7.08	15.25	100
Seoul	**452**	61	91	68	78	150	71	38	71	40	1120
	323	45	95	53	73	133	67	45	216	71	
	51.87	5.44	0.15	4.44	0.41	2.27	0.18	1.04	97.63	13.35	
	40.36	5.45	8.13	6.07	6.96	13.39	6.34	3.39	6.34	3.75	100
Shanghai	141	6	66	6	26	66	35	19	**358**	29	752
	217	30	64	35	49	89	45	30	145	47	
	26.40	19.60	0.09	24.40	10.6	5.98	2.35	4.10	311.63	7.20	
	18.75	0.80	8.78	0.80	3.46	8.78	4.65	2.53	47.61	3.86	100
Total	698	98	205	114	157	287	146	97	468	153	2,423

a Frequency
b Expected
c Cell Chi-Square
d Row percentage
_ Underlined numbers are *larger* than expected at the most largest cell Chi-Square level across the cities (used dominantly in a certain city than other cities)

Table 13 reports the frequency, the expected frequency, cell Chi-Square, and row percentage of each ending digit in the SLP across the three cities. Similar to the tests relating to Hypothesis1, the 9-digit was used in the SLP significantly more frequently than the other digits in New York City, while the 0-digit and 8-digit were used significantly more frequently than other digits in Seoul and in Shanghai, respectively.

Additionally, the cell Chi-Square values compared usage rates of each ending digit in SLP *among* the three cities. There were significant differences which confirmed the findings relating to Hypothesis 2-A (x^2 = 755.57, p <0.001). In New York City, the 9-digit was used significantly more often than in the other cities (x^2 = 69.60, p <0.001); the 0-digit was used more in Seoul (x^2 = 51.87, p <0.001); and the 8-digit was used more in Shanghai (x^2 = 311.63, p <0.001). These analyses indicated that 9-ending prices for the left digit effect were used more in New York City than in the other two cities.

A complementary analysis investigated if prices ending in 9 were more likely to be associated with the second leftmost digit place (SLP) of a price. A Chi-Square test compared the ratio of the 9-ending digit in the SLP to that in the other digit places. In all three cities, 9-ending prices were used significantly less frequently in the SLP than other places: NYC (x^2 =28.34, p < 0.001), Seoul (x^2 =15.28, p < 0.001), and Shanghai (x^2 =19.89, p < 0.001). Thus, Hypothesis 2-B was rejected.

Hypothesis 2-C addressed the difference in use of odd-ending formats between low and high priced services. The data reported in Tables 8, 9, and 10 were used for this analysis. Low and high priced services were defined by the median. The medians for music concerts, sport events, live theaters, restaurants, and hotels in New York City were

$113.08, $51, $97.5, $19, and $299, respectively; in Seoul they were ₩40,000, ₩10,000, ₩50,000, ₩12000, and ₩180,000; and in Shanghai they were ¥380, ¥470, ¥380, ¥48, and ¥391. Additionally, hotel prices were categorized into two groups according to their number of stars, so a separate analysis was conducted with hotels; those with 3 or fewer stars were deemed to represent low priced services, while those with 4 and 5 stars represented high priced services.

A Pearson Chi-Square was used to test whether the use of 9-endings in the low price groups significantly exceeded the use of 9-endings in the high price groups. In cases where cell sizes were smaller than 5, a Fisher's exact test was used for the analysis.

Table 14. Frequency and percentage of the use of culture specific price-endings by price level

Cities	Price Level	Price endings		
		All Price-endings	9-endings	Culture Specific Price-endings[a]
NYC	Lower price	592	115	-
	Higher price	592	147	-
Seoul	Lower price	690	21	284
	Higher price	690	43	168
Shanghai	Lower price	599	45	204
	Higher price	599	30	312

a. Culture specific price-endings refer to 9-endings, 0-endings, and 8-endings in NYC, in Seoul, and in Shanghai respectively.

Table 14 reports the frequency and percentage of prices ending in the 9-digit when low priced and high priced were defined by the median price (Column 2). Contrary to expectation, the lower price services ended in the 9-digit significantly less frequently than the higher price group in New York City (x^2 = 5.02, p = 0.03) and in Seoul (x^2 = 7.93, p = 0.01). In contrast, 9-ending prices were used more frequently in the lower price group than the higher price group in Shanghai, but the difference was not significant (x^2 = 3.20, p = 0.07).

Table 14 also shows the frequency of culture specific price-endings (i.e. 0-endings for Seoul; and 8-endings for Shanghai) when low price and high price were defined by the median price. Results were mixed. In Korea 0-ending prices were significantly more frequently used for lower priced services than for higher priced services (x^2 = 44.27, p <0.001). However, there was no significant differences in use of 0-ending prices between the two hotel groups (x^2 = 0.17, p = 0.67, Table 14). In China, higher price services used 8-ending prices significantly more frequently than lower price services (x^2 = 39.71, p < 0.001, Table 8), but there were no significant differences between the two hotel groups (x^2 = 0.00, p = 0.96, Table 14).

Table 15 replicated this analysis using number of stars to define low and high prices for hotels. Results were consistent with those in Table 14, confirming New York City and Seoul used 9-endings less frequently in hotels with fewer than 4 or 5 stars. However, the differences were not statistically significant (NYC, x^2 = 0.10, p = 0.76; Seoul, x^2 = 1.54, p = 0.22). In Shanghai, 9-endings were used significantly more frequently in hotels with fewer than 4 and 5 stars (x^2 = 6.40, p = 0.01).

The New York City results were not consistent with the belief that 9-digit endings in the U.S. would be more frequently used for lower priced than for higher priced services. However, they are consistent with findings reported by Schindler and his associates (Schindler, 2006; Schindler & Kibarian, 2001; Schindler & Kirby, 1997) who termed the use of 9-ending prices for higher priced items as "the 99-meaning paradox", because they were contrary to the conventional wisdom that they were used primarily for lower priced goods.

Table 15. Frequency and percentage of the use of culture specific price-endings by hotel stars

Cities	Price Level	Price endings		
		All Price-endings	9-endings	Culture Specific Price-endings[a]
NYC	1, 2, and 3 stars	229	69	-
	4 and 5 stars	338	106	-
Seoul	1, 2, and 3 stars	392	14	34
	4 and 5 stars	57	4	4
Shanghai	1, 2, and 3 stars	293	50	73
	4 and 5 stars	199	18	50

a. Culture specific price-endings refer to 9-endings, 0-endings, and 8-endings in NYC, in Seoul, and in Shanghai respectively.

3.6 Discussion and conclusions

Globalization means that many tourism suppliers target international visitors from multiple countries, so understanding cultural differences is potentially a key to gaining a competitive advantage. This requires tourism managers to adopt strategies that reflect the multi-faceted responses to price formats exhibited by visitors from different cultures. This research empirically examined the prevalence of price-ending practices of tourism suppliers across three cities to ascertain whether odd-ending price effects were culturally specific or universal.

Tests of Hypothesis 2-A offered clear evidence they were perceived by tourism service suppliers to be culturally specific. The 9-digit in New York City, the 0-digit in Seoul, and the 8-digit in Shanghai were used significantly more frequently than the other digits within and across the cities. In the complementary analysis using a sample from the leading three international franchise hotels, Shanghai used the 8-digit in price endings significantly more frequently than the other digits, reflecting Chinese traditional preference for the use of the 8-endings. However, 9-endings were used frequently in both New York City and Seoul, suggesting the price ending practices of international franchise hotels in Seoul were influenced by the cultural practice in the U.S. where their marketing headquarters are located.

The relative infrequent use of 9-ending prices in tourism services in Seoul and Shanghai suggested they did not have positive connotations for people from non-western/collectivist-culture countries (Nguyen, Heeler, & Taran, 2007; Suri & Anderson,

2004). The study provides evidence that there are different cultural interpretations of price endings, resulting in differences in frequency of their use.

In Seoul, the 0-end digit dominated (33%) and the only other digit that was overrepresented was the 5 digit (21%, Table 9). Table 10 showed that in Shanghai these same two digits followed the 8 digit in frequency of use. In New York City, the only digit other than 9 to be overrepresented was 5 and its use frequency of 19% was close to the 9-ending frequency of 22% and it was followed by 0 (Table 8). The frequency of the 0 digit and the 5 digit in New York City and Shanghai, respectively, did not exceed the 10% expectation. However, this was attributable to the overwhelming percentage dominance of the 9 and 8 digits in those cities. The emergence of the 0 and 5 digits as the second and third ranked digits is consistent with those reported by others (Baird, Lewis & Romer, 1970; Kaufman et al, 1949; Kreul, 1982; Rudolf, 1954; Twedt, 1965). In the context of pricing, Schindler and Wiman (1989) reported 0-ending numbers dominated when consumers were asked to recall prices they paid. This suggests that cultural heuristics may be complemented by a universal heuristic driven by the rounded number effect (Wadhwa & Zhang, 2015) and/or by the availability effect (Kahneman & Tvorsky, 1973).

Rounded numbers are those ending in 0, while 5 is considered to be a semi-round number (Lynn, Flynn & Helion, 2013). The rounded number effect suggests the 0 and 5 numbers are fluently processed. It has been suggested their mental saliency makes them relatively easy to memorize, process, and perform mathematical operations compared to non-rounded numbers leading to System 1 processing and their use as a heuristic

(Wadhwa & Zhang, 2014). In the context of leisure, they have dominated in estimates of frequency of participation in recreation activities (Chase & Godbey, 1983; Chase & Harada, 1984), and in fishing (Tarrant & Manfredo, 1993), and have been termed "prototypes", in that the estimates effectively serve to characterize a range of values (Beaman et.al, 2015).

The prominence of their use in decision-making reflects their dominance in everyday communications (Schindler & Kirby, 1997). Its pervasiveness in multiple cultures (Copeland & Griggs, 1985; Dehaene & Mehler, 1992; Kettle & Haubl, 2010; Schindler & Yalch, 2006) suggests it is a universal heuristic. This is reinforced by a belief that the decimal number system is probably related to a reliance on humans having ten fingers for counting (Schindler & Kirby, 1997).

The availability effect (Kahneman & Tvorsky, 1974) is related to roundedness. It refers to the ease with which a mental unit is retrieved from memory. The high level of cognitive accessibility, exposure, and familiarity with the 0 and 5 digits is believed to generate positive, warm emotions and affect towards them, so they feel "just right" (Wadhwa & Zhang, 2014). It has been observed that, "By setting prices at numbers that have relatively high cognitive accessibility, the price setter communicates with consumers in the terms in which consumers think. The result is prices that are more likely to be easily perceived, remembered and compared" (Schindler & Kirby, 1997 p. 193). This is likely to be especially important in sectors like tourism where there is a substantial price variability in many services. Using round numbers thus has the ability

to simplify the information processing challenge for tourists and make it more likely they will perceive and recall those prices.

Hypothesis 2-B investigated whether 9-ending prices were used more frequently when both left and right digit odd numbers were incorporated in a price. Contrary to expectations, 9-endings were not used more frequently when the leftmost digit was lowered by the use of the 9-ending price than when it was not. Sellers appeared content merely to use 9-digits in the end of a price, rather than to use them to also lower a leftmost digit. This suggests sellers consider the 9 number at the end of a price is sufficiently resonant in connoting a low price, that it does not need to be reinforced by a lowering of the leftmost digit. This is consistent with results reported by Stiving and Winer (1997) who showed a 9-ending price *itself* resulted in superior sales *regardless* of the leftmost digit.

Tests of Hypothesis 2-C revealed that Shanghai used 9-endings more frequently in lower priced tourism services than in higher priced services, but in New York City and Seoul the association of the 9-ending prices with lower priced items was *not* present. While this was inconsistent with conventional wisdom in the U.S, it was consistent with findings indicating there was *no* such relation of 9-ending prices to lower prices (Schindler 2006; Schindler & Kirby, 1997). When the analyses were repeated using the cultural specific 0 and 8-endings on the Korea and Shanghai samples, Hypothesis 2-C(i) was rejected since the relationship with lower prices in New York City and Shanghai was not confirmed. Similarly, Hypothesis 2-C(ii) was rejected. In none of the three samples were the price endings more prominent among hotels with fewer stars.

Tourists' economic decisions often are not rational because they seek to minimize cognitive effort in the decision-making processes by using heuristics (rules of thumb) derived from experience. An effective way to gain insights into tourists' responses is to review the pricing strategies employed by suppliers in their home cultures. This research provides practical guidelines to tourism marketing managers for applying effective price ending practices. It suggests that heuristic responses related to 9 and 8 digit ending prices are learned skills which are specific to the U.S. and China cultures, respectively. Accordingly, tourism service suppliers should recognize that visitors from different cultures react to prices frameworks differently, and that they need to be tailored to each culture. At the same time, the research also revealed a belief that the 0 and 5 digits had a universal appeal that crossed cultures.

The study's results suggest a managerial conundrum. The use of the 9 and 8 digits in New York City and Shanghai are likely to be effective in attracting visitors from these cities' home cultures, but they may be unappealing to visitors from other cultures. The findings suggest that prices in New York City, for example, should emphasize the 8-digit endings when they are targeted at Chinese visitors, but the 9-digit endings when promoting to U.S. visitors, and the 0 and 5 digits when targeting other high context cultures.

A possible resolution of the conundrum may be to price online sales of performance tickets, flights, or hotels in the currency of the targeted consumers. Indeed, most international tourism websites for online sales (e.g. booking.com, expedia.com, kayak.com) allow consumers to choose a preferred currency to pay for services. Framing

the same price in different currencies, so it incorporates the odd-ending heuristic most acceptable in each culture would enable prices to be accepted more easily by visitors from respective foreign cultures.

CHAPTER IV

STUDY 3: THE ROLE OF SYMBOLIC MEANINGS OF 9-ENDING PRICES IN TOURISTS' PURCHASE DECISIONS

4.1 Introduction

By definition, international tourism is a global phenomenon. Many corporations engaged in transportation, hospitality, and food and beverages have expanded their businesses into multiple markets. This requires their marketing strategies be adapted to fit local customs. One of the challenging tasks is how best to present price information. It has been recognized that while the neoclassical economic concepts of price, demand and supply remain sound general principles, they are incomplete (Kahneman, 2011).

Traditional economics assumes that the marketplace is perfect and efficient; that when tourists evaluate a price their thinking is rational and logical; that they invariably act to maximize utility; and that they act on the basis of full and relevant information. However, these assumptions are optimistic and unreasonable. Tourists often make decisions which are systematically and substantially different from those predicted by standard economics models. They seek to minimize cognitive effort in the decision-making processes by using heuristics which reduce the cognitive burden associated with complex problem solving (Shah & Oppenheimer, 2008). In lieu of rational decisions they develop strategies for making efficient decisions which are derived from their imperfect memories, different cultural heritages, and selected past experiences and

contexts. Since heuristics are a simplified thinking process, this diversity invariably means they have systematic cognitive biases.

One of these heuristics is their reaction to 9-ending prices. This study reports results from experiments that exposed subjects to scenarios involving tourism services with 9-ending prices. In the U.S., the use of 9-ending prices has been a long-standing practice (Rudolf,1954; Schindler & Kirby, 1997; Twedt, 1967). However, it is not widely embraced in Asian countries such as China and Korea (Nguyen et al., 2007; Simmons & Schindler, 2003). In Study 2 it was found there was no dominant use of 9-ending prices in Korea and in China. Rather, 0 and 8 ending prices were dominant in those countries, respectively. Hence, the study investigated if there were different symbolic meanings associated with 9-endings in these three different cultures, and if cultural differences in the effectiveness of the 9-ending services could be attributed to different symbolic meanings.

4.2 Literature review

4.2.1 The pervasive use of 9-ending prices

Prices of products and services ending with the number 9 are omnipresent in the U.S. It has been consistently demonstrated that they are an effective strategy for increasing purchases (Kalyanam & Shively, 1998; Manning & Sprott, 2009; Quigley & Notarantonio, 1992; Schindler & Kibarian, 1996; Stiving & Winer, 1997; Thomas & Morwitz, 2005, 2009). For example, surveys reported between 30 and 65 percent of all

retail prices ended in the digit 9 (Schindler & Kirby, 1997), and a series of eight studies published over a 17-year period reported that prices ending in the 9 digit increased sales by an average of 24 percent (Holdershaw, Gendall & Garland, 1997).

Retailers initiated this practice in the early 1900s to reduce dishonesty among store assistants (Schindler & Kirby, 1997). If a customer handed a clerk a $1 bill, the clerk could neglect to record the sale, slip the bill into his/her pocket, and nobody would know the money was stolen. The 9-digit ending required employees to punch in a price in order to open the change drawer, since most people paid in even-dollar amounts. The cash register kept a record of the amount entered and it was relatively simple to check the record against the cash, so it reduced opportunities to pocket the payment.

Subsequently, this practice continued, likely because it creates an illusion of substantially lower prices. Several explanations have been offered to explain this phenomenon, but the most convincing is termed "truncation" (Quigley & Notarantonio, 1992). Truncation involves people cutting off reading a price's digits before all of them have been recognized and encoded. This derives from research demonstrating that in the U.S., despite years of educational instruction to process numbers from right to left while adding and subtracting, people process prices from left to right. To illustrate: In the following examples, which service's price increase appears to be highest: A: $79 → $93 or B: $75 → $89? And which discount is perceived to be largest: A: $6.00→$4.95 or B: $6.05→$5.00? In both cases, most Americans are likely to select option A. It is suggested this occurs because of a tendency to reach a decision by comparing only the

left-side digits, so the differences between 7 and 9, and 6 and 4 are perceived to be greater than those between 7 and 8, and 6 and 5, respectively (Stiving & Winer, 1997).

The magnitude of the numbers is encoded very rapidly and a conclusion reached before all the digits are read. Thus, the price perception is anchored by the left-most digit(s). Since the left-most digits are the most important and people have a limited capacity to absorb information, this is a heuristic that enables them to simplify the complexity emanating from the bombardment of information to which they are subjected. Prospective purchasers are said to be "cognitive misers" so they ignore the right-hand digits, because they are "trading off the low likelihood of making a mistake against the cost of mentally processing the digit" (Stiving & Winer, 1997 p. 65).

Odd-ending pricing has most impact on price perceptions when the difference in the right-most digit alters the left-most digit. That is, $19.99 (vs $20) is more effective than $17.99 (vs $18), because the left-most digit changes from 2 to1(Thomas & Morwitz, 2009). Further, it is likely to be more effective at higher price levels, because the perceived dollar gain is much greater. Thus, the gain from a $39.99 price if only the first digit is processed would be $10, compared to a $1 gain for a $3.99 price.

While truncation offers a strong and viable explanation for why use of the 9-digit is so effective, it is not complete. Studies have shown, for example, that when a service is offered at $34, $39, and $44 not only are sales disproportionally larger at the $39 compared to the $44 price, but also that they are higher at $39 than at $34. Truncation and mental rounding cannot explain such results. If only the first digits were

considered, then sales at both price points should be the same, instead of being greater at the substantially higher $39 price than the $34 price (Stiving & Winer, 1997).

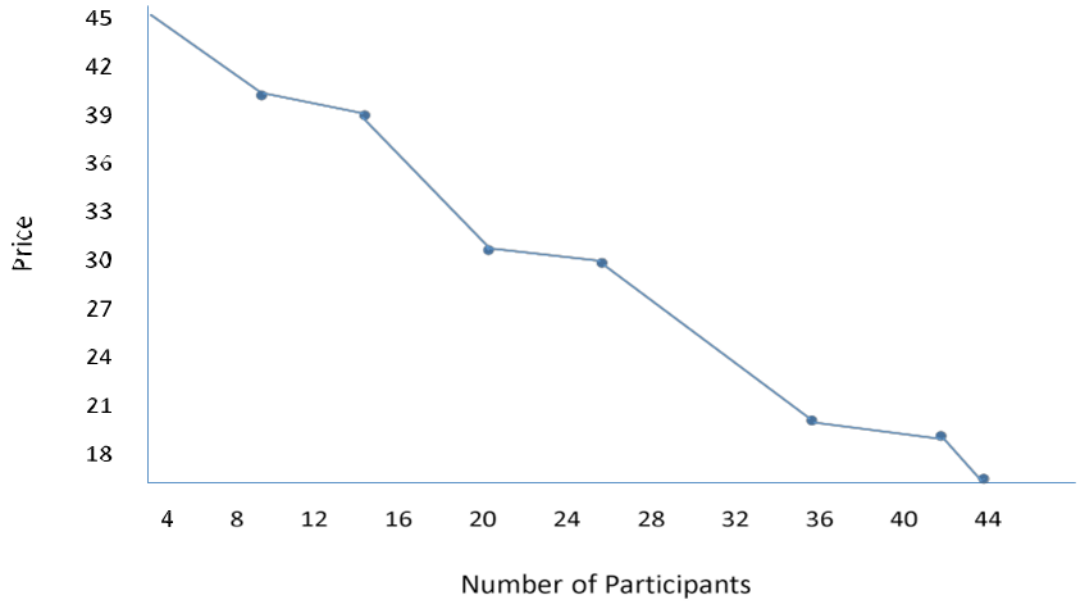


Figure 7. The influence of odd pricing on demand

To accommodate this anomaly, it has been proposed the truncation effect may be complemented by a more holistic response that is instinctive and associative rather than deliberative. It draws from associative knowledge structures in long-term memory and recognizes that sometimes a number spontaneously “pops up” first in a tourist’s mind, so it serves as an unintended heuristic in judgments. It may be the result of

instinctive cognitive arithmetic that mentally completes rounded number comparisons more quickly than non-rounded numbers (Thomas & Moving, 2009). Both are likely to contribute to the explanation for the effectiveness of odd number pricing.

A conceptual illustration of the influence of odd pricing on demand is shown in Figure 7. Consistent with classic economic theory, the figure shows that as price decreases from $45 to $18 the number of individuals purchasing a service can be expected to increase. However, at the 9-digit prices of $39, $29, and $19, disproportionately more people purchase it than at the rounded prices immediately above them. Thus, while 10 people buy it at $40, this increases to 15 at $39. Similarly, Figure 7 shows 20 people buy it at $30, but this number increases to 26 when the 9-ending of $29 is used (Crompton, 2016)

4.2.2 High/low context cultures

The same price message may not have the same shared meaning to people from different cultures. They are likely to use different cultural criteria, thought structures, and reasoning processes and so may attribute different symbolic meanings and interpretations to price communications. Two conceptualizations of national cultures have dominated the literature in the past three decades: Hofstrede's (1980, 2001) individualist/collectivist continuum, and Hall's (1976) identification of high/low context cultures. They are complementary in that Hofstede's work addresses societal values and beliefs, which may be perceived as antecedents to Hall's work on intercultural communications. This study was embedded in Hall's conceptualization, since its focus was on price communications.

Culture is often subconscious, an invisible control that directs many of our actions. Hall (1983) proposed that cultures could be differentiated by the extent to which recipients of a communication rely on the context in which it is presented to interpret its meanings. He observed that "what one pays attention to or does not attend to is largely a matter of context" (p.79). Context defines heuristics that enable tourists not to be overwhelmed by information overload. He described the process will colorful metaphor:

> Once learned… these habitual responses… gradually sink below the surface of the mind and, like the admiral of a submerged submarine fleet, control from the depths. The hidden controls are usually experienced as though they were innate simply because they are not only ubiquitous but habitual as well (p. 37).

In Hall's taxonomy, Korea and China are characterized as high-context cultures, whereas the U.S. is a low-context culture. In high-context cultures, focus is not on a message's content *per se*. Rather interpretation of its meaning is covert, indirect and implicit. A transmitted message is assumed to contain only minimal information, and it is preprogrammed information both in the receiver's mind and in the setting that guide its interpretation: "This internal contexting makes it possible for human beings to perform the exceedingly important function of automatically correcting for distortions or omissions of information in messages" (Hall, 1976, p. 102). Effort is invested in "reading between the lines" to understand what is being communicated, and meaning is ascertained by evaluating the message against the society's relatively strong cultural norms. Meaning and context are inextricably bound up with each other.

Hall (1976, p. 79) further explained: “A high context communication or message is one in which most of the information is either in the physical context or internalized in the person, while very little is in the coded, explicit, or transmitted part of the message.” In contrast, he observed that in low-context cultures like the U.S., meaning is attached to the messages themselves and they are more likely to be taken at face-value. They are considered to be direct, and explicit words that convey unambiguous meaning. Whereas cognitions in high-context culture are context dependent, they are independent in low-context cultures.

This distinction was supported by a series of empirical explorations of Chinese and western reasoning styles. The authors reported that Chinese reasoning tended to be integral and holistic attending to the perceptual and cognitive context as a whole, whereas individuals grounded in western cultures emphasized decontextualized thinking that separated a message from its field (Peng & Nesbitt, 1999).

These differences suggest that high-context cultures are likely to mitigate the effect of 9-digit endings so they are less effective, since in those societies people will tend to more carefully scrutinize the messages and ‘read’ their true meaning which is to create an illusion. They will be more likely to realize a price of $199 (what is stated) is really $200 (what is meant) and that it involves a real gain of only $1. Further, they are more likely to perceive them as a manipulative marketing practice and so consider the service supplier to be distrustful.

4.2.3 Alternate symbolic meanings associated with 9-ending prices

Since people evolve and function within a culture, those around them tend to share the same patterns of thinking and behavior, so the meanings of heuristics are reinforced and widely understood by most others in that culture. Hence, over time, U.S. residents are likely to subconsciously associate symbolic meanings with 9-ending prices. Symbolic meaning is different from the level of price. That is, while $499.99 is likely to be perceived by most consumers in the U.S. as being substantially below $500.00, the literature suggests they may attribute four different symbolic meanings to the $499.99 price.

First, it has long been recognized that for many people a 9-ending price connotes a sale price, a low price, or a discount price (Berman & Evans, 1992; Bliss, 1952; Dodds & Monroe, 1985). More recently Schindler (2009), for example, in an analysis of U.S. retailing advertisements empirically demonstrated that use of the 9-ending was considerably higher in advertisements that were promoting a discount, than in those for which no such claim was made.

A second symbolic meaning emanates from the price/quality relationship (Scitovszsky 1945). Since the 9-ending has connotations of low price, then some may also associate it with low quality (Kreul, 1982; Schindler, 1991). The antithesis of an odd-ending price is an even-ending price. Several studies have reported that ending a price with the 0 digit symbolizes “classiness” (Spohn & Allen, 1977) or high quality (Whalen, 1980; Wingate, Schaller & Miller, 1972). Its effectiveness in conveying this

meaning has been demonstrated in the contexts of restaurants (Naipaul & Parsa, 2001) and retailing (Schindler & Kibarian, 2001).

A third symbolic meaning of a 9-ending price is enhanced value, which emanates from prospect theory (Kahneman & Tversky, 1979). One of its central tenets is that a price perceived as being lower than its latitude of acceptance is regarded as a gain. Thus, when a 9-ending creates the illusion of a substantially lower price, it is perceived to offer enhanced value (Crompton, 2016).

Finally, the 9-ending price may symbolize "sneaky, slick, doesn't play it straight" (Schindler 1991, p 798). It has been suggested that in high-context cultures, a 9-ending price may be perceived as a misleading, manipulative market practice that creates distrust: "Relative to their counterparts in low context, western cultures, consumers in non-western high context cultures may be less prone to the illusion of cheapness or gain created by odd endings, and more likely offended by such attempts to 'fool' them. Thus, odd endings are predicted to operate at a higher level of value significance to consumers, and to occur less frequently relative to even endings, in high than low, context cultures" (Nguyan et al., 2007, p. 206). This symbolic association was affirmed by the findings of Diller and Brielmeir (1995) and Suri et al. (2004).

In Schindler's (2009) analysis of Japanese advertisement endings, he reported the 8 digit as being the most pervasive price ending. The 8 is an auspicious number in Japan because the shape of its character has connotations of happiness and prosperity. However, Schindler (2009) suggested its prominence "could also be due to 8's added distance from the round (0-ending) number. Being a little further from the round number

may make 8-endings seem less manipulative than 9-endings in that they are not as close to the round number as possible. Because Japan is a high-context culture where manipulative intent would be more devalued that in a low-context culture such as the U.S., this factor could help explain Japanese managers' preference of the digit 8 (Synodinos, 2001)" (p. 27).

4.3 Hypotheses and methods

This study investigated potential tourists' price decisions when confronted with odd and even price options relating to inexpensive functional items (buying a sandwich alone and a pizza with a travel companion) and an expensive hedonic option (purchasing tickets with a travel companion for a show). Tourism experiences are comprised of a portfolio of tangible products (such as meals) and less tangible experiences (such as shows); and functional purchases (such as sandwiches and pizzas) and hedonic purchases (such as shows). The experiments' scenarios were designed to address these differences. They were also asked to respond to a scenario involving discounted hotel rooms to see if a 9-ending discounted price was effective when compared to even-ended price discounts.

The subjects were drawn from three cultures: U.S. (low-context, individualistic culture), and Korea and China (high-context, collectivist cultures). Based on the literature review, five hypotheses were tested:

H3-A There will be differences in the relative importance tourists assign to meanings associated with 9-ending prices among the three cultures.

H3-B (i) Tourists in high-context cultures will be less likely to select 9-ending prices than to select even-ending prices.

H3-B(ii) Decisions relating to selection of 9-ending prices will be influenced by the symbolic meanings associated with them.

H3-C. In the context of a hotel room, a 9-ending price will be perceived as offering a significantly greater discount than an even-numbered price.

H3-D The effectiveness of a 9-ending discount will be attributable to different symbolic meanings that tourists ascribe to 9-endings.

Subjects were presented with one of four different questionnaires translated into their language. The same travel scenario was presented in all of the questionnaires: A three-day pleasure vacation trip to New York City which involved staying at a hotel, dining, shopping and sightseeing.

On all four questionnaires, scenario questions were posed and in each question subjects were requested to make a decision to purchase a lower or a higher priced option. In questionnaires 1 and 2 the lower price had a 9-ending price, while the higher price had an even-ended number. In questionnaires 3 and 4 this was reversed, so subjects were asked to select either a higher price option with a 9-number ending or a lower price option with an even-ended number.

A total of 2,346 usable questionnaires were collected from convenience samples of college students in three different cultures in three countries: 486 from the

U.S.; 866 from Korea; and 994 from China. Only those questionnaires in which all of the questions were fully answered were considered usable.

4.4 Development and reliability of the scales

The literature review suggested that price endings had four different symbolic meanings: low quality, discounted price, enhanced value and/or misleading action (Suri & Anderson, 2004; Schindler & Kibarian, 1996; Quigley & Notarantonio, 1992). Items representing each of these domains were collected from that review. They were formed into Likert-type seven-point scales anchored by strongly disagree (1) and strongly agree (7), randomly ordered, and pilot tested using a sample of U.S. undergraduate students. As a result of the pilot test, each of the domains was operationalized by three items which are shown in Table 16.

This instrument was pilot tested with Texas A&M University students to assess its reliability before administering it to samples in the three cultures. The pilot test sample comprised 57 students. In the pilot test instrument the direction of three scale items (questions 3, 6, and 10) were reversed to discourage automatic responses (i.e. question 3: Ending a price in 9 makes it less likely I will buy it; question 6: A price ending in 9 makes me confident it is good quality; and question 10: Ending a price in 9 is ethically acceptable)

Reliability for the internal consistency of subjects' responses on each of the four scale dimensions was measured by Cronbach's alpha. The alpha of the 3 items in the

Discount Price domain was 0.53, which was acceptable for the small sample pilot test. The alpha for the 3 items in Low Quality domain was 0.34 but it increased 0.71 when question 3 was deleted. The alpha of the 3 items in the Misleading Action domain was 0.14 but it increased 0.26 when question 10 was deleted. The alpha for the Enhanced Value domain was 0.22, but increased 0.37 when question 3 was deleted. These results suggested the reverse question format (3, 6, and 10) caused confusion. So, rather than delete these items, it was decided to change them so they were stated in the same direction as the other items, recognizing that if they lacked internal consistency when all the data were collected, they could be removed at that time.

Table 16. List of scale items

1. A price ending in 9 suggests the service is low priced.
2. Ending a price in 9 is a trick to mislead consumers
3. Ending a price in 9 make it more acceptably I will buy it
4. A price ending in 9 suggests the service is poor quality.
5. I prefer to buy services with a price ending in 9.
6. A price ending in 9 makes me doubt it is good quality
7. A 9-ending price is more likely to capture my attention when selecting a service
8. Ending a price in 9 is unfair because it is used to make the price look smaller than actually it
9. A price ending in 9 suggests it is being discounted
10. Ending a price in 9 is ethically unacceptable.
11. A price ending in 9 means the service's quality is not reliable.
12. A price ending in 9 indicates it has been recently reduced.

Table 17. Exploratory factor analysis of items measuring the connotations of 9-ending prices

Domains and Items	Salient Factor Loadings			
	All	U.S.[a]	Korea	China
Factor 1 (Low Quality)				
4. A price ending in 9 suggests the service is poor quality	0.60	0.74	0.71	0.50
6. A price ending in 9 makes me doubt it is good quality	0.66	0.71	0.67	0.62
11. A price ending in 9 means the service's quality is not reliable	0.81	0.85	0.85	0.70
Cronbach's alpha	*0.74*	*0.85*	*0.79*	*0.63*
Factor 2 (Enhanced Value)				
3.Ending a price in 9 make it more acceptably I will buy it	0.71	0.66	0.72	0.74
5. I prefer to buy services with a price ending in 9.	0.69	0.56	0.74	0.69
7.A 9-ending price is more likely to capture my attention when selecting a service	0.69	0.62	0.73	0.68
Cronbach's alpha	*0.74*	*0.69*	*0.77*	*0.75*
Factor 3 (Discount Price)				
9.A price ending in 9 suggests it is being discounted	0.66	0.47	0.77	0.61
12.A price ending in 9 indicates it has been recently reduced	0.69	0.46	0.42	0.73
Cronbach's alpha	*0.68*	*0.73*	*0.52*	0.69
Factor 4 (Misleading Action)				
2.Ending a price in 9 is a trick to mislead consumers	0.54	0.62	0.58	0.44
8.Ending a price in 9 is unfair because it is used to make the price look smaller than actually it is.	0.68	0.50	0.65	0.82
Cronbach's alpha	*0.54*	*0.46*	*0.55*	*0.53*

a. The 5 items measuring Enhanced Value and Discount Price loaded on the same factor in the U.S. sample.

To confirm the dimensionality of the scales, an exploratory factor analysis was undertaken on the whole sample in the three cultures. Four factors with an eigenvalue higher than one emerged. The salient loadings are reported in Table 17. The factor analysis confirmed the dimensionality of the three item scales measuring the Low Quality and Enhanced Value domains. The Cronbach alpha in both cases was 0.74.

Two of the anticipated three items loaded saliently on the Discount Price domain, but Item #1 did not. This may be attributable to the item using the words "low price" which is an absolute condition, rather than the word "discount" which characterized the other two items. Similarly, the Misleading Action domain was reduced to two items when item #10 did not load saliently, perhaps because the word "unacceptable" was perceived as being much stronger than the words "trick" and "unfair" that were used in items #2 and #8, respectively. The Cronbach alphas for these two domains were 0.68 and 0.54.

To evaluate the stability of the scales across cultures, independent exploratory factor analyses were undertaken on each of the three samples (Appendices E through I). The salient loadings on the Korea and China samples confirmed those that emerged from the overall factor analysis. The U.S. analysis generated only three factors. It confirmed the Low Quality, Enhanced Value, and Misleading Action domains, but the two items comprising the Discount Price domain saliently loaded on the same factor as the three items on the Enhanced Value domain (Table 17).

Despite the widespread use of Cronbach's alpha (Sijtsma, 2009), there is surprisingly little guidance as to what constitutes an "acceptable" or "sufficient"

coefficient (Peterson, 1994). However, most studies cite Nunnally's (1978) recommendation of 0.7 as meeting this criterion. Nunnally recognized this criterion was relatively arbitrary, and so it was probably reasonable for the authors to conclude that the 0.74, 0.74, and 0.68 alphas reported in Table 17 were acceptable.

The marginal and low alphas on the Misleading Action and Discount Price domains were not unexpected. Nunnally (1978) pointed out that the fewer the number of items in a scale, the smaller would be the magnitude of Cronbach alpha. It has consistently been confirmed in the literature that it is difficult to achieve the 0.7 criterion with a small number of scale items. Peterson (1994) in his meta-analysis empirically demonstrated that the major difference in mean alpha scores was between scales with two or three items and those with more than three items. Similarly, Cortina (1993) empirically demonstrated: "The number of items had a profound effect on alphas... Alpha is very much a function of the number of items in a scale" (p. 102).

This characteristic of alpha has led some to suggest and an alpha greater than 0.6 is acceptable for scales comprised of so few items (Robinson et al., 1994; Hair et al., 1995), while others have suggested 0.55 (Van de Ver & Ferry, 1979). Nevertheless, the low alpha for the Discount Price scale together with its failure to load saliently on the U.S. factor analysis suggests results associated with that scale should be regarded as tenuous.

4.5 Results

Hypothesis 3-A: There will be differences in the relative importance tourists assign to meanings associated with 9-ending prices among the three cultures.

The group means of items comprising each of the four scales were calculated for each of the three samples. Table 18 shows there were significant differences ($p < 0.01$) on each of the scales. In all three cultures, misleading action was the most salient symbolic meaning, while the least salient was low quality in the U.S. and Korean samples, and discount price among the Chinese sample.

Table 18. Results of ANOVA and Duncan's tests on the 7-point scale group means of the three cultures

Domains	Mean Value			F-Value (p-value)
	U.S. (n=486)	Korea (n=866)	China (n=994)	
Low Quality	2.58 (C)[a]	3.14 (B)	3.27 (A)	60.22 (p<0.01)
Enhanced Value	3.36 (B)	3.64 (A)	3.47 (B)	8.45 (p<0.01)
Discount Price	2.82 (C)	4.21 (A)	2.97 (B)	264.91 (p<0.01)
Misleading Action	4.81 (B)	5.35 (A)	4.91 (B)	38.80 (p<0.01)

a. Different letters indicate significant differences in group means

When responses on the four scales in each of the three cultures were independently measured in each of the three different contexts (i.e. eating a sandwich alone, a pizza with a travel companion, and a show with a travel companion) the results replicated those shown in Table 18. Irrespective of the social context and the functional or hedonic nature of the purchase, the orderings, magnitude and range of scale responses remained remarkably consistent.

Ostensibly, the results confirmed the hypothesis. However, there were patterns that suggested this might not be the most appropriate interpretation of the data. It has been demonstrated that sometimes systemic bias leads to results that are an artifact of the scale response process, rather than a measure of real differences (Greenleaf, 1992). The data in Table 18 show evidence of such a bias, since there was a consistent trend in the group means. The U.S. scores were lowest and the Korea scores were highest on three of the scales, (the exception being the Low Quality scale). In other words, the importance of each symbolic meaning was reported at a different point along the scales by each culture, but the order and range of differences between the four meanings was similar. It has been suggested that these characteristics are indicative of systemic bias (Hofstede, 2001; Tellis & Chandrasekaran, 2010).

This led the author to conclude the differences were likely to be an artifact of the measuring instrument, rather than real differences among the cultures. That is, cultural biases assigning a numeric value to a verbal cue resulted in the U.S. sample recording their diversity of perceptions at the low end of the scales, perhaps reflecting the "law of the excluded middle" that characterizes Western thinking (Peng & Nisbett, 1999); the

China sample at middle points of the scales, which is consistent with the Chinese heuristic of adopting a dialectical reasoning style to create compromise when confronted with opposing perspectives (Peng & Nisbett, 1999); and the Korea sample at the highest points along the continuum, which may be consistent with Koreans' "overall tendency to extreme responses" (Tellis & Chandrasekaran, 2010 p.334).

It was hypothesized subjects from the three cultures would exhibit differences in the *relative* importance of the meaning of odd-numbered prices. To explore *real* differences, two assumptions were necessary: (i) that there was a consistent trend in the ordering of the relative weights of the scales; and (ii) that the ranges among the three cultures on all four scales were of a similar magnitude. If there was a similar magnitude of diversity of perspectives relating to the relative importance of the four symbolic meanings within each country, then real score differences among the cultures could be compared after adjusting their *grand means* (i.e. the average of the symbolic meanings in each culture shown in Table 18).

Table 19. Duncan's test of grand means in the three cultures

Country	N	Mean	Std Dev	Waller Grouping[a]
Korea	866	4.09	0.73	A
China	994	3.66	0.74	B
U.S.	486	3.40	0.84	C

a. Different letters indicate significant differences in group means

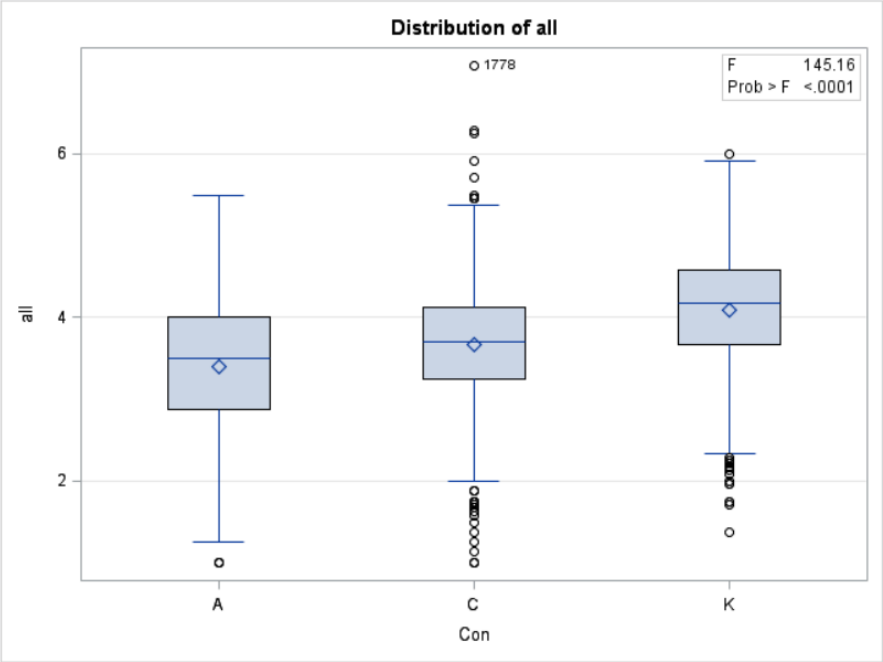


Figure 8. ANOVA of grand means in the three cultures

Table 19 shows the grand means. For example, the 4.09 grand mean for Korea is comprised of the mean of the four scale scores shown in Table 18 (i.e. average of 3.14+3.64+4.21+5.35). As expected, ANOVA and Duncan's tests indicated there was a significant difference in grand means among the three cultures ($F= 145.16$, $p<0.01$); the grand mean of the Korean sample was highest (4.09) while that of the U.S. sample was lowest (3.40) (Figure 8 and Table 19). Furthermore, the standard deviations of the grand means were different; the U.S. sample had the widest standard deviation value (0.84), while those of the Korea and China samples were 0.73 and 074, respectively. The

goodness-of-fit measured by the shaprio-wilk test indicated all three samples did not follow a normal distribution ($p<0.01$) (Figure 9).

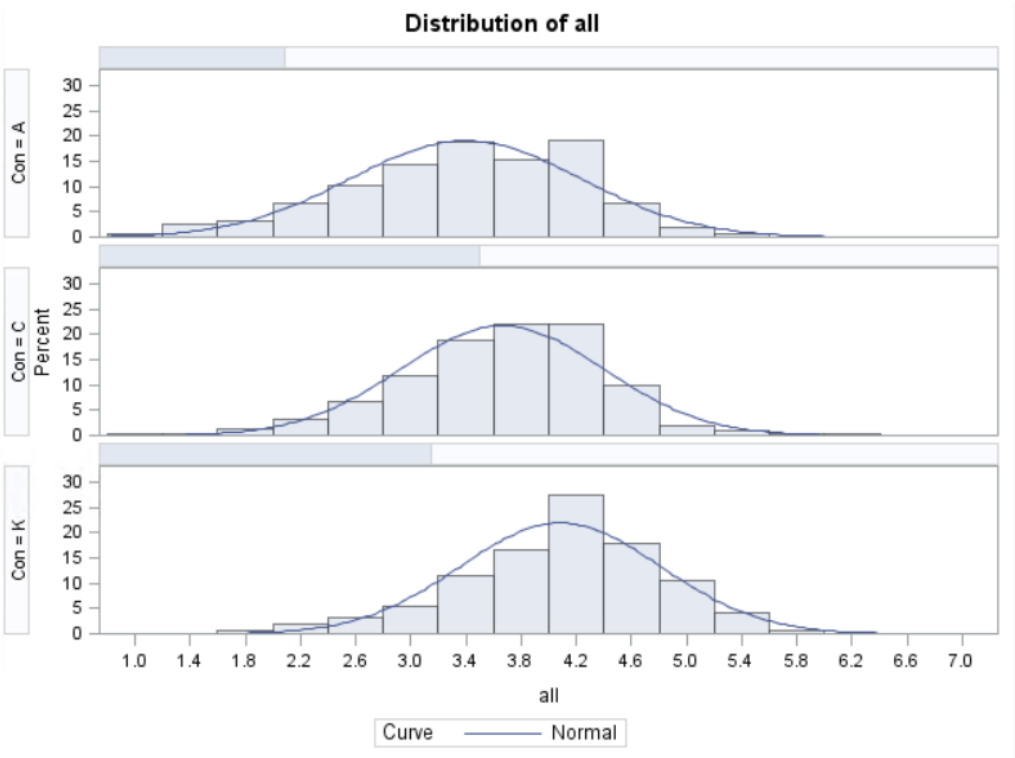


Figure 9. Goodness-of-fit tests for normal distribution

Since there was systematic bias in the numeric value, the potential for using standardized scores was considered which would adjust the three samples so their group means could be compared. However, since there were significant differences in the standard deviations and distributions among the cultures, this was not a feasible

alternative. An adjustment of *grand means* would be arbitrary. Standardization would change the relative cultural weights of scores, and so dilute the real extent to which each culture agreed or disagreed with the scale items. Given these doubts about the validity of the group mean differences among the samples, and the distortion that would occur by standardizing scores, subsequent analyses were confined to testing for differences within each sample.

Hypothesis 3-B(i): Tourists in high-context cultures are less likely to select 9-ending prices than to select even-ending prices.

The hypothesis was tested by comparing the responses to each of the three purchase scenarios that required subjects to select either a 9-ending or an even-number ending price. Questionnaires 1 and 2 posited a lower price with a 9-ending price and a higher price with an even-ended number, while questionnaires 3 and 4 reversed this by asking subjects to select either a higher price option with a 9-number ending or a lower price option with an even-ended number.

Compared with 52.4% in the U.S. sample, 51.6% and 52. 7% of the Korean and Chinses samples selected to eat the 9-ending priced sandwich. Similarly, 47.7%. 49.3% and 51.9% of the U.S., Korean, and Chinses samples selected the 9-ending priced pizza; And, 52.7%, 51.9%, and 53.0% of the U.S., Korean, and Chinese samples selected the 9-ending priced show tickets. These results indicated that the Korean and Chinses samples were not less likely to select 9-ending priced services than was the U.S. sample. Hence, the hypothesis 3-B(i) was rejected.

Hypothesis 3-B(ii). Decisions relating to selection of 9-ending prices will be influenced by the symbolic meanings associated with them.

In all three purchase scenarios, t-tests were undertaken on the group means of the four scales in each of the three cultures between those who selected the odd and the even-ended price (Table 20). Significant differences ($p < .05$) on the 36 tests emerged on only 1, 2 and 1 of the scales in the sandwich, pizza and show ticket scenarios, respectively. Thus, in 89% of the cases those who selected 9-ending priced services and those who selected even ending priced services did not perceive there to be differences in symbolic meanings attributed to 9-ending prices. These results suggested hypothesis 3-B(ii) should be rejected.

Table 20. Differences in perception of 9-ending prices between those who select odd-ending priced services and those who select even-ending priced services

Domains	U.S.			Korea			China		
	Those Who Selected an Odd ending	Those Who Selected an Even ending	t-value (p-value)	Those Who Selected an Odd ending	Those Who Selected an Even ending	t-value (p-value)	Those Who Selected an Odd ending	Those Who Selected an Even ending	t-value (p-value)
Sandwich to Eat Alone[a]									
Low Quality	2.58	2.59	-0.13 (0.90)	3.14	3.14	-0.02 (0.98)	3.22	3.33	-1.63 (0.10)
Enhanced Value	3.44	3.27	1.63 (0.10)	**3.74**	**3.54**	**2.42 (0.02*)**	3.55	3.39	1.87 (0.06)
Discount	2.77	2.88	-0.90 (0.37)	4.26	4.15	1.34 (0.18)	2.94	3.01	-0.85 (0.40)
Misleading Action	4.81	4.81	-0.03 (0.97)	5.30	5.40	-1.25 (0.21)	4.89	4.92	-0.39 (0.70)
Pizza to Share with a Travel Companion[b]									
Low Quality	2.56	2.60	-0.38 (0.70)	3.15	3.14	0.15 (0.88)	**3.20**	**3.35**	**-2.02 (0.04*)**
Enhanced Value	3.46	3.27	1.79 (0.07)	**3.82**	**3.47**	**4.18 (<0.01**)**	3.55	3.39	1.82 (0.07)
Discount	2.90	2.76	1.16 (0.25)	4.27	4.14	1.48 (0.14)	2.95	3.00	-0.57 (0.57)
Misleading Action	4.81	4.80	0.08 (0.94)	5.33	5.36	-0.45 (0.66)	4.86	4.96	-1.18 (0.24)

Table 20. Continued

Domains	U.S.			Korea			China		
	Those Who Selected an Odd ending	Those Who Selected an Even ending	t-value (p-value)	Those Who Selected an Odd ending	Those Who Selected an Even ending	t-value (p-value)	Those Who Selected an Odd ending	Those Who Selected an Even ending	t-value (p-value)
Show Tickets to Share with a Travel Companion[c]									
Low Quality	2.59	2.58	0.12 (0.91)	3.08	3.20	-1.56 (0.12)	3.28	3.26	0.24 (0.81)
Enhanced Value	**3.53**	**3.20**	**3.19 (<0.01**)**	3.69	3.60	1.14 (0.26)	3.51	3.43	0.98 (0.33)
Discount	2.83	2.81	0.20 (0.84)	4.13	4.28	-1.82 (0.07)	3.01	2.93	1.04 (0.30)
Misleading Action	4.85	4.77	0.74 (0.46)	5.31	5.38	-0.79 (0.43)	4.91	4.91	-0.05 (0.96)

a. The numbers of the subjects who selected an odd-ending and an even-ending are 255 and 231 in the U.S., 447 and 419 in Korea, and 524 and 470 in China, respectively.
b. The numbers of the subjects who selected an odd-ending and an even-ending are 232 and 254 in the U.S., 427 and 439 in Korea, and 516 and 478 in China, respectively.
c. The numbers of the subjects who selected an odd-ending and an even-ending are 241 and 245 in the U.S., 431 and 435 in Korea, and 527 and 467 in China, respectively.

Hypothesis 3-C. In the context of a hotel room, a 9-ending price will be perceived as offering a significantly greater discount than an even-numbered price by the U.S. sample but not by the Korean and Chinses samples.

Each of the four questionnaires included the following scenario:

You are a college student and the nightly rate for the Hotel New York in New York City is discounted for college students if you provide a student card. This hotel is in a central location in New York City convenient for all the city's attractions. It offers all guests free Internet service and a free breakfast buffet. A cable TV and fridge are included.

Compared with the ***regular price of $240***, do you consider this hotel's student ***discounted X*** price to be (check one):

[1]	[2]	[3]	[4]
Very ***slightly*** discounted	***Slightly*** discounted	***moderately*** discounted	***highly*** discounted

The different discounted X prices in the scenario used in the four questionnaires were: $220, $200, $199, and $180. The results for each of the three cultural samples are reported in Table 20 and are graphed in Figure 8. They show that in all samples the difference between the $200 and $199 discounts was significant, even though the absolute dollar difference between them was only $1. Hence, the 9-ending price effect seemed to be universal and hypothesis 3-C was rejected.

Table 21. Results of ANOVA and Duncan's Test on the 4-point scale measuring perceptions of different hotel discount prices

	US			Korea			China		
Discounted prices from $240	Mean	Duncan Grouping*	N	Mean	Duncan Grouping	N	Mean	Duncan Grouping	N
$220	1.96	A	92	2.26	A	216	2.12	A	265
$200	2.51	B	94	2.72	B	212	2.51	B	232
$199	2.84	C	88	3.00	C	218	2.76	C	249
$180	3.21	D	92	3.13	C	220	3.01	D	248
F	59.52 (P<0.01)			70.71 (P<0.01)			94.19 (p<0.01)		

* Means with the same letter are not significantly different

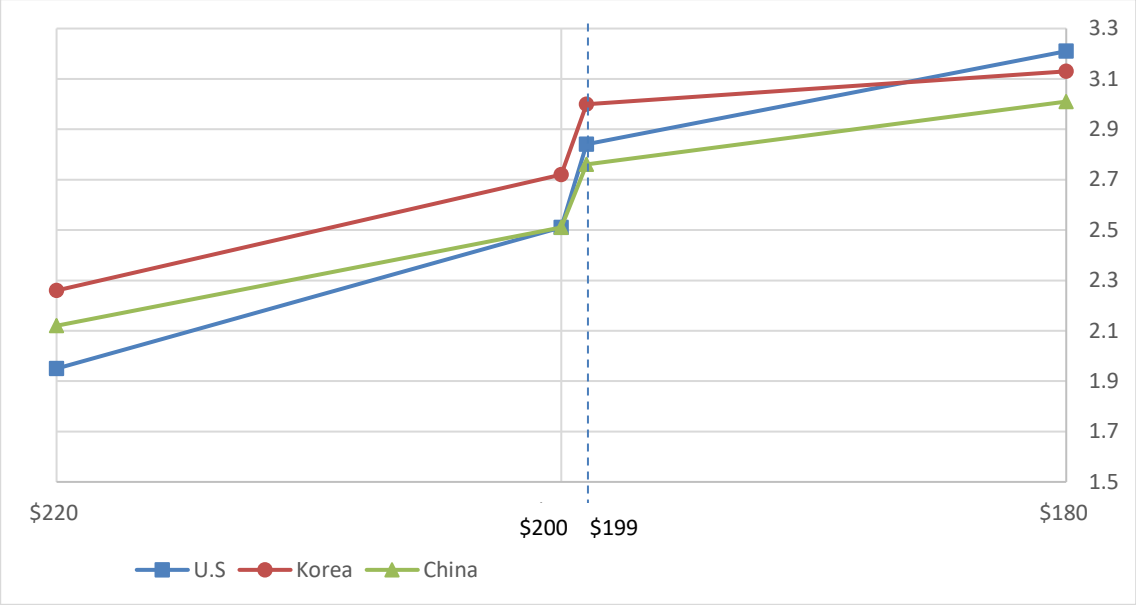


Figure 10. Perceived value of each discounted price

Hypothesis 3-D. The effectiveness of a 9-ending discount will be attributable to different symbolic meanings that tourists ascribe to 9-endings.

Responses to three of the experimental questions were used to test this hypothesis. First, responses to the $199 hotel discounted price reported in Table 5 were analyzed. The first two and the last two response categories were collapsed to form two categories: very slightly/slightly and moderately/highly discounted. The results are reported in Table 22. Only one of the twelve t-tests indicated a significant difference. Thus, the effectiveness of the 9-ending discount could not be explained by the different symbolic meanings ascribed to 9-ending prices.

Table 22. Differences in perceptions of 9-ending prices between those who perceive discounted price of $199 as slightly and highly discounted

	U.S.			Korea			China		
	Slightly (n= 27)	Highly (n= 88)	t-Value (p-value)	Slightly (n=41)	Highly (n=177)	t-Value (p-value)	Slightly (n= 80)	Highly (n= 169)	t-Value (p-value)
Low Quality	2.38	2.59	0.75 (0.45)	3.44	3.19	-1.27 (0.21)	3.40	3.19	-1.46 (0.15)
Enhanced Value	3.10	3.35	0.99 (0.33)	3.50	3.73	1.16 (0.25)	3.43	3.42	-0.09 (0.93)
Discount Price	2.52	2.82	1.06 (0.29)	3.98	4.32	1.63 (0.10)	3.21	2.95	-1.45 (0.15)
Misleading Action	**4.31**	**5.10**	**2.51 (0.01*)**	5.57	5.38	-1.07 (0.29)	4.72	4.90	1.00 (0.32)

4.6 Discussion and conclusions

An earlier paper empirically explored the prevalence of odd-ending prices in the same three cultures from a supply perspective (under review). While 9-ending prices were dominantly used in the U.S., they were not frequently used in China and Korea. This paper complemented the earlier research in that it explored the odd-ending price effect from a demand perspective and sought to identify if symbolic meanings were associated with the 9-ending heuristic in each of the three cultures.

Three main findings emerged from the study. First, the literature review identified four symbolic meanings: low quality; enhanced value; discount price; and misleading action. The review suggested that tourists in low-context cultures like the U.S. would focus on discounts or low quality, while those in high-context cultures would be less prone to the illusion of cheapness by odd-endings and view them as misleading actions to be treated with suspicion (Nguyen, Heeler and Taran, 2007). However, contrary to expectations, there were no significant differences in the symbolic meanings attached to 9-ending prices between the U.S. (low-context) and Korean and Chinese (high-context) samples. In all three samples, misleading action was the strongest symbolic meaning, while the connotation of low quality was the least salient meaning.

As expected, there were significant differences in the relative importance tourists assigned to meanings associated with 9-ending prices among the three cultures. However, it was concluded that these differences were likely to be an artifact of the measuring instrument rather than real differences among the cultures.

A second major finding was there were no substantive differences among the samples in their selection of 9-ending prices when purchasing a sandwich, a pizza, or show tickets. In all three samples, approximately 50% opted for the 9-ending and the even-ending alternatives which is consistent with what would be expected by chance. However, a third major finding countered this result. When a hotel discounted price ended in the number 9 (i.e. $199), samples in the all three cultures perceived this promotional price disproportionately more positively than at the rounded price immediately above it (i.e. $200). This result is contrary to that reported in the earlier study of the suppliers' perspective on price-endings where in China and Korea the cultural specific price endings of 8 and 0, respectively, were most frequently used, and 9-ending prices were conspicuously rare (paper, under review).

Behavioral decisions are influenced by subconscious and perhaps biased reasoning, so identifying the reasons explaining behavior is a challenge (Wilson and Dunn, 2004). People's attitudes do not always rationally and/or logically reflect their behavior (Fazio & Roskos-Ewoldsen, 2004). Even though there is often an assumption that attitudes predict behavior (Fishbein & Ajzen, 1975), empirical tests have revealed this is not necessarily the case (Pager & Quillian, 2005). Because price heuristics are not based on reasoned action but instinctive "rules of thumb", asking rational questions relating to 9-ending prices may not be effective in explaining behavior. Thus, even though this study did not find significant differences in the symbolic meanings of 9-ending prices between those who select 9-ending and even-ending priced services, the lack of relationship should be regarded as being tenuous.

This study provides useful insights for developing pricing strategies in the global tourism industry. Even though suppliers tend to use cultural specific price endings in their countries, in the context of hotels, potential tourists in all three cultures were influenced positively by 9-ending price discounts. That may mean the 9-ending price effect is universal in some contexts, but not in others. Suppliers in high context cultures have been reluctant to use 9-ending priced services because of its negative symbolic meanings, but tourists in high context cultures are not less likely to select 9-ending priced services than those in low context cultures. Indeed, in all cultures, the 9-ending discount was perceived to be a greater discount than even-ended prices in the context of a hotel room even though its effectiveness could not be explained by the different symbolic meanings associated with 9-ending prices. It is perhaps more appropriate to recognize people's behavior for what it is instead of trying to understand their reasoning, because there is no cognitive rationale process; rather, it results from quick decisions based on the innate mechanisms of heuristics.

CHAPTER V

SUMMARY

Globalization means that many tourism suppliers target international visitors from multiple countries, so understanding cultural differences is a key to gaining a competitive advantage. This requires tourism managers to adapt strategies that reflect the multi-faceted responses to price formats exhibited by visitors from different cultures. If tourists' responses toward price endings derive from cultural learning, tourism service suppliers have to recognize that visitors from different cultures will react to price frameworks differently, and that they need to be tailored to each culture. This dissertation empirically examined whether price heuristics were culturally specific or universal.

In Study 1, the perceived value based on the relationship to price and quality was explored in the three cultures. As the scenarios moved from consuming alone, with an acquaintance, to with a close family member, subjects in each culture had a greater propensity to select the higher price option, indicating the quality factor was considered more importantly. By addressing cultural and social group influences on price decisions relating to functional and hedonic elements of a tourism trip, this study was a pioneering effort

Hypothesis 1-A was confirmed as there was a statistically significantly greater tendency to purchase the higher price option when a pizza was being consumed with a companion than when eating sandwich alone. In other words, consumers were less likely

to be concerned about price in social consumption contexts. The data used to test Hypothesis 1-B(i) showed there was an overwhelming tendency for the U.S. sample to select the lower price option when making purchases for both the pizza and the show for both an acquaintance and family member. This suggests that the U.S, sample treat in-groups and out-groups similarly and do not pay much attention to them. It reflected the expectation associated with an individualist culture where the emphasis is on self-reliance and personal goals, rather than on group responsibilities.

In contrast to the U.S. sample, a majority of the Korea sample selected the higher price option in both the pizza and show scenarios when their companion was a family member. These results from the Korea sample were distinctively different from those of the China sample, even though they are frequently regarded as both having a collectivist culture. Results for the China sample did not differentiate between acquaintance and family since the China sample selected the higher priced option not only for a family member, but also for an acquaintance. This suggests that the collectivist influence in China extends beyond the family to a wider circle than in Korea.

The data for Hypothesis 1-C tested if people secured social benefits only when the monetary was low. the U.S. sample overwhelmingly selected the low-price option in both instances, for both family and acquaintances. In contrast, Korean sample selected the higher priced option for family in the expensive show scenario. The China sample results also differed from the other two groups. A significantly larger percentage of the sample selected the higher price option for inexpensive pizza, than for the expensive show in both the family and the acquaintance contexts. The mixed results to this

hypothesis meant that each of the conflicting suggestions could at best claim only partial support for their expectations.

Studies 2 and 3 explored the effectiveness of odd-ending pricing strategies. From a supplier perspective, Study 2 explored the prevalence of odd-ending price in three different cultures since an effective way to gain insights into their responses is to review the pricing strategies employed in tourists' home cultures. From a demand perspective, Study 3 explored the perception of visitors to odd-ending prices in three different cultures.

Study 2 provides confirmative evidence that there are different cultural interpretations of price endings, resulting in differences in frequency of their use. Tests of Hypothesis 2-A offered clear evidence they were perceived by tourism service suppliers to be culturally specific. The 9-digit in New York City, the 0-digit in Seoul, and the 8-digit in Shanghai were used significantly more frequently than the other digits within and across the cities. It suggests that heuristic responses of suppliers related to 9 and 8 digit ending prices are learned skills which are specific to the U.S. and China cultures, respectively. However, the 0 and 5 digit ending prices were prominent in all three cultures. They were ranked first (32.8%) and second (15.0%) in Seoul, respectively; second (11.8%) and third (9.0 %) in Shanghai, and third (8.9%) and second (19.1%) in New York. That suggests the heuristic response to round number ending prices are universal.

Hypothesis 2-B investigated whether 9-ending prices were used more frequently when both left and right digit odd numbers were incorporated in a price. Contrary to

expectations, 9-endings were not used more frequently when the leftmost digit was lowered by the use of the 9-ending price than when it was not. Sellers appeared content merely to use 9-digits in the end of a price, rather than to use them to also lower a leftmost digit. This suggests they may consider the discount connotations of this action to be as effective as the combined effects of lowering both the left and right digits. This is consistent with results reported by Stiving and Winer (1997) that showed a 9-ending price *itself* resulted in superior sales *regardless* of the leftmost digit.

Tests of Hypothesis 2-C revealed that Shanghai used 9-endings more frequently in lower priced tourism services than in higher priced services, but in New York City and Seoul the association of the 9-ending prices with lower priced items was *not* present. While this was inconsistent with conventional wisdom in the U.S, it was consistent with findings indicating there was *no* such relation of 9-ending prices to lower prices (Schindler 2006; Schindler & Kirby, 1997).

Study 3 complemented Study 2 in that it explored the odd-ending price effect from a demand perspective and sought to identify if symbolic meanings were associated with the 9-ending heuristic in each of the three cultures. Three main findings emerged from the study. First, contrary to expectations, there were no significant differences in the symbolic meanings (i.e. low quality; enhanced value; discount price; and misleading action) attached to 9-ending prices between the U.S. (low-context) and Korean and Chinese (high-context) samples. In all three samples, misleading action was the strongest symbolic meaning, while the connotation of low quality was the least salient meaning.

A second major finding was there were no substantive differences among the samples in their selection of 9-ending prices when purchasing a sandwich, a pizza, or show tickets. In all three samples, approximately 50% opted for the 9-ending and the even-ending alternatives which is consistent with what would be expected by chance. However, a third major finding countered this result. When a hotel discounted price ended in the number 9 (i.e. $199), samples in the all three cultures perceived this promotional price disproportionately more positively than at the rounded price immediately above it (i.e. $200). This result is contrary to that reported in the earlier study of the suppliers' perspective on price-endings where in China and Korea the cultural specific price endings of 8 and 0, respectively, were most frequently used, and 9-ending prices were conspicuously rare (paper, under review).

This dissertation provides useful insights for developing pricing strategies in the global tourism industry by identifying price heuristics that are culturally specific and those that appear to be universal (Table 23). Study 1 suggested cultural norms influenced the prices tourists would pay. Thus, the price/quality relationship was more prevalent when individuals made purchases for others than for themselves, and this propensity was stronger among samples in collectivist cultures than those in individualist cultures. Also, even in collectivist cultures, there were differences.

Table 23. Summary of universal or culturally specific price heuristics

	Universal	**Culturally specific**
Study 1	Price/quality relationship was more prevalent when purchases were made for others.	This propensity was stronger among samples in collectivist cultures (Korea and China) than those in an individualist culture (U.S.). In the Korean sample, there was a greater willingness to pay a higher price for family members than for non – family members. This propensity was not found among the China sample. The Korean sample was more likely to select a higher priced option when buying an expensive service for others, than when buying an inexpensive service. This did not occur in the China sample.
Study 2	0 and 5 ending prices were universal. (These digits were ranked in frequency of use among the first three digits in all three samples.)	Different price endings dominated in each culture. (i.e. 9 endings in the U.S.; 8-endings in China;0-endings in Seoul) U.S and Korean suppliers used 9-ending prices more frequently in high-price tourism services than for low-high tourism services. This was not true among China suppliers.
Study 3	There were no differences in the relative importance tourists assigned to meanings associated with 9-ending prices among the three cultures. Misleading action was the most salient symbolic meaning in all three cultures. There were no evidence in any of the three cultures to suggest that 9-ending prices resulted in a greater proportion of a tourism service was purchased than even-ending prices. The positive influences of a 9-ending price on a discounted hotel room was universal.	

Study 3 suggested 9-ending price effect may be universal at least in some contexts. Even though suppliers tend to use cultural specific price endings in their countries (Study 2), potential tourists in all three cultures were influenced positively by 9-ending price discounts in the context of hotels (Study 3). Suppliers in high context cultures have been reluctant to use 9-ending priced services because of its negative symbolic meanings, but tourists in high context cultures were not less likely to select 9-ending priced services than those in low context cultures. And furthermore, in all cultures, the 9-ending discount was perceived to be a greater discount than even-ended prices in the context of a hotel room.

The dissertation has some limitations. First, this dissertation revealed reactions to the 9-ending price heuristic but their decisions are not based on reasoned action but instinctive "rules of thumb". People's attitudes do not always rationally and logically reflect their behavior (Fazio & Roskos-Ewoldsen, 2004). Behavioral decisions are influenced by subconscious and perhaps biased reasoning, so identifying the reasons explaining behavior is a challenge (Wilson and Dunn, 2004).

Second, Hofstede's collectivism- individualism dimension may not explain all of the reasons of differences in selection on priced option, even though Study 1 suggested that the collectivist influence remained influential. He reported there was a high correlation of 0.82 between individualism and a country's wealth. In the years since Hofstede's study was undertaken, Korea and China have experienced an increase in affluence at a rate that is perhaps unparalleled in human history suggesting that the collectivist influence in those societies may have weakened in recent decades.

Third, most scholars have reported that price endings influence consumers' perception of prices, but the influence might not always be of the same magnitude. For example, when consumers have a high level of involvement in the products/ services they contemplate buying, they tend to see prices as an indicator of quality, resulting in a decrease in motivation to purchase odd-ending prices. (Chebat and Picard, 1985).

Fourth, although the use of students from each culture controlled for age and education, it obviously limits generalization to a non-student population. Sears (1986, p. 515) has suggested that compared with older adults, "college students are likely to have less-crystallized attitudes, less-formulated senses of self, stronger cognitive skills, and stronger tendencies to comply with authority." Further, research by Sinha, Sinha, Verma and Sinha (2001) has found that education has a positive effect individualism.

REFERENCES

Adair, W. H., Buchan, N. R. & Chen, X. P. (2009). *Conceptualizing culture as communication in management and marketing research*. In C. Nakata (editor). *Beyond Hofstede: Cultural frameworks for global marketing and management*. New York: Palgrave Macmillan.

Ariely, D. (2009). *Predictably Irrational, Revised and Expanded Edition: The Hidden Forces That Shape Our Decisions*. Harper Perennial.

Asia Today. (April 10. 2015). *Top 100 Seoul restaurants of 2015*. http://www.asiatoday.co.kr/view.php?key=20150410010006766

Bacon, R.W. (1991). Rockets & feathers: The asymmetric speed of adjustment of UK retail gasoline prices to cost changes. *Energy Economics,* 13(3), 211-218.

Baird, J.C. Lewis, C., & Romer, D. (1970). Relative frequencies of numerical responses in ratio estimation. *Perception and Psychophysics,* 8 (November), 358-362.

Baumgartner, B. and Steiner, W. J. (2007). Are consumers heterogeneous in their preferences for odd and even prices? Findings from a choice-based conjoint study. *International Journal of Research in Marketing*, 24(4), 312-323.

BBC. (2003). China's lucky phone number. *BBC News* August 13. Retrieved January, 2017.

Beaman, J., Vaske, J.J., Schwidt, J.L. & Huan, T.C. (2015) Measuring and correcting response heaping arising from the use of prototypes. *Human Dimensions of Wildlife*, 20,167-173.

Bearden, W. O., & Etzel, M. J. (1982). Reference group influence on product and brand purchase decisions. *Journal of Consumer Research*, 9, 183-194.

Berman, B., & Evans, J. R. (1986). *Retail management: A strategic approach*, 3rd edition, New York, NY : Macmillan Publishing company.

Berry, L. L., & Parasuraman, A. (1991). *Marketing services: Competing through quality.* New York, NY: Free Press.

Bishop, W. R. Jr. (1984). Competitive intelligence. Progressive Grocer, 63(3), 19-20.

Bliss, P. (1952). Price determination at the department store level. *Journal of Marketing,*17(1), 37-46.

Bolton, L. E. & Alba, J. W. (2006). Price fairness: good and service differences and the role of vendor costs. *Journal of Consumer Research,* 33 (2), 258–65.

Brenner, G. A. & Brenner, R. (1982). Memory and markets, or why are you paying $2.99 for a widget. *Journal of Business*, 55(1), 147-58.

Burch, W. R. (1969). The social circles of leisure: Competing explanations. *Journal of Leisure Research*, 1(2), 125-147.

Chapman, R. G. (1986). Toward a theory of college selection: A model of college search and choice behavior. *Advances in Consumer Research*, 13, 246-250.

Chase, D.R. & Godbey, G.C. (1983). The accuracy of self-reported participation rates. *Leisure Studies* 2(2), 231-235.

Chase, D.R. & Harada, M. (1984). Response error in self-reported recreation participation. *Journal of Leisure Research,* 16(4), 322-329.

Chebat, J. & Picard, J. (1985). The effects of price and message-sidedness on confidence in product and advertisement with personal involvement as a mediator variable. *International Journal of Research in Marketing*, 2(2), 129-141.

Cheek, N. H. Jr. (1971). Toward a sociology of non-work. *Pacific Sociological Review*, 14(3), 245-258.

Chen, J. S. (2000). Cross-cultural differences in travel information acquisition among tourists from three Pacific-rim countries. *Journal of Hospitality and Tourism Research*, 24(2), 239-251.

Childers, T. L., & Rao, A. R. (1992). The influence of familial and peer-based reference groups on consumer decisions. *Journal of Consumer Research, 19*(2), 198-211.

Commission for Architecture and the Built Environment. (2009). Making the invisible visible: The real value of park assets. London: CABE.

Copeland, L. and Griggs, L. (1986). Getting the best from foreign employees. *Management Review*, 75(6), 19-26.

Cortina, J. M. (1993). What is coefficient alpha? An examination of theory and applications. *Journal of Applied Psychology*, 78, 98-104.

Costanzo P, Shaw M. (1966). Conformity as a function of age level. *Child Development*, 37, 967–975

Crompton, J. L. (1981). Dimensions of the social group role in pleasure vacations. *Annals of Tourism Research*, 8(4), 550-568.

Crompton, J. L. (2006). "Economic Impact Studies: Instruments for Political Shenanigans?" *Journal of Travel Research*, 45 (1), 67–82.

Crompton, J. L. (2016). *Pricing recreation and park services: The science and the art*. Urbane, Illinois: Sagamore Publishing.

Crompton, J. L., Jeong, J. Y. & Dudensing, R. M. (2016). Sources of variation in economic impact multipliers. *Journal of Travel Research,* 55(8), 1,051-1,064.

Crotts, J. C. & Erdman, R. (2000). Does national culture influence consumers' evaluation of travel services? A test of Hofstede's model of cross-cultural differences. *Managing Service Quality: An International Journal,* 10(6), 410-419.

Decrop, A. (2005). Group processes in vacation decision-making, *Journal of Travel & Tourism Marketing,* 18(3), 23-36.

Dehaene, S & Mehler, J. (1992). Cross-linguistic regularities in the frequency of number words. *Cognition,* 43 (April), 1-29.

Dickson, P. R., & Sawyer, A. G. (1986). Methods to research shoppers' knowledge of supermarket prices. *Advances in Consumer Research,* 13, 584-588.

Diller, H., & Brielmaier, A. (1995). The impact of rounding-up odd prices: results of a field experiment in German drugstores. *Pricing Strategy and Practice,* 3 (4). 4-13.

Dodds, W. B. & Monroe. K. B. (1985) The effect of brand and price information on subjective product evaluation. *Advances in Consumer Research*, 12(1), 85-90.

Eisinga, R., te Grotenhuis, M, & Pelzer, B (2013). The reliability of a two-item scale: Pearson, Cronbach or Spearman-Brown? *International Journal of Public Health,* 58, 637-642.

Field, D. R. (1971). Interchangeability of parks with other leisure settings. Paper presented at the A.A.A.S. Symposium, 26-31 December 1971, Philadelphia, PA.

Fiske, A., Kitayama, S., Markus, H., & Nisbett, R. (1998). The cultural matrix of social psychology. In Gilbert, D., Fiske, S., & Lindzey, G. (Eds.), *The handbook of social psychology* (4th ed., Vol. 2., 915-981). New York: McGraw-Hill.

Filiatrault, P. & Ritchie, J. R. B. (1988). The impact of situational factors on the evaluation of hospitality services. *Journal of Travel Research,* 26(4), 29-37.

Friedman, L. (1967). "Psychological pricing in the food industry," in *Prices: Issues in Theory, Practice, and Public Policy,* Phillips, A. and Williamson, O. E. (eds.), Philadelphia: University of Pennsylvania Press, 187–201.

Gabor, A. and Granger, C. W. J. (1964). Price sensitivity of the consumer. *Journal of Advertising Research,* 4 (4), 40-44.

Gainer, B. (1995). Ritual and relationships: Interpersonal influences on shared consumption. *Journal of Business Research,* 32(2), 253-260.

Gitelson, R., & Kerstetter, D. (1994). The influence of friends and relatives in travel decision-making. *Journal of Travel and Tourism Marketing, 3*(3), 59-68.

Greenleaf, E. (1992). Improving rating scale measures by detecting and correcting bias components in some response style. *Journal of Marketing Research,* 29, 176-188.

Gursoy, D. & Gavcar, F. (2003). International leisure tourists' involvement profile. *Annals of Tourism Research* 30,906-926.

Hall, E. (1976). *Beyond culture*. New York: Doubleday.

Hall, E. (1983). *The dance of life: The other dimension of time*. New York: Doubleday.

Hackl, F., Kummer, M. E. & Winter-Ebmer, R. (2014). 99 Cent: Price points in e-commerce. *Information Economics and Policy*, 26 (1), 12–27.

Hair, J. F., Anderson, R. E., Tatham, R. L. & Black, W. C. (1995). *Multivariate data analysis with reading*, Prentice Hall, Englewood Cliffs, NJ.

Havitz, M. & Dimanche, F. (1997) Leisure involvement revisited: Conceptual conundrums and measurement advances. *Journal of Leisure Research,* 29, 245-278.

Heeler, R. & Nguyen, A. (2001). Price endings in Asia. Proceedings of the Australian and New Zealand Marketing, Academy Conference, Massey University, Albany, New Zealand.

Hedrick-Wong, Y. & Choong, D. (2015). *Master card 2015 global destination cities index*. Master Card.

Hinkle, S. W., & Brown, r. J. (1990). Intergroup comparisons and social identity: Some links and lacunae. In Abrams, D., & Hogg, M. A. (Eds.), *Social identity theory: Constructive and critical advances* (48-70). Hemel Hempstead, England: Harvester Wheatsheaf.

Hofstede, G. (1980). *Culture's consequences: International differences in work-related values*. Beverly Hills, CA: Sage Publications.

Hofstede, G. (1991). *Cultures and organizations: Software of the Mind*. London: McGraw-Hill.

Hofstede, G. (1994). Foreword. In Kim, U., Triandis, H. C., Jigitcibasi, C., Choi, S. C., & Yoon, G. (Eds). *Individualism and collectivism: Theory, method, and applications* (ix-xiv). Thousand Oaks, CA : Sage Publications.

Hofstede, G. (2001). *Culture's consequences: comparing values, behaviors, institutions and organizations across nations* (2 ed.). Thousand Oaks: SAGE

Hogg, M. A., Abrams, D., Otten, S., & Hinkle, S. (2004). The social identity perspective. *Small Group Research,* 35(3), 246-276.

Holdershaw, j., Gendall, P., & Garland, R. (1997). The widespread use of odd pricing in the retail sector. *Marketing Bulletin*, 8, 53-58.

Hotel News Now. (Nov. 19. 2015). *The 10 largest hotel companies by room count.* http://www.hotelnewsnow.com/articles/28560/The-10-largest-hotel-companies-by-room-count).

Jeong, J. Y. & Crompton, J. L. (2015). Measuring the economic impact of a state park system. *Managing Sport and Leisure*, 20 (4), 238-257.

Kahneman, D. (2011). *Thinking fast and slow*. London: Penguin.

Kahneman, D. & Tvorsky, A. (1979). Prospect theory: An analysis of decision making under risk. *Econometrica*, 47, 263-291.

Kahneman, D. & Tvorsky, A. (1974). Judgment under uncertainty: Heuristics and biases. *Science* 185, 1124-1131.

Kalyanam, K., & Shively, T. S. (1998). Estimating irregular pricing effects: A stochastic spline regression approach. *Journal of Marketing Research*, 35 (1), 16-29.

Kettle, K. & Haubl, G. (2010). Numeric fluency and preference in *Advances in Consumer Research* 37 editors M. C. Campbell, J. Inman & R. Pieters. Duluth, MN: Association for Consumer Research

Kim, H., Cheng, C.K., & O'Leary, J. T. (2007). Understanding participation patterns and trends in tourism cultural attractions. *Tourism Management,* 28, 1366-1371.

Kim, S. S., & McKercher, B. (2011). The collective effect of national culture and tourist culture on tourist. *Journals of Travel and Tourism Marketing*, *28*(2), 145-164.

Kim, U., Triandis, H. C., Jigitcibasi, C., Choi, S. C., & Yoon, G. (1994). *Individualism and collectivism: Theory, method, and applications*. Thousand Oaks, CA : Sage Publications.

Kittler, M. G., Rygi D. & Machinnon, A. (2011). Beyond culture on beyond control? Reviewing the use of Hall's high/low context concept. *International Journal of Cross-Cultural Management,* 11(1), 63-82.

Kleinsasser, S. & Wagner, U. (2011). Price endings and tourism consumers' price perceptions. *Journal of Retailing and Consumer Service*, 18(1), 58-63.

Kreul, L. M. (1982). Magic numbers: psychological aspects of menu pricing. *Cornell Hospitality Quarterly,* 23(2), 70–75.

Lewis, M.S. (2015). Odd prices at retail gasoline stations: Focal point pricing and tacit collusion. *Journal of Economics and Management Strategy*, 24(3), 664-685.

Lichtenstein, D. R., Ridgway, N. & Netemeyer, R. G. (1993). Price perceptions and consumer shopping behavior: A field study. *Journal of Marketing Research,*30 (2), 234–245.

Lynn, M., Flynn S.M. & Helion, C. (2013). Do consumers prefer round prices? Evidence from pay-what-you-want decisions and self-pumped gasoline purchases. *Journal of Economic Psychology,* 36, 96-102.

Manning, K. C. & Sprott, D. E. (2009). Price endings, left-digit effects, and choice. *Journal of Consumer Research,* 36(2), 328-335.

Manrai, L. A., & Manrai, A. K. (2011). Hofstede's cultural dimensions and tourist behaviors: A review and conceptual frameworks. *Journal of Economics, Finance and Administrative Science,* 16(31), 23-48.

Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review,* 98(2), 224-253.

Mattila, A. S. (1999). The role of culture and purchase motivation in service encounter evaluations. *The Journal of Services Marketing,* 13(4/5), 376-389.

McAuliffe, B. J., Jetten, J., Hornsey, M. J., & Hogg, M. A. (2003). Individualist and collectivist norms: When It's Ok to Go Your Own Way, *European Journal of Social Psychology*, 33. 57–70

Mills, P. K. (1986). *Managing service industries*. Cambridge: MA: Ballinger,

Money, R. B., & Crotts, J. C. (2003). The effect of uncertainty avoidance on information search, planning, and purchase of international travel vacations. *Tourism Management*, 24(2), 191-202.

Monroe, K. B. (1973). Buyers' subjective perceptions of price. *Journal of Marketing Research*, 10(1), 70-80

Monroe, K. B., & Krishnan, R. (1985). The effect of price on subjective product evaluations, in Jacoby, J., & Olson, J. (Eds), *Perceived quality: How consumers view stores and merchandise*. Lexington Books, Lexington, MA, 209-232.

Naipaul, S., & Parsa, H. G. (2001). Meu price endings that communicate value and quality. *Cornell Hotel and Restaurant Administration Quarterly*, 42, 26-37.

Neisser, U. (1979). The Concept of Intelligence. *Intelligence*, 3(3), 217-227

Neisser, U. & Becklen, R. (1975). Selective looking: Attending to visually specified events. *Cognitive Psychology*, 7(4). 480-494

Netemeyer, R. G., Bearden, W. O., & Teel, J. E. (1992). Consumer susceptibility to interpersonal influences and attributional sensitivity. Psychology and Marketing, 9(5), 379-395.

New York Times. (Dec. 15. 2015). *Top New York restaurants of 2015*. http://www.nytimes.com/2015/12/16/dining/best-restaurants-in-nyc.html?_r=0

Nguyen, A., Heeler, R. M. & Taran, Z. (2007). High-low context cultures and price-ending practices. *Journal of Product and Brand Management*, 16(3). 206-214.

Nishimura S., Nevgi, A., & Tella, S. (2008). Communication style and cultural features in high/low context communication cultures: A case study of Finland, Japan and India. Proceedings of a subject-didactic symposium part 2 (783-796). Helsinki, Finland: University of Helsinki.

Odongo, E. K., Agneta, N., & Orinda, E.O. (2012). The impact of global cultural differences on the pricing strategies in the United States of America.

International Journal of Academic Research in Business and Social Science 2(2), 58-68.

Olshavsky, R. W. (1985). Perceived quality in consumer decision making: An integrated theoretical perspective, In *Perceived quality*, Jacoby, J., & Olson, J. (Eds.). Lexington, MA: Lexington Books, 3-29

Parsa, H. G. & Naipaul, S. (2007). Price-ending strategies and managerial perspectives: A reciprocal phenomenon-Part I. *Journal of service Research*, 7(2), 7-26

Pearce, P. (2005). *Tourist behaviour: Themes and conceptual schemas*. Channel View, Clevedon.

Peng, K. & Nisbett R. E. (1999) Culture, dialectics and reasoning about contradiction. *American Psychologist*, 54 (9), 741-754.

Peterson, R. A. (2011). On the use of college students in social science research: Insights from a second-order meta-analysis. Journal of Consumer Research, 28(3), 450-461.

Poltrock, S.E. & Schwartz, D.R. (1984). Comparative judgments of multi-digit numbers. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 10(1), 32-45.

Osselaer, S. M. J. et al. (2005). Choice based on goals. Marketing Letters. 16 (3), 335-346.

Quigley, C. & Notarantonio, E. M. (1992). "An exploratory investigation of perceptions of odd and even pricing," in *Developments in Marketing Science XV*. Crittenden, V. L. (ed.), Chestnut Hill, MA: Academy of Marketing Science, 306–309.

Parsa, H. G. & Naipaul, S. (2007). Price-ending strategies and managerial perspectives: A reciprocal phenomenon-part I. *Journal of Services Research*, 7 (2), 7-26.

Puntoni, S. & Tavassoli, N. (2005). Motivational Influences of Social Context on Consumer Behavior. *Advances in Consumer Research*, January 1, 2005

Rao, A. & Monroe, K. B. (1989). The effect of price, brand name, and store name on buyers' perceptions of product quality: an integrative review. *Journal of Marketing Research*, 26(3), 351-357

Raghubir, P., Inman, J. J., & Grande, H. (2004). The three faces of price promotions: Economic, informative and affective. *California Management Review*, 46(4), 1-19.

Reisinger, Y., & Mavondo, F. (2006). Cultural differences in travel risk perception. Journal of Travel & Tourism Marketing, 20(1), 13-31.

Ritchie, J. R. B. (1997). Beacons of light in an expanding universe: An assessment of the state-of-the-art in tourism marketing/marketing research. *Journal of Travel and Tourism Marketing*, 5(4), 49-84.

Rudolf, H.J. (1954). Pricing for today's market. *Printers' Ink.*247 May 28, 22-24.

Schechter, L. (1984). A normative conception of value. *Progressive Grocer Executive Report*, 12-14.

Schindler, R. M. (1991). Symbolic meanings of a price ending. *Advances in Consumer Research*, 18(1), 794-801.

Schindler, R. M. (2006). The 99 Price ending as a signal of a low-price appeal. *Journal of Retailing*, 82 (1), 71-77.

Schindler, R. M. (2009). Patterns of price endings used in US and Japanese price advertising. *International Marketing Review*, 26(1), 17-29.

Schindler, R. M. & Kibarian, T. (1996). Increased consumer sales response through use of 99-ending prices. *Journal of Retailing*, 72(2), 187-199

Schindler, R. M. & Kibarian, T. M. (1993). Testing for perceptual underestimation of 9-ending prices. *Advances in Consumer Research*, 20(1), 580-585.

Schindler, R. M. & Kibarian, T. M. (2001). Image communicated by the use of 99 Endings in advertised prices. *Journal of Advertising*, 30(4), 95–99.

Schindler. R. M. & Kirby, P. N. (1997). Patterns of rightmost digits used in advertising prices: Implications for nine-ending effects. *Journal of Consumer Research* 24, 192-201

Schindler, R. M. & Winer, A. R. (1989) Effects of odd pricing on price recall. *Journal of Business Research.* 19 (November), 165-177.

Schindler. R. M. & Yalch, R. F. (2006). Seems factual, but is it? Effects of using sharp versus round numbers in advertising claims in *Advances in Consumer Research* 33 editors C Pechmann & L. Price. Duluth, MN: Association for Consumer Research.

Schmitt, N. (1996). Uses and abuses of coefficient alpha. *Psychological Assessment*, 8 (4), 350-353.

Schütte, H. & Ciarlante, D. (1998) *Consumer Behavior in Asia*. New York: New York University Press.

Scitovszky, T. (1945). Some consequences of the habit of judging quality by price. *The Review of Economic Studies*, 12(2), 100-105.

Sciutte, H., & Ciarlante, D. (1988). *Consumer behavior in Asia*. New York: New York University Press.

Sears, D. O. (1986). College sophomores in the laboratory: Influences of a narrow data base on social psychology's view of human nature. *Journal of Personality and Social Psychology*, 51(3) , 515-530.

Shah A. K. & Oppenheimer, D. M. (2008). Heuristics made easy: An effort-reduction framework. *Psychological Bulletin*, 134 (2), 207-222.

Sherman, R. C., Buddie, A. M., Dragan, K. L., End, C. M., & Finney, L. J. (1999). Twenty years of PSPB: Trends in content, design, and analysis. *Personality and Social Psychology Bulletin,* 25(2), 177-187.

Simmons, L. C. & Schindler, R. M. (2003). Cultural superstitions and the price endings used in Chinese advertising. *Journal of International Marketing,* 11(2), 101-111

Sijtsma, K. (2009) On the Use, the Misuse, and the Very Limited Usefulness of Cronbach's Alpha. *Psychometrika,* 74 (1), 107–120.

Sinha, J., Sinha, T., Verma, J., & Sinha, R. (2001). Collectivism coexisting with individualism: An Indian scenario. *Asian Journal of Social Psychology, 4*(2), 133-145.

Sinha, D., & Tripathi, R. C. (1994). Individualism in a collectivist culture: A case of coexistence of opposites. In Kim, U., Triandis, H. C., Jigitcibasi, C., Choi, S. C.,

& Yoon, G. (Eds). *Individualism and collectivism: Theory, method, and applications* (123-136). Thousand Oaks, CA : Sage Publications.

Spence, M. (1974). *Market signaling: Information signaling and related screening processes*. Cambridge, MA: Harvard University Press.

Spohn, R. F., & Allen R. Y. (1977)., Retailing, Englewood Cliffs, NJ: Prentice-Hall.

Stiving, M. (2000). Price-endings when prices signal quality. *Management Science*, 46 (12), 1617–1629.

Stiving, M. & Winer, R. S. (1997). An empirical analysis of price endings with scanner data. *Journal of Consumer Research*, 24(1), 57-66.

Stone, M. J. (2016). Deciding not to choose: Delegation to social surrogates in tourism decisions. *Tourism Management*, 57(6). 168-179.

Suri, R. & Anderson, R. E. (2004). The use of 9-ending prices: contrasting the USA with Poland. *European Journal of Marketing*, 38(1/2), 56-72

Synodinos, N. E. (2001). Understanding Japanese consumers: some important underlying factors. *Japanese Psychological Research*, 43 (4). 235-248.

Tajfel, H., & Turner, J. C. (1979). An integrative theory of intergroup conflict. In W. G. Austin & S. Worchel (Eds.), *The Social Psychology of Intergroup Relations* (33-47). Monterey, CA: Brooks/Cole.

Tarrant, M.A. & Manfredo, M.J. (1993). Digit preference recall bias, and non-response bias in self-reports of angling participation. *Leisure Sciences* 15, 231-238.

Teare, R. (1990). An exploration of the consumer decision process for hospitality services. In R. Teare, L. Moutinho, & R. Morgan (eds) *Managing and marketing services* (p 233-248) London: Cassell Educational

Tellis, G. J. & Chandrasekaran, D. (2010). Export and import of response biases in cross-national survey research. *International Journal of Research in Marketing*, 27 (4). 329-341.

Timeout Shanghai. (July 12. 2014). *The 100 best restaurants in Shanghai*. http://www.timeoutshanghai.com/feature/20650/The-100-best-restaurants-in-Shanghai.html

Thomas, M. & Morwitz, W. (2005). Penny wise and pound foolish: The left-digit effect in price cognition. *Journal of Consumer Research*, 32(1), 54-64.

Thomas, M., & Morwitz, V. (2009). *Heuristics in numerical cognition: Implications for pricing*, In V. R. Rao (Ed.), Handbook of pricing research in marketing (pp.132-149). Northampton, MA: Edward Elgar.

Triandis, H. C. (1995). *Individualism and collectivism*. Boulder, CO: Westview Press.

Triandis, H. C. (1998). Collectism v. Individulism: A reconceptualization of basic concept in cross-cultural social psychology. In Verma, G. K., & Bagley, C. (eds.). *Cross-cultural studies of personality, attitudes and cognition* (60-95). London: Macmillan.

Triandis, H. C. (2001). Individualism-collectivism and personality. *Journal of Personality*, 69(6), 907-924.

Turner, J. C. (1982). Towards a cognitive redefinition of the social group. In H. Tajfel (Ed.), *Social identity and intergroup relations* (15-40). Cambridge, England: Cambridge University Press.

Twedt, D. W. (1965). Does the 9 fixation in retail pricing really promote sales? *Journal of Marketing,* 29 (October), 54-55.

Van de Ven, A., & Ferry, D. (1979). *Measuring and assessing organization*, Wiley, New York.

Volckner, F., & Hofmann, J. (2007). The price-perceived quality relationship: A meta analytic review and assessments of its determinants. *Marketing Letters*, 18(3), 181-196.

Wadhwa, M. & Zhang, K. (2015). This number feels just right: The impact of roundedness of price numbers on product evaluations. *Journal of Consumer Research,* 41(5) 1172-1185.

Walker, G. J. (2009). Culture, self construal and leisure motivation. *Leisure Sciences*, 31(4), 347-363.

Walker, G. J., Deng, J., & Dieser, R. B. (2005). Culture, self-construal and leisure theory and practice. *Journal of Leisure Research,* 37(1), 77-99.

Wakefield, K. L. & Inman, J. J. (2003). Situational price sensitivity: the role of consumption occasion, social context and income. *Journal of Retailing,* 79(4), 199-212.

Williams, R. (2008). Patriot games: China makes its point with greatest show. *The Guardian August 9*

World Tourism Organization. (2016). Tourism highlights. Madrid, Spain: UNWTO. Available in: http://www.e-unwto.org/doi/pdf/10.18111/9789284418145

Whalen, B. F. (1980). Strategic mix of odd, even prices can lead to increased retail profits. *Marketing News,* 13 (18). 24.

Wingate, J. W., Schaller, E. O., & Miller, F. L. (1972). *Retail merchandise management*. Englewood cliffs, NJ: Prentice-Hall.

Yau, O. H. M. (1994). *Consumer behavior in China: Customer satisfaction and cultural values*. London: Routledge.

Zeithaml, V. A. (1988). Consumer perceptions of price, quality, and value: A means-end model and synthesis of evidence. *Journal of Marketing,* 52(3), 2-22.

APPENDIX A

QUESTIONNAIRES FOR THE U.S. SAMPLE

Questionnaire A-1

THE FOLLOWING QUESTIONS REFER TO THE SITUATION DESCRIBED IN THE BOX BELOW.

Scenario : Please assume that you are on a trip to New York City for a three-day pleasure vacation which will involve staying at a hotel, dining, shopping and sightseeing. You are traveling with a fellow student who you know slightly but is ***NOT*** a close friend.

Question 1:
You feel hungry. So, you leave your companion resting in the hotel and you ***go alone*** to look for a snack. You find two restaurants on the same block offering the type of sandwich you want to eat. Both of them look tasty. Their prices are :

Restaurant C	Restaurant D
Sandwich price : $7.99	*Sandwich price : $8.40*

You will be eating the sandwich ***alone***. Please circle which of the above restaurant sandwiches you would select.

Question 2:
You will book a show ***for yourself and your travel companion*** to see it together. There are two shows available both of which are appealing to you.

Show F	Show G
Ticket price for two is $299	*Ticket price for two is $330*

You are purchasing ***two tickets*** *to* see a show **together.** Please circle which of the above shows you would select.

Question 3:
You and your travel companion decide to share a large pizza and find two restaurants offering large pizzas. Both of them look tasty.

Restaurant I	Restaurant J
Pizza price : $19.99	*Pizza price : $22.00*

You are purchasing a pizza ***to eat together***. Please circle which of the above restaurant pizzas you would select.

PLEASE ANSWER THE QUESTION WHICH RELATES TO FOLLOWING SCENARIO.

Question 4

You are a college student and the nightly rate for the Hotel New York in New York City is discounted for college students if you provide a student card. This hotel is in a central location in New York City convenient for all the city's attractions. It offers all guests free Internet service and a free breakfast buffet. A cable TV and fridge are included.

Compared with the ***regular price of $240***, do you consider this hotel's student ***discounted $220*** price to be (check one) :

[1]	[2]	[3]	[4]
Very ***slightly*** discounted	***Slightly*** discounted	***moderately*** discounted	***highly*** discounted

Question 5

How many days in the past 3 years have you spent in foreign countries?

[ ] days

Question 6

Have you ever been to New York City? Yes [ ] No [ ]

Question 7

Approximately how much money do you spend on leisure activities, equipment, or home entertainment in ***a typical month*** during the summer when you are not taking college classes?

$_____

Questionnaire A-2

THE FOLLOWING QUESTIONS REFER TO THE SITUATION DESCRIBED IN THE BOX BELOW.

Scenario : Please assume that you are on a trip to New York City for a three-day pleasure vacation which will involve staying at a hotel, dining, shopping and sightseeing ***with your favorite family member:***   _____ (Please write here your relationship to this person. e.g. mother, brother etc.)

Question 1:
You feel hungry. So, you leave your companion resting in the hotel and you ***go alone*** to look for a snack. You find two restaurants on the same block offering the type of sandwich you want to eat. Both of them look tasty Their prices are :

Restaurant C	Restaurant D
Sandwich price : $7.99	*Sandwich price : $8.40*

You will be eating the sandwich ***alone***. Please circle which of the above restaurant sandwiches you would select.

Question 2:
You will book a show ***for yourself and your favorite family member*** who is on the trip with you to see it together. There are two shows available both of which are appealing to you.

Show F	Show G
Ticket price for two is $299	*Ticket price for two is $330*

You are purchasing ***two tickets*** *to* see a show **together.** Please circle which of the above shows you would select.

Question 3:
You and your favorite family member decide to share a large pizza and find two restaurants offering large pizzas. Both of them look tasty.

Restaurant I	Restaurant J
Pizza price : $19.99	*Pizza price : $22.00*

You are purchasing a pizza ***to eat together***. Please circle which of the above restaurant pizzas you would select.

PLEASE ANSWER THE QUESTION WHICH RELATES TO FOLLOWING SCENARIO.

Question 4

You are a college student and the nightly rate for the Hotel New York in New York City is discounted for college students if you provide a student card. This hotel is in a central location in New York City convenient for all the city's attractions. It offers all guests free Internet service and a free breakfast buffet. A cable TV and fridge are included.

Compared with the ***regular price of $240***, do you consider this hotel's student ***discounted $200*** price to be (check one) :

[1]	[2]	[3]	[4]
Very ***slightly*** discounted	***Slightly*** discounted	***moderately*** discounted	***highly*** discounted

Question 5

How many days in the past 3 years have you spent in foreign countries?

[ ] days

Question 6

Have you ever been to New York City? Yes [ ] No [ ]

Question 7

Approximately how much money do you spend on leisure activities, equipment, or home entertainment in ***a typical month*** during the summer when you are not taking college classes?

$_____

Questionnaire A-3

THE FOLLOWING QUESTIONS REFER TO THE SITUATION DESCRIBED IN THE BOX BELOW.

Scenario : Please assume that you are on a trip to New York City for a three-day pleasure vacation which will involve staying at a hotel, dining, shopping and sightseeing. You are traveling with a fellow student who you know slightly but is ***NOT*** a close friend.

Question 1:
You feel hungry. So, you leave your companion resting in the hotel and you ***go alone*** to look for a snack. You find two restaurants on the same block offering the type of sandwich you want to eat. Both of them look tasty. Their prices are :

Restaurant B	Restaurant C
Sandwich price : $7.60	*Sandwich price : $7.99*

You will be eating the sandwich ***alone***. Please circle which of the above restaurant sandwiches you would select.

Question 2:
You will book a show ***for yourself and travel companion*** to see it together. There are two shows available both of which are appealing to you.

Show E	Show F
Ticket price for two is $270	*Ticket price for two is $299*

You are purchasing ***two tickets*** *to* see a show **together.** Please circle which of the above shows you would select.

Question 3:
You and your travel companion decide to share a large pizza and find two restaurants offering large pizzas. Both of them look tasty.

Restaurant H	Restaurant I
Pizza price : $18.00	*Pizza price : $19.99*

You are purchasing a pizza ***to eat together***. Please circle which of the above restaurant pizzas you would select.

PLEASE ANSWER THE QUESTION WHICH RELATES TO FOLLOWING SCENARIO.

Question 4

You are a college student and the nightly rate for the Hotel New York in New York City is discounted for college students if you provide a student card. This hotel is in a central location in New York City convenient for all the city's attractions. It offers all guests free Internet service and a free breakfast buffet. A cable TV and fridge are included.

Compared with the ***regular price of $240***, do you consider this hotel's student ***discounted $199*** price to be (check one) :

[1]	[2]	[3]	[4]
Very ***slightly*** discounted	***Slightly*** discounted	***moderately*** discounted	***highly*** discounted

Question 5

How many days in the past 3 years have you spent in foreign countries?

[ ] days

Question 6

Have you ever been to New York City? Yes [ ] No [ ]

Question 7

Approximately how much money do you spend on leisure activities, equipment, or home entertainment in ***a typical month*** during the summer when you are not taking college classes?

$_____

Questionnaire A-4

THE FOLLOWING QUESTIONS REFER TO THE SITUATION DESCRIBED IN THE BOX BELOW.

Scenario : Please assume that you are on a trip to New York City for a three-day pleasure vacation which will involve staying at a hotel, dining, shopping and sightseeing ***with your favorite family member:***   _____ (Please write here your relationship to this person. e.g. mother, brother etc.)

Question 1:
You feel hungry. So, you leave your companion resting in the hotel and you ***go alone*** to look for a snack. You find two restaurants on the same block offering the type of sandwich you want to eat. Both of them look tasty. Their prices are :

Restaurant B	Restaurant C
Sandwich price : $7.60	*Sandwich price : $7.90*

You will be eating the sandwich ***alone***. Please circle which of the above restaurant sandwiches you would select.

Question 2:
You will book a show ***for yourself and your favorite family member*** to see it together. There are two shows available both of which are appealing to you.

Show E	Show F
Ticket price for two is $270	*Ticket price for two is $299*

You are purchasing ***two tickets*** *to* see a show **together.** Please circle which of the above shows you would select.

Question 3:
You and your favorite family member decide to share a large pizza and find two restaurants offering large pizzas. Both of them look tasty.

Restaurant H	Restaurant I
Pizza price : $18.00	*Pizza price : $19.99*

You are purchasing a pizza ***to eat together***. Please circle which of the above restaurant pizzas you would select.

PLEASE ANSWER THE QUESTION WHICH RELATES TO FOLLOWING SCENARIO.

Question 4

You are a college student and the nightly rate for the Hotel New York in New York City is discounted for college students if you provide a student card. This hotel is in a central location in New York City convenient for all the city's attractions. It offers all guests free Internet service and a free breakfast buffet. A cable TV and fridge are included.

Compared with the ***regular price of $240***, do you consider this hotel's student ***discounted $180*** price to be (check one) :

[1]	[2]	[3]	[4]
Very ***slightly*** discounted	***Slightly*** discounted	***moderately*** discounted	***highly*** discounted

Question 5

How many days in the past 3 years have you spent in foreign countries?

[ ] days

Question 6

Have you ever been to New York City? Yes [ ] No [ ]

Question 7

Approximately how much money do you spend on leisure activities, equipment, or home entertainment in ***a typical month*** during the summer when you are not taking college classes?

$_____

Questionnaire B

Please indicate the extent to which you agree or disagree with each of the following statements

	Strongly Disagree			Neutral			Strongly agree
1 A price ending in 9 suggests the service is low priced.	[**1**]	[**2**]	[**3**]	[**4**]	[**5**]	[**6**]	[**7**]
2. Ending a price in 9 is a trick to mislead consumers	[**1**]	[**2**]	[**3**]	[**4**]	[**5**]	[**6**]	[**7**]
3. Ending a price in 9 make it more acceptably I will buy it	[**1**]	[**2**]	[**3**]	[**4**]	[**5**]	[**6**]	[**7**]
4. A price ending in 9 suggests the service is poor quality.	[**1**]	[**2**]	[**3**]	[**4**]	[**5**]	[**6**]	[**7**]
5. I prefer to buy services with a price ending in 9.	[**1**]	[**2**]	[**3**]	[**4**]	[**5**]	[**6**]	[**7**]
6. A price ending in 9 makes me doubt it is good quality	[**1**]	[**2**]	[**3**]	[**4**]	[**5**]	[**6**]	[**7**]
7. A 9-ending price is more likely to capture my attention when selecting a service	[**1**]	[**2**]	[**3**]	[**4**]	[**5**]	[**6**]	[**7**]
8. Ending a price in 9 is unfair because it is used to make the price look smaller than actually it is.	[**1**]	[**2**]	[**3**]	[**4**]	[**5**]	[**6**]	[**7**]
9. A price ending in 9 suggests it is being discounted	[**1**]	[**2**]	[**3**]	[**4**]	[**5**]	[**6**]	[**7**]
10. Ending a price in 9 is ethically unacceptable.	[**1**]	[**2**]	[**3**]	[**4**]	[**5**]	[**6**]	[**7**]
11. A price ending in 9 means the service's quality is not reliable.	[**1**]	[**2**]	[**3**]	[**4**]	[**5**]	[**6**]	[**7**]
12. A price ending in 9 indicates it has been recently reduced.	[**1**]	[**2**]	[**3**]	[**4**]	[**5**]	[**6**]	[**7**]

APPENDIX B

QUESTIONNAIRES FOR THE KOREAN SAMPLE

설문지 A-1

박스 안에 있는 상황을 고려하여 주시고 질문에 답해주세요 (질문 1~ 질문 3)

상황 : 3 일 동안 뉴욕으로 여행가서 호텔에서 지내며, 쇼핑하고, 관광한다고 가정하십시오. 당신은 그렇게 친하지 **<u>않은</u>** 같은 학교 학생과 일정을 함께 하고 있습니다.

질문 1.

배가 고파서 동행인은 호텔에서 쉬고 당신 **혼자** 밥을 먹으러 나왔습니다. 비슷한 위치에 비슷한 가격의 샌드위치를 파는 가게 두곳을 발견하였고 둘다 당신이 맛있어 보이는 샌드위치였습니다.

가게 C	가게 D
샌드위치 가격: $7.99	*샌드위치 가격: $8.40*

샌드위치를 **혼자** 먹는다면, 어느 가게의 샌드위치를 선택하시겠습니까?

질문 2

당신과 동행인은 쇼를 **함께** 보기 위해 예약을 할 것입니다. 어느 정도 재미있어보이는 비슷한 가격의 두개의 쇼가 다음과 같이 있습니다.

쇼 F	쇼 G
2 인 가격: $299	*2 인 가격: $330*

쇼를 동행인과 **함께** 본다면 어느 쇼를 선택하시겠습니다.

질문 3

당신과 동행인은 큰 사이즈의 피자를 주문하여 **함께** 먹을 것입니다. 맛있어 보이는 비슷한 가격의 피자를 파는 2 개의 가게를 발견하였습니다.

가게 I	가게 J
피자가격: $19.99	*피자가격: $22.00*

함께 먹기 위해 피자를 산다면, 어느 가게의 피자를 선택하시겠습니까?

박스 안에 있는 상황을 고려하여 주시고 질문 4 에 답해주세요

상황 : 당신은 대학생입니다. 뉴욕에 있는 한 호텔이 학생증을 제시하는 대학생들에게 숙박비를 할인해주는 프로모션을 진행중입니다. 이 호텔은 뉴욕의 모든 관광지와 가까운 곳에 위치하고 있고, 무료 인터넷 서비스와 아침부페를 제공하고 있습니다. 케이블 TV 와 냉장고도 호텔방에 비치되어있습니다.

질문 4

일반 가격 $240 과 비고하여 볼때, **학생 할인 가격 $220** 은 어떻다고 생각하십니까?

[1]	[2]	[3]	[4]
매우 조금	***조금***	***적당히***	***많이***
할인되었음	할인되었음	할인되었음	할인되었음

질문 5.

지난 3 년간 외국에 며칠간 체류하신 경험이 있으십니까?

[ ] 일

질문 6.

뉴욕에 가보신 경험이 있으십니까? 네 [ ] 아니요 [ ]

질문 7

학교 수업이 없는 여름 방학이나 겨울 방학때 대략 한달동안 레저활동, 장비구입, 오락활동으로 대략 얼마나 돈을 쓰십니까?

[ ] 원

설문조사 B

다음 질문에 어느정도 동의/비동의 하시는지 체크하여 주십시오

	전혀 동의하지 않음			중간			매우 동의함
1. 9 로 끝나는 가격은 대체로 값싼 서비스를 의미한다	[1]	[2]	[3]	[4]	[5]	[6]	[7]
2. 9 로 끝나는 가격은 고객을 속이기 위한 상술이다.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
3. 9 로 끝나는 가격의 서비스는 좀더 구매하게 된다	[1]	[2]	[3]	[4]	[5]	[6]	[7]
4. 9 로 끝나는 가격은 서비스 품질이 낮을 것이다.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
5. 9 로 끝나는 가격의 서비스를 사는 것을 좋아한다	[1]	[2]	[3]	[4]	[5]	[6]	[7]
6. 9 로 끝나는 가격은 품질에 대해 의구심을 준다	[1]	[2]	[3]	[4]	[5]	[6]	[7]
7. 서비스를 고를때 9 로 끝나는 가격의 상품에 더욱 관심이 간다	[1]	[2]	[3]	[4]	[5]	[6]	[7]
8. 9 로 끝나는 가격은 실제 가격보다 싸게 보이기 위한 정당하지 못한 목적을 갖고 있다	[1]	[2]	[3]	[4]	[5]	[6]	[7]
9. 9 로 끝나는 가격은 대체로 할인된 가격에 쓰인다	[1]	[2]	[3]	[4]	[5]	[6]	[7]
10. 9 로끝나는 가격의 서비스는 윤리적으로 믿을만하지 못하다.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
11. 9 로 끝나는 가격은 서비스 품질이 믿을만하지 못하다	[1]	[2]	[3]	[4]	[5]	[6]	[7]
12. 9 로 끝나는 가격은 최근에 가격 인하를 했을 것이다.	[1]	[2]	[3]	[4]	[5]	[6]	[7]

APPENDIX C

QUESTIONNAIRES FOR THE MAINLAND CHINESE SAMPLE

调查问卷 A-1

请根据以下情景假设来回答问题

情景假设：您将和***一位交情不是特别深的朋友***在纽约度假三天，旅游行程包括酒店住宿、用餐、购物和观光。

问题 1：
您现在有点饿，然后您把交情不深的旅伴留在酒店，自己***独自一人***去找吃的。您一个人在某街区发现了两家餐馆，他们都提供一些您想吃的三明治，看起来都十分美味。他们的价格分别是：

餐馆 C	餐馆 D
价格 : $7.99	*价格: $8.40*

如果***您打算独自一人***吃三明治，请圈出您会选择的餐馆。

问题 2
您和您交情不深的旅伴打算**一起**去看一场演出，因此您要为您自己与您朋友各买一张票。正好有两场演出看起来都非常吸引您，它们的价格分别是：

演出 F	演出 G
两张票的价格 $299	*两张票的价格 $330*

如果***您与您交情不深的旅伴***打算一起观看，请圈出您会选择的演出。

问题 3

您与您交情不深的旅伴打算一起享用一个大份披萨。现在您发现两个餐馆同时提供看起来都十分美味的披萨。它们的价格如下：

餐馆 I	餐馆 J
披萨价格 : $19.99	*披萨价格 : $22.00*

如果***您与您交情不深的旅伴***打算***一起吃***，请圈出您选择的餐馆

问题 4

情景假设：您是一名大学生，且“纽约大酒店”的房费对大学生有特别的折扣。另外，这家酒店坐落于纽约市中心，因此交通非常便捷。它的房费同时包含网络费、自助早餐费以及提供有线电视、冰箱。客房的房费价格如下所示，那么：

相比较*$240* 原价, 那么您对于***$220* 的**折扣价，您认为（ ）

[1]	[2]	[3]	[4]
基本没打折	稍微打了点折	打折还可以	很高的折扣

问题 5

在过去的 3 年中，您在国外总共度过了多少天？ [ ]天

问题 6

您去过纽约吗 ？ 是 [ ] 否 [ ]

问题 7

当您在暑假期间的某个没有课程的一个月内，您在休闲活动、休闲器材或者家庭娱乐活动等方面的花费大概在多少钱？

[ ]元

调查问卷 B

请表明您对以下陈述的态度：

	十分不同意			中立			十分同意
1. 价格以 0.99 元结尾的物品可认为是低价标注的。	[1]	[2]	[3]	[4]	[5]	[6]	[7]
2. 价格以 0.99 元结尾的标价行为是一种误导消费者的小把戏。	[1]	[2]	[3]	[4]	[5]	[6]	[7]
3. 价格以 0.99 元结尾的商品让我更加容易接受并购买它。	[1]	[2]	[3]	[4]	[5]	[6]	[7]
4. 价格以 0.99 元结尾的商品说明它的服务质量一般。	[1]	[2]	[3]	[4]	[5]	[6]	[7]
5. 我更倾向于购买价格以 0.99 元结尾的商品。	[1]	[2]	[3]	[4]	[5]	[6]	[7]
6. 价格以 0.99 元结尾的商品会让我质疑它是否有好的质量。	[1]	[2]	[3]	[4]	[5]	[6]	[7]
7. 我在购买东西的时候，价格以 0.99 元结尾的商品更容易吸引我的注意力。	[1]	[2]	[3]	[4]	[5]	[6]	[7]
8. 将价格以 0.99 元结尾的标价行为是不厚道的，因为他将价格标注得看起来比实际低。	[1]	[2]	[3]	[4]	[5]	[6]	[7]
9. 价格以 0.99 元结尾的物品表明正在打折。	[1]	[2]	[3]	[4]	[5]	[6]	[7]
10. 将价格标注到以 0.99 元作为结尾的行为在道德上是不可接受的。	[1]	[2]	[3]	[4]	[5]	[6]	[7]
11. 价格以 0.99 元结尾的商品或服务说明它不是很可靠。	[1]	[2]	[3]	[4]	[5]	[6]	[7]
12. 价格以 0.99 元结尾的物品说明最近有降价。	[1]	[2]	[3]	[4]	[5]	[6]	[7]

APPENDIX D

QUESTIONNAIRES FOR THE HONG KONG SAMPLE

調查問卷 A-1

請根據以下情景假設來回答問題

情景假設:你將和***一位交情不是特別深的朋友***在紐約度假三天,旅遊行程包括酒店住宿、用餐、購物和觀光。

問題 1：
您現在有點餓，然後您把***交情不深的旅伴***留在酒店，自己***獨自一人***去找吃的。您一個人在某街區發現了兩家餐館，他們都提供一些您想吃的三明治，看起來都十分美味。他們的價格分別是：

餐館 C	餐館 D
價格 : $7.99	*價格: $8.40*

如果您打算***獨自一人***吃三明治，請圈出您會選擇的餐館。

問題 2
您和您***交情不深的旅伴***打算一起去看一場演出，因此您要為您自己與您朋友各買一張票。正好有兩場演出看起來都非常吸引您，它們的價格分別是：

演出 F	演出 G
兩張票的價格 $299	*兩張票的價格 $330*

如果***您與您交情不深的旅伴打算一起觀看***，請圈出您會選擇的演出。

問題 3

您與***您交情不深的旅伴***打算一起享用一個大份披薩。現在您發現兩個餐館同時提供看起來都十分美味的披薩。它們的價格如下：

餐館 I	餐館 J
披薩價格 : $19.99	*披薩價格 : $22.00*

如果***您與您交情不深的旅伴***打算一起吃，請圈出您選擇的餐館

問題 4

情景假設：您是一名大學生，且“紐約大酒店”的房費對大學生有特別的折扣。另外，這家酒店坐落於紐約市中心，因此交通非常便捷。它的房費同時包含網絡費、自助早餐費以及提供有線電視、冰箱。客房的房費價格如下所示，那麼：

相比較$240 原價, 那麼您對於$220 的折扣價，您認為（　　）

[1]	[2]	[3]	[4]
基本沒打折	稍微打了點折	打折還可以	很高的折扣

問題 5

在過去的 3 年中，您在國外總共度過了多少天？［　　］天

問題 6

您去過紐約嗎 ？　　是［　　］　　否［　　］

問題 7

您在暑假期間沒有課程的一個月內，您在休閒活動、休閒器材或者家庭娛樂活動等方面的花費大概在多少錢?

［　　］港幣

調查問卷 B

請標明您對以下陳述的態度：

	十分不同意			中立			十分同意
1. 價格以 0.99 元結尾的物品可認為是低價標註的	[1]	[2]	[3]	[4]	[5]	[6]	[7]
2. 價格以 0.99 元結尾的標價行為是一種誤導消費者的小把戲。	[1]	[2]	[3]	[4]	[5]	[6]	[7]
3. 價格以 0.99 元結尾的商品讓我更加容易接受併購買它。	[1]	[2]	[3]	[4]	[5]	[6]	[7]
4. 價格以 0.99 元結尾的商品說明它的服務質量一般。	[1]	[2]	[3]	[4]	[5]	[6]	[7]
5. 我更傾向於購買價格以 0.99 元結尾的商品。	[1]	[2]	[3]	[4]	[5]	[6]	[7]
6. 價格以 0.99 元結尾的商品會讓我質疑它是否有好的質量。	[1]	[2]	[3]	[4]	[5]	[6]	[7]
7. 我在購買東西的時候，價格以 0.99 元結尾的商品更容易吸引我的注意力。	[1]	[2]	[3]	[4]	[5]	[6]	[7]
8. 將價格以 0.99 元結尾的標價行為是不厚道的，因為他將價格標註得看起來比實際低。	[1]	[2]	[3]	[4]	[5]	[6]	[7]
9. 價格以 0.99 元結尾的物品表明正在打折。	[1]	[2]	[3]	[4]	[5]	[6]	[7]
10. 將價格標註到以 0.99 元作為結尾的行為在道德上是不可接受的。	[1]	[2]	[3]	[4]	[5]	[6]	[7]
11. 價格以 0.99 元結尾的商品或服務說明它不是很可靠。	[1]	[2]	[3]	[4]	[5]	[6]	[7]
12. 價格以 0.99 元結尾的物品說明最近有降價。	[1]	[2]	[3]	[4]	[5]	[6]	[7]

APPENDIX E

FACTOR ANALYSIS USING VARIMA ROTATION METHOD

1. All samples

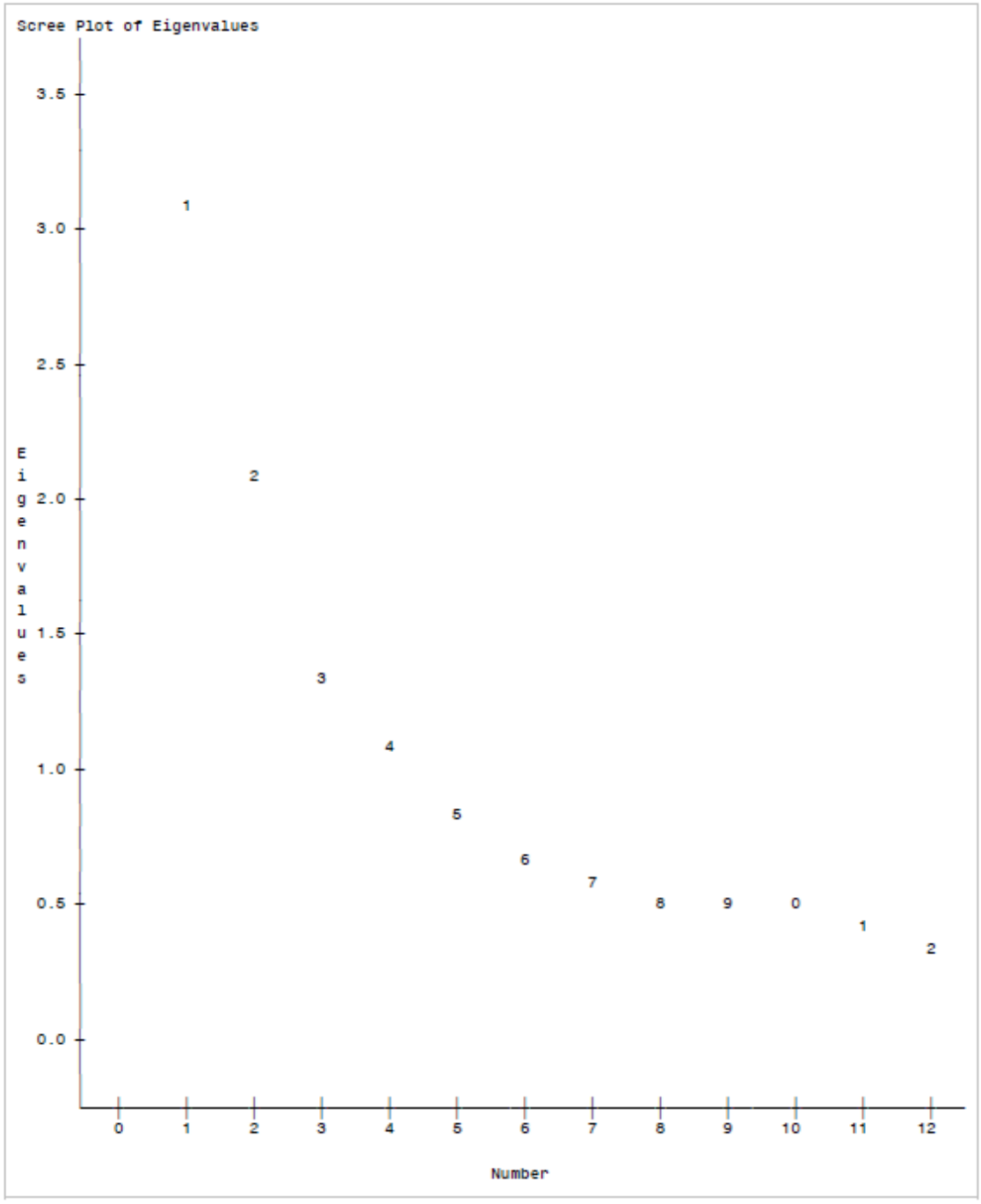
Orthogonal transformation matrix

	1	**2**	**3**	**4**
1	0.73204	0.48125	0.45716	0.15334
2	-0.53480	0.80066	0.09794	-0.25170
3	-0.22226	0.16732	-0.13902	0.95041
4	0.35875	0.31520	-0.87298	-0.09928

Rotated factor pattern

	Factor 1	**Factor 2**	**Factor 3**	**Factor 4**
b1	0.08562	0.32750	0.14503	-0.13890
b2	0.00582	-0.03057	-0.03544	0.54422
b3	-0.01266	0.70947	0.11807	0.10502
b4	0.60473	0.08098	0.02970	0.01445
b5	0.04998	0.69226	0.07192	-0.06421
b6	0.65589	0.11900	0.06545	0.07125
b7	0.07780	0.68575	0.08481	0.01062
b8	0.23482	-0.01034	0.10312	0.68180
b9	0.08410	0.22588	0.66450	0.08157
b10	0.58283	-0.05236	0.18562	0.14794
b11	0.80598	0.06144	0.18013	0.04351
b12	0.29168	0.14482	0.69409	-0.04633

4 factors will be retained by the NFACTOR criterion.



2. U.S. sample

Orthogonal transformation matrix

	1	2	3
1	0.77861	0.60500	0.16654
2	-0.61314	0.78997	-0.00319
3	-0.13349	-0.09963	0.98603

Rotated factor pattern

	Factor 1	Factor 2	Factor 3
b1	0.17198	0.50427	-0.06828
b2	-0.01323	0.03032	0.62383
b3	0.01107	0.66227	0.13043
b4	0.73570	0.20091	0.03825
b5	0.15097	0.56448	-0.03258
b6	0.71055	0.25989	0.06678
b7	0.08500	0.62155	0.19219
b8	0.27018	0.09695	0.49657
b9	0.34624	0.47487	0.10324
b10	0.56140	0.00510	0.18890
b11	0.84993	0.17909	0.05314
b12	0.47834	0.46369	-0.03985

3. Korean Sample

Orthogonal transformation matrix

	1	**2**	**3**	**4**
1	0.79612	0.52297	0.06929	0.29648
2	-0.55507	0.79073	-0.21320	0.14555
3	-0.22549	0.01978	0.90549	0.35897
4	0.08511	0.31759	0.36033	-0.87296

Rotated factor pattern

	Factor 1	**Factor 2**	**Factor 3**	**Factor 4**
b1	0.22757	0.41458	-0.19650	0.18021
b2	0.00743	-0.02623	0.57626	0.02256
b3	-0.02075	0.72114	0.08444	0.06199
b4	0.71012	0.11033	-0.09097	0.08024
b5	0.05484	0.73919	-0.08182	0.08782
b6	0.67104	0.10282	0.10039	0.04651
b7	0.11870	0.72502	-0.00019	0.09027
b8	0.14405	-0.02487	0.65295	0.05622
b9	0.01022	0.18295	0.12235	0.77209
b10	0.64050	-0.00231	0.16578	0.02390
b11	0.84568	0.06595	0.05022	0.09040
b12	0.36618	0.11248	-0.03411	0.42232

4. Chinese Sample

Orthogonal transformation matrix

	1	2	3	4
1	0.54614	0.61022	0.57164	0.05088
2	-0.68811	0.57175	0.00731	0.44672
3	0.46758	0.01371	-0.52466	0.71128
4	-0.09804	-0.54822	0.63079	0.54032

Rotated factor pattern

	Factor 1	Factor 2	Factor 3	Factor 4
b1	0.24610	0.01702	0.08999	-0.14926
b2	-0.05619	0.02286	-0.17511	0.44020
b3	0.73898	-0.02387	0.00425	0.02710
b4	0.02538	0.50396	0.00118	0.05307
b5	0.68999	0.00935	0.11202	-0.04847
b6	0.06640	0.62070	0.03444	0.02539
b7	0.68433	0.03302	0.11007	-0.01497
b8	-0.03004	0.26860	0.05893	0.82017
b9	0.22828	0.15000	0.60975	-0.15246
b10	-0.12576	0.47477	0.28872	0.17098
b11	0.00755	0.69807	0.26117	0.08340
b12	0.12315	0.16398	0.73482	-0.08283

APPENDIX F

CRONBACH ALPHA TEST FOR ALL SAMPLES

1. Low Quality

3 Variables: b4 b6 b11

Simple statistics

Variable	N	Mean	Std Dev	Sum	Minimum	Maximum
b4	2346	3.06394	1.61370	7188	1.00000	44.00000
b6	2346	3.29966	1.56975	7741	1.00000	26.00000
b11	2346	2.90750	1.34417	6821	1.00000	7.00000

Cronbach coefficient alpha

Variables	Alpha
Raw	0.740632
Standardized	0.745351

Cronbach coefficient alpha with deleted variable

Deleted variable	Raw variables		Standardized variables	
	Correlation with total	Alpha	Correlation with total	Alpha
b4	0.541301	0.689214	0.542342	0.694639
b6	0.577246	0.642169	0.581454	0.649430
b11	0.590658	0.637918	0.591091	0.638083

Pearson correlation coefficients, N = 2346
Prob > |r| under H0: Rho=0

	b4	b6	b11
b4	1.00000	0.46852	0.48086
		<.0001	<.0001
b6	0.46852	1.00000	0.53214
	<.0001		<.0001
b11	0.48086	0.53214	1.00000
	<.0001	<.0001	

2. Enhanced value

3 Variables: b3 b5 b7

Simple Statistics

Variable	N	Mean	Std Dev	Sum	Minimum	Maximum
b3	2346	3.75448	1.61213	8808	1.00000	7.00000
b5	2346	3.22847	1.44841	7574	1.00000	7.00000
b7	2346	3.55627	1.63061	8343	1.00000	7.00000

Cronbach Coefficient Alpha

Variables	Alpha
Raw	0.743521
Standardized	0.745124

Cronbach Coefficient Alpha with Deleted Variable

Deleted Variable	Raw Variables		Standardized Variables	
	Correlation with Total	Alpha	Correlation with Total	Alpha
b3	0.562334	0.667811	0.562484	0.670930
b5	0.573558	0.658104	0.573497	0.658133
b7	0.576716	0.651001	0.577448	0.653517

Pearson Correlation Coefficients, N = 2346
Prob > |r| under H0: Rho=0

	b3	b5	b7
b3	1.00000	0.48535 <.0001	0.49046 <.0001
b5	0.48535 <.0001	1.00000	0.50481 <.0001
b7	0.49046 <.0001	0.50481 <.0001	1.00000

3. Discount Price

3 Variables: b1 b9 b12

Simple Statistics

Variable	N	Mean	Std Dev	Sum	Minimum	Maximum
b1	2346	3.10102	1.91226	7275	1.00000	55.00000
b9	2346	3.56010	1.76920	8352	1.00000	7.00000
b12	2346	3.23402	1.54954	7587	1.00000	7.00000

Cronbach Coefficient Alpha

Variables	Alpha
Raw	0.534355
Standardized	0.550950

Cronbach Coefficient Alpha with Deleted Variable

Deleted Variable	Raw Variables		Standardized Variables	
	Correlation with Total	Alpha	Correlation with Total	Alpha
b1	0.203376	0.677659	0.203127	0.681590
b9	0.432024	0.287727	0.456621	0.293178
b12	0.438995	0.307230	0.447949	0.308016

Pearson Correlation Coefficients, N = 2346
Prob > |r| under H0: Rho=0

	b1	b9	b12
b1	1.00000	0.18204 <.0001	0.17177 <.0001
b9	0.18204 <.0001	1.00000	0.51698 <.0001
b12	0.17177 <.0001	0.51698 <.0001	1.00000

4. Misleading Action

3 Variables: b2 b8 b10

Simple Statistics

Variable	N	Mean	Std Dev	Sum	Minimum	Maximum
b2	2346	5.56607	1.46636	13058	1.00000	7.00000
b8	2346	4.53069	1.64509	10629	1.00000	7.00000
b10	2346	3.04390	1.47046	7141	1.00000	7.00000

Cronbach Coefficient Alpha

Variables	Alpha
Raw	0.484328
Standardized	0.475666

Cronbach Coefficient Alpha with Deleted Variable

Deleted Variable	Raw Variables		Standardized Variables	
	Correlation with Total	Alpha	Correlation with Total	Alpha
b2	0.261825	0.451905	0.250408	0.454107
b8	0.460331	0.066422	0.460404	0.066422
b10	0.207175	0.535897	0.198326	0.538490

Pearson Correlation Coefficients, N = 2346
Prob > |r| under H0: Rho=0

	b2	b8	b10
b2	1.00000	0.36845 <.0001	0.03435 0.0962
b8	0.36845 <.0001	1.00000	0.29375 <.0001
b10	0.03435 0.0962	0.29375 <.0001	1.00000

APPENDIX G

CRONBACH ALPHA TEST FOR THE U.S. SAMPLES

1.Low Quality

3 Variables: b4 b6 b11

Simple Statistics

Variable	N	Mean	Std Dev	Sum	Minimum	Maximum
b4	486	2.54527	1.31956	1237	1.00000	7.00000
b6	486	2.80658	1.40677	1364	1.00000	7.00000
b11	486	2.40123	1.26878	1167	1.00000	7.00000

Cronbach Coefficient Alpha

Variables	Alpha
Raw	0.852258
Standardized	0.853083

Cronbach Coefficient Alpha with Deleted Variable

Deleted Variable	Raw Variables		Standardized Variables	
	Correlation with Total	Alpha	Correlation with Total	Alpha
b4	0.754110	0.763798	0.753553	0.766311
b6	0.720567	0.798153	0.719831	0.798522
b11	0.698079	0.817161	0.698900	0.818150

Pearson Correlation Coefficients, N = 486
Prob > |r| under H0: Rho=0

	b4	b6	b11
b4	1.00000	0.69226 <.0001	0.66462 <.0001
b6	0.69226 <.0001	1.00000	0.62115 <.0001
b11	0.66462 <.0001	0.62115 <.0001	1.00000

2. Enhanced Value

3 Variables: b3 b5 b7

Simple Statistics

Variable	N	Mean	Std Dev	Sum	Minimum	Maximum
b3	486	3.36214	1.51028	1634	1.00000	7.00000
b5	486	3.22016	1.30459	1565	1.00000	7.00000
b7	486	3.50823	1.56605	1705	1.00000	7.00000

Cronbach Coefficient Alpha

Variables	Alpha
Raw	0.689168
Standardized	0.690110

Cronbach Coefficient Alpha with Deleted Variable

Deleted Variable	Raw Variables		Standardized Variables	
	Correlation with Total	Alpha	Correlation with Total	Alpha
b3	0.520763	0.574095	0.517482	0.580910
b5	0.469233	0.641914	0.469118	0.642201
b7	0.530248	0.562830	0.528078	0.567160

Pearson Correlation Coefficients, N = 486
Prob > |r| under H0: Rho=0

	b3	b5	b7
b3	1.00000	0.39583 <.0001	0.47297 <.0001
b5	0.39583 <.0001	1.00000	0.40935 <.0001
b7	0.47297 <.0001	0.40935 <.0001	1.00000

3. Discount Price

3 Variables: b1 b9 b12

Simple Statistics

Variable	N	Mean	Std Dev	Sum	Minimum	Maximum
b1	486	3.14609	1.43493	1529	1.00000	7.00000
b9	486	3.02058	1.56758	1468	1.00000	7.00000
b12	486	2.62757	1.39778	1277	1.00000	7.00000

Cronbach Coefficient Alpha

Variables	Alpha
Raw	0.681306
Standardized	0.681520

Cronbach Coefficient Alpha with Deleted Variable

Deleted Variable	Raw Variables		Standardized Variables	
	Correlation with Total	Alpha	Correlation with Total	Alpha
b1	0.372791	0.734404	0.373549	0.737454
b9	0.551719	0.509275	0.553831	0.509406
b12	0.575436	0.487017	0.569141	0.488456

Pearson Correlation Coefficients, N = 486
Prob > |r| under H0: Rho=0

	b1	b9	b12
b1	1.00000	0.32315 <.0001	0.34175 <.0001
b9	0.32315 <.0001	1.00000	0.58410 <.0001
b12	0.34175 <.0001	0.58410 <.0001	1.00000

4. Misleading Action

3 Variables: b2 b8 b10

Simple Statistics

Variable	N	Mean	Std Dev	Sum	Minimum	Maximum
b2	486	5.45885	1.42342	2653	1.00000	7.00000
b8	486	4.15638	1.69907	2020	1.00000	7.00000
b10	486	2.39506	1.42159	1164	1.00000	7.00000

Cronbach Coefficient Alpha

Variables	Alpha
Raw	0.468623
Standardized	0.459385

Cronbach Coefficient Alpha with Deleted Variable

Deleted Variable	Raw Variables		Standardized Variables	
	Correlation with Total	Alpha	Correlation with Total	Alpha
b2	0.243863	0.445397	0.230950	0.450895
b8	0.409986	0.120464	0.409979	0.120464
b10	0.231584	0.464224	0.219669	0.469804

Pearson Correlation Coefficients, N = 486
Prob > |r| under H0: Rho=0

	b2	b8	b10
b2	1.00000	0.30702 <.0001	0.06409 0.1583
b8	0.30702 <.0001	1.00000	0.29107 <.0001
b10	0.06409 0.1583	0.29107 <.0001	1.00000

APPENDIX H

CRONBACH ALPHA TEST FOR THE KOREAN SAMPLES

1. Low Quality

3 Variables: b4 b6 b11

Simple Statistics

Variable	N	Mean	Std Dev	Sum	Minimum	Maximum
b4	866	3.03118	1.31165	2625	1.00000	7.00000
b6	866	3.40185	1.51072	2946	1.00000	7.00000
b11	866	2.99654	1.32516	2595	1.00000	7.00000

Cronbach Coefficient Alpha

Variables	Alpha
Raw	0.790965
Standardized	0.794100

Cronbach Coefficient Alpha with Deleted Variable

Deleted Variable	Raw Variables		Standardized Variables	
	Correlation with Total	Alpha	Correlation with Total	Alpha
b4	0.626102	0.724095	0.628767	0.728055
b6	0.616522	0.741077	0.616392	0.741102
b11	0.663375	0.685184	0.664544	0.689673

Pearson Correlation Coefficients, N = 866
Prob > |r| under H0: Rho=0

	b4	b6	b11
b4	1.00000	0.52634 <.0001	0.58869 <.0001
b6	0.52634 <.0001	1.00000	0.57239 <.0001
b11	0.58869 <.0001	0.57239 <.0001	1.00000

2. Enhanced Value

3 Variables: b3 b5 b7

Simple Statistics

Variable	N	Mean	Std Dev	Sum	Minimum	Maximum
b3	866	4.15473	1.49576	3598	1.00000	7.00000
b5	866	3.23672	1.40785	2803	1.00000	7.00000
b7	866	3.53926	1.61251	3065	1.00000	7.00000

Cronbach Coefficient Alpha

Variables	Alpha
Raw	0.774953
Standardized	0.776554

Cronbach Coefficient Alpha with Deleted Variable

Deleted Variable	Raw Variables		Standardized Variables	
	Correlation with Total	Alpha	Correlation with Total	Alpha
b3	0.601070	0.706499	0.601169	0.710700
b5	0.615293	0.694387	0.614874	0.695666
b7	0.620521	0.688158	0.620919	0.688986

Pearson Correlation Coefficients, N = 866
Prob > |r| under H0: Rho=0

	b3	b5	b7
b3	1.00000	0.52554 <.0001	0.53335 <.0001
b5	0.52554 <.0001	1.00000	0.55123 <.0001
b7	0.53335 <.0001	0.55123 <.0001	1.00000

3. Discount Price

3 Variables: b1 b9 b12

Simple Statistics

Variable	N	Mean	Std Dev	Sum	Minimum	Maximum
b1	866	3.18707	1.60408	2760	1.00000	7.00000
b9	866	4.65012	1.56441	4027	1.00000	7.00000
b12	866	3.76097	1.53326	3257	1.00000	7.00000

Cronbach Coefficient Alpha

Variables	Alpha
Raw	0.496628
Standardized	0.498380

Cronbach Coefficient Alpha with Deleted Variable

Deleted Variable	Raw Variables		Standardized Variables	
	Correlation with Total	Alpha	Correlation with Total	Alpha
b1	0.242716	0.515995	0.242772	0.516072
b9	0.347705	0.337757	0.349984	0.338043
b12	0.355310	0.326534	0.356498	0.326620

Pearson Correlation Coefficients, N = 866
Prob > |r| under H0: Rho=0

	b1	b9	b12
b1	1.00000	0.19519 <.0001	0.20340 <.0001
b9	0.19519 <.0001	1.00000	0.34777 <.0001
b12	0.20340 <.0001	0.34777 <.0001	1.00000

4. Misleading Action

3 Variables: b2 b8 b10

Simple Statistics

Variable	N	Mean	Std Dev	Sum	Minimum	Maximum
b2	866	5.75982	1.28398	4988	1.00000	7.00000
b8	866	4.93187	1.52474	4271	1.00000	7.00000
b10	866	3.23557	1.38278	2802	1.00000	7.00000

Cronbach Coefficient Alpha

Variables	Alpha
Raw	0.467268
Standardized	0.462191

Cronbach Coefficient Alpha with Deleted Variable

Deleted Variable	Raw Variables		Standardized Variables	
	Correlation with Total	Alpha	Correlation with Total	Alpha
b2	0.293338	0.365595	0.283225	0.367022
b8	0.416743	0.105779	0.421142	0.106054
b10	0.176947	0.552431	0.168550	0.558326

Pearson Correlation Coefficients, N = 866
Prob > |r| under H0: Rho=0

	b2	b8	b10
b2	1.00000	0.38728 <.0001	0.05600 0.0996
b8	0.38728 <.0001	1.00000	0.22476 <.0001
b10	0.05600 0.0996	0.22476 <.0001	1.00000

APPENDIX I

CRONBACH ALPHA TEST FOR THE CHINESE SAMPLES

1. Low Quality

3 Variables: b4 b6 b11

Simple Statistics

Variable	N	Mean	Std Dev	Sum	Minimum	Maximum
b4	994	3.34608	1.89422	3326	1.00000	44.00000
b6	994	3.45171	1.64717	3431	1.00000	26.00000
b11	994	3.07746	1.33775	3059	1.00000	7.00000

Cronbach Coefficient Alpha

Variables	Alpha
Raw	0.627766
Standardized	0.642511

Cronbach Coefficient Alpha with Deleted Variable

Deleted Variable	Raw Variables		Standardized Variables	
	Correlation with Total	Alpha	Correlation with Total	Alpha
b4	0.407641	0.596088	0.407537	0.605120
b6	0.469175	0.482245	0.481121	0.504282
b11	0.464039	0.518032	0.468678	0.521777

Pearson Correlation Coefficients, N = 994
Prob > |r| under H0: Rho=0

	b4	b6	b11
b4	1.00000	0.35298 <.0001	0.33715 <.0001
b6	0.35298 <.0001	1.00000	0.43382 <.0001
b11	0.33715 <.0001	0.43382 <.0001	1.00000

2. Enhanced Value

3 Variables: b3 b5 b7

Simple Statistics

Variable	N	Mean	Std Dev	Sum	Minimum	Maximum
b3	994	3.59759	1.68371	3576	1.00000	7.00000
b5	994	3.22535	1.54800	3206	1.00000	7.00000
b7	994	3.59457	1.67729	3573	1.00000	7.00000

Cronbach Coefficient Alpha

Variables	Alpha
Raw	0.750160
Standardized	0.751246

Cronbach Coefficient Alpha with Deleted Variable

Deleted Variable	Raw Variables		Standardized Variables	
	Correlation with Total	Alpha	Correlation with Total	Alpha
b3	0.574048	0.671643	0.574662	0.673077
b5	0.588880	0.656660	0.588878	0.656663
b7	0.572774	0.672969	0.573384	0.674545

Pearson Correlation Coefficients, N = 994
Prob > |r| under H0: Rho=0

	b3	b5	b7
b3	1.00000	0.50892 <.0001	0.48883 <.0001
b5	0.50892 <.0001	1.00000	0.50725 <.0001
b7	0.48883 <.0001	0.50725 <.0001	1.00000

3. Discount Price

3 Variables: b1 b9 b12

Simple Statistics

Variable	N	Mean	Std Dev	Sum	Minimum	Maximum
b1	994	3.00402	2.31767	2986	1.00000	55.00000
b9	994	2.87425	1.55247	2857	1.00000	7.00000
b12	994	3.07143	1.48979	3053	1.00000	7.00000

Cronbach Coefficient Alpha

Variables	Alpha
Raw	0.450744
Standardized	0.517635

Cronbach Coefficient Alpha with Deleted Variable

Deleted Variable	Raw Variables		Standardized Variables	
	Correlation with Total	Alpha	Correlation with Total	Alpha
b1	0.150164	0.691198	0.149747	0.691582
b9	0.391579	0.186114	0.454207	0.202714
b12	0.363618	0.242260	0.423072	0.259415

Pearson Correlation Coefficients, N = 994
Prob > |r| under H0: Rho=0

	b1	b9	b12
b1	1.00000	0.14904 <.0001	0.11279 0.0004
b9	0.14904 <.0001	1.00000	0.52856 <.0001
b12	0.11279 0.0004	0.52856 <.0001	1.00000

4. Misleading Action

3 Variables: b2 b8 b10

Simple Statistics

Variable	N	Mean	Std Dev	Sum	Minimum	Maximum
b2	994	5.44970	1.61251	5417	1.00000	7.00000
b8	994	4.36419	1.64900	4338	1.00000	7.00000
b10	994	3.19416	1.48084	3175	1.00000	7.00000

Cronbach Coefficient Alpha

Variables	Alpha
Raw	0.468512
Standardized	0.461239

Cronbach Coefficient Alpha with Deleted Variable

Deleted Variable	Raw Variables		Standardized Variables	
	Correlation with Total	Alpha	Correlation with Total	Alpha
b2	0.231046	0.473125	0.218800	0.475213
b8	0.481625	-.020197	0.480474	-.020271
b10	0.184764	0.534073	0.182591	0.534171

Pearson Correlation Coefficients, N = 994
Prob > |r| under H0: Rho=0

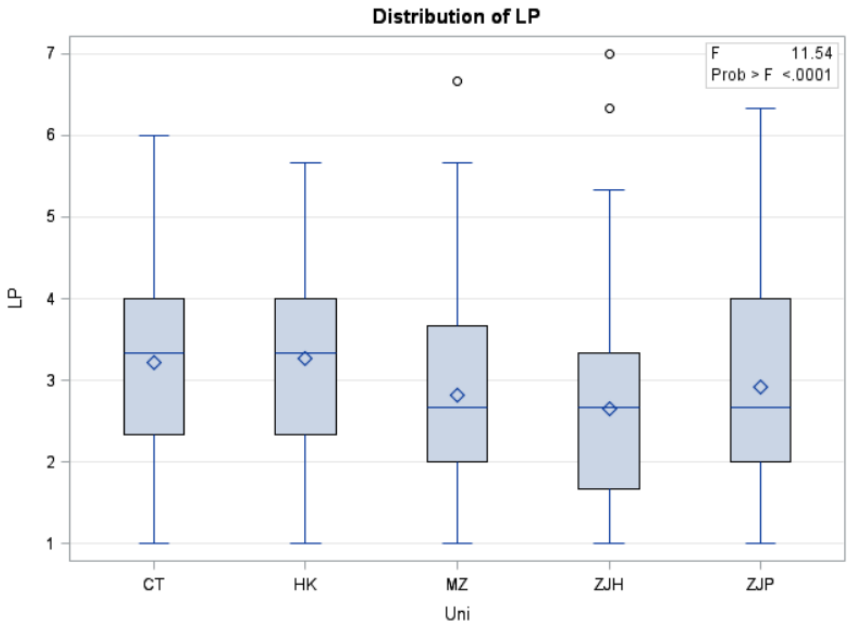
	b2	b8	b10
b2	1.00000	0.36442 <.0001	-0.01003 0.7520
b8	0.36442 <.0001	1.00000	0.31166 <.0001
b10	-0.01003 0.7520	0.31166 <.0001	1.00000

APPENDIX J

ANOVA AND DUNCAN'S TEST FOR THE CHINESE SAMPLE

1. Discount Price

Mean for Low Price (Q1, Q9, and Q12) of five schools is 2.96. Mean of each school's responses is statistically significantly different to each other. (p-value : 0.0001)

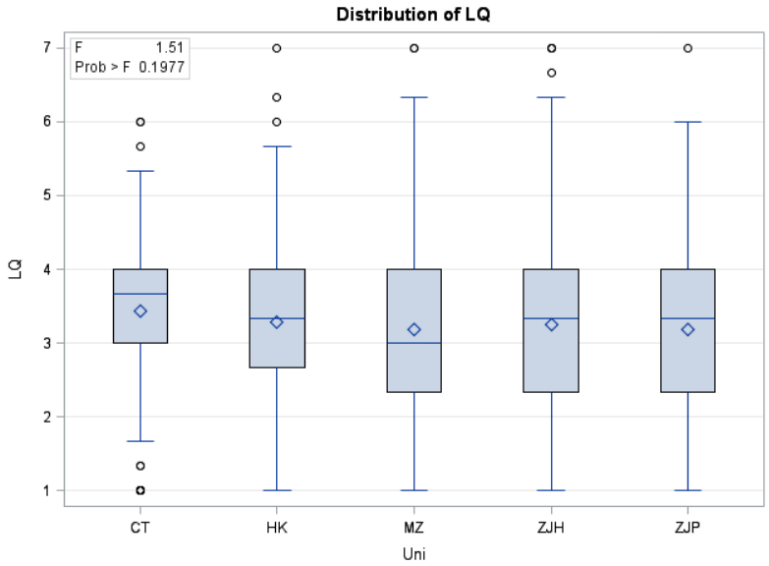


Duncan Grouping*		Mean	N	University
	A	3.2696	188	Hong Kong Poly U
	A			
	A	3.2255	198	Central South
	B	2.9118	185	Zhejiang (Dr. Liyong)
	B			
C	B	2.8181	198	Minzu
C				
C		2.6458	225	Zhejiang (Dr. Liu)

*Means with the same letter are not significantly different.

2. Low quality

Mean for Low Quality (Q4, Q6, and Q11) of five schools is 3.27 Mean of each school's responses is not statistically significantly different to each other. (p-value : 0.1977)

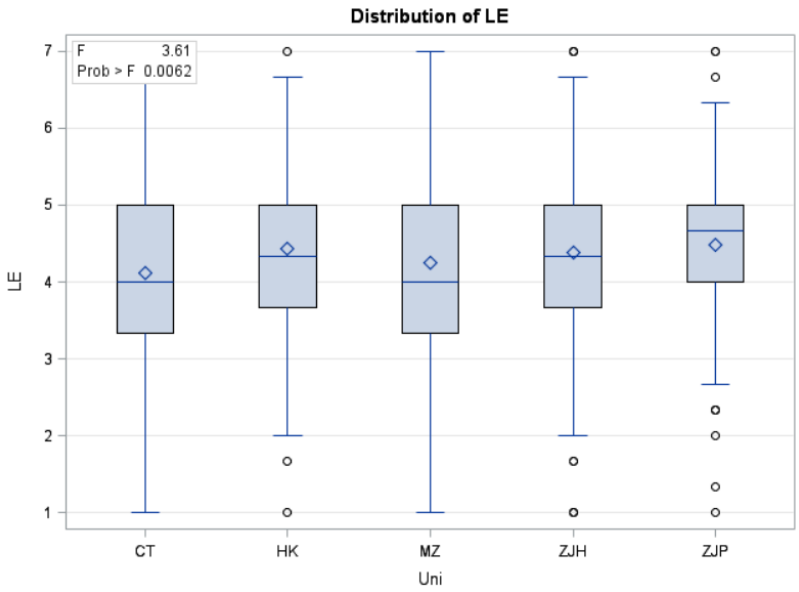


Duncan Grouping	Mean	N	University
A	3.4312	198	Central South
A			
A	3.2870	188	Hong Kong Poly U
A			
A	3.2564	225	Zhejiang (Dr. Liu)
A			
A	3.1911	185	Zhejiang (Dr. Liyong)
A			
A	3.1903	198	Minzu

*Means with the same letter are not significantly different.

3. Misleading action

Mean for Unethical Image (Q2, Q8, and Q10) of five schools is 4.34. Mean of each school's responses is statistically significantly different to each other. (p-value : 0.0062)

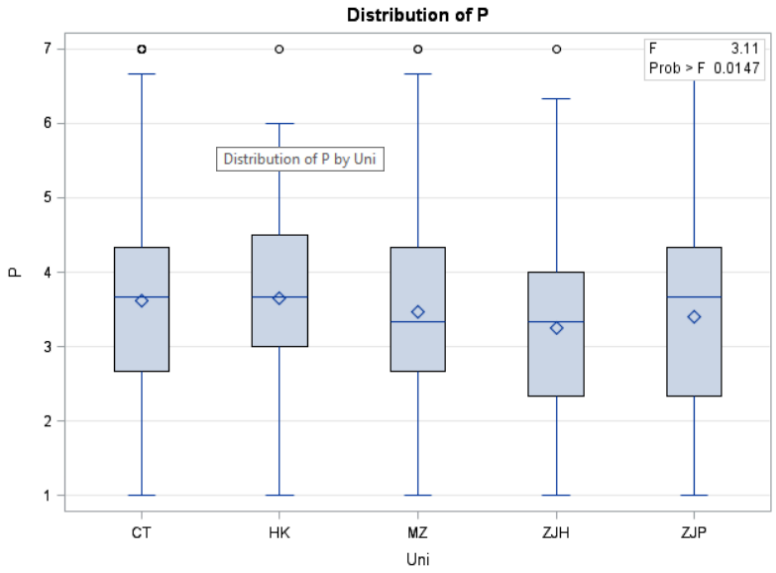


Duncan Grouping		Mean	N	University
	A	4.4866	185	Zhejiang (Dr. Liyong)
	A			
	A	4.4364	188	Hong Kong PolyU
	A			
	A	4.3911	225	Zhejiang (Dr. Liu)
	A			
B	A	4.2543	198	Minzu
B				
B		4.1196	198	Central South

*Means with the same letter are not significantly different.

4. Enhanced value

Mean for Unethical Image (Q3, Q5, and Q7) of five schools is 3.47. Mean of each school's responses is statistically significantly different to each other (p-value : 0.0147).



Duncan Grouping		Mean	N	Uni
	A	3.6580	188	Hong Kong PolyU
	A			
	A	3.6163	198	Central South
	A			
B	A	3.4611	198	Minzu
B	A			
B	A	3.4072	185	Zhejiang (Dr. Liyong)
B				
B		3.2544	225	Zhejiang (Dr. Liu)

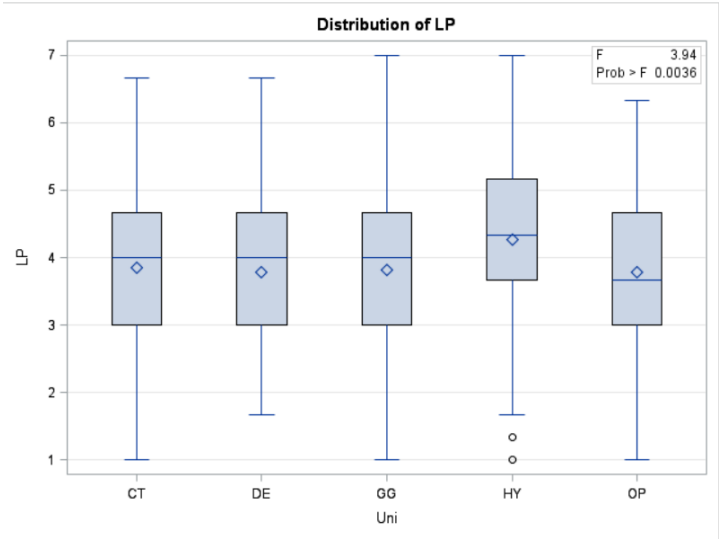
*Means with the same letter are not significantly different.

APPENDIX K

ANOVA AND DUNCAN'S TEST FOR THE KOREAN SAMPLE

1. Discount price

Mean for Low Price (Q1, Q9, and Q12) of five schools is 3.87. Mean of Hanyang University (4.27) is statistically significantly different from that of other four schools. (p-value : 0.0036)

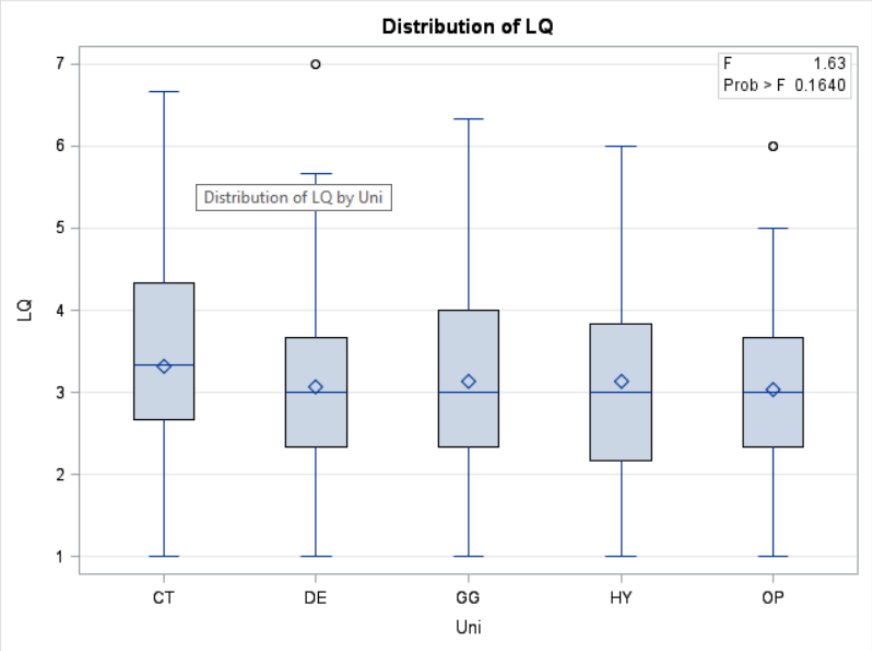


Duncan Grouping*	Mean	N	University
A	4.27	100	Hanyang
B	3.85	206	Catholic
B	3.82	214	Kyonggi
B	3.79	189	Dong-eui
B	3.78	157	Open

*Means with the same letter are not significantly different.

2. Low quality

Mean for Low Quality (Q4, Q6, and Q11) of five schools is 3.14. Mean of each university is not statistically significantly different from each other. (p-value = 0.1640)

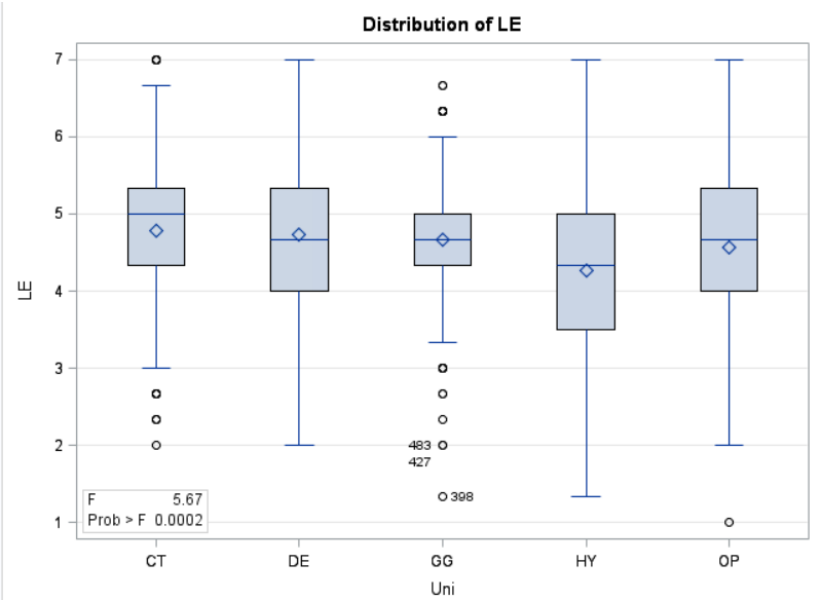


Duncan Grouping	Mean	N	University
A	3.31	206	Catholic
A	3.13	214	Kyonggi
A	3.13	100	Hanyang
A	3.07	189	Dong-eui
A	3.03	157	Open

*Means with the same letter are not significantly different.

3. Misleading action

Mean for Unethical Image (Q2, Q8, and Q10) of five schools is 4.64. Mean of Hanyang University (4.26) is statistically significantly different from that of other four schools. (p-value = 0.0002)

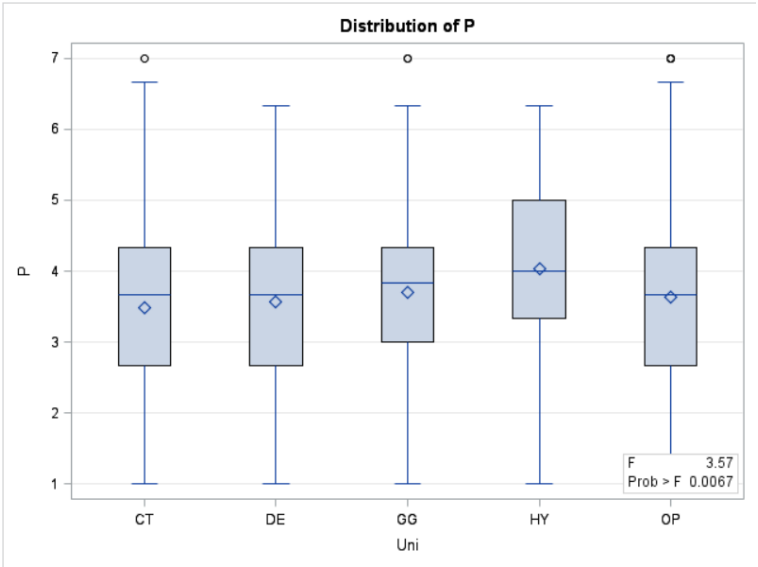


Duncan Grouping	Mean	N	University
A	4.78	206	Catholic
A	4.73	189	Dong-eui
A	4.67	214	Kyonggi
A	4.56	157	Open
B	4.26	100	Hanyang

* Means with the same letter are not significantly different.

4. Enhanced value

Mean for Unethical Image (Q3, Q5, and Q7) of five schools is 3.64. Mean of Hanyang University (4.02) is statistically significantly different from that of other four schools. (p-value = 0.0067)



Duncan Grouping	Mean	N	University
A	4.02	100	Hanyang
B	3.70	214	Kyonggi
B	3.63	157	Open
B	3.57	189	Dong-eui
B	3.48	206	Catholic

* Means with the same letter are not significantly different.