International Journal of Costume and Fashion
Vol. 12 No. 1, June 2012, pp. 29-48

Consumer Spatial Behavior for Apparel Products based on Trade Area Selection Criteria

Jin-Ah Son · Eun-Young Rhee · Hye Sun Park

Concurrent Professor, Graduate school of design, Konkuk University, Seoul, Korea
Professor, Dept. of Clothing and Textiles, Seoul National University, Seoul, Korea
Professor, Dept. of Clothing and Textiles, Pai Chai University, Daejeon, Korea
(Received November 20, 2011; Revised March 15, 2012; Accepted June 10, 2012)

Abstract *The purpose of this study was to examine the relationship between consumer spatial behavior and consumer characteristics based on trade area selection criteria. 469 female consumers who lived in the two new towns near Seoul, Bundang and Ilsan, participated in the study by completing questionnaires. Data were analyzed by using cluster analysis, ANOVA, Duncan's multiple range test, chi-square analysis, etc.*

The findings of the empirical research were as follows:

1. *Five groups were identified by cluster analysis based on trade area selection criteria of clothing: price-oriented group, time convenience-oriented group, shopping convenience-oriented group, variety/entertainment-oriented group, and passive shopping group.*
2. *Each group differed in spatial behavior such as clothing shopping area, the visiting frequency, and spatial movement type.*
3. *Each group showed differences in fashion involvement and demographic characteristics(age, marital status, education, occupation, and social status).*

Key words *trade area, trade area selection criteria, consumer segmentation, consumer spatial behavior*

Introduction

Companies always target relevant markets when they develop marketing activities, and thus understanding the markets flow is a must. It is particularly important to understand consumers behavior. Accordingly, as trade areas are the venues where companies meet their consumers and consumers show their shopping behavior, they play important roles in marketing activities(Han, 1983). Therefore, trade areas have long been studies with the focus on those places that were under the control of companies who implement marketing activities. However, considering that trade activities could not be performed without consumers, trade areas need understood, as geographic areas from which consumers obtain resources necessary for

Corresponding author: Hye Sun Park e-mail: hspark@pcu.ac.kr

their everyday lives, from interdependent perspectives of companies and consumers.

Consumer spatial behavior refers to consumption behavior in which consumers choose certain regions as shopping destinations to obtain resources for their lives, and consists of static spatial selection and dynamic spatial movement(Kim, 1986). Pervious studies on consumer spatial behavior have focused on spatial selection, particularly store choice. In the apparel studies, many studies have dealt with store choice(Bush & Joseph, 1976; Jeong & Park, 1992; Kim, 1991; Kim & Rhee, 2007; Lee & Lim, 1990; Sung, 2008). However, the perspective that regards consumers' choice of shopping destination by shop limits the scope of consumer spatial behavior. Thus, a broader perspective is called for. In addition, clothing items are highly distinctive and affected by trends, and consumers tend to compare many different items from different shops before making a purchase decision(Rhee, 1999). Therefore, consumers' choice of shopping destination should be examined not by individual shops, but by trade area, which is a cluster of many stores.

Gollegde and Rushton(1966) claimed that it was critical for consumer spatial behavior studies to understand what information about the urban retail structure consumer value. Craig and colleague(1984) said that different consumers gave different weights to variables that affect their choice of trade areas. Ahn(1990) also emphasized the needs for consumer segmentation by spatial selection criteria, citing studies on consumer spatial behavior have found that consumers used subjective criteria when recognizing space, but such criteria are consistent by each sub-group.

Furthermore, many researchers(Darden & Rerreault, 1976; Davis, 1976; Herman & Beik, 1968; Hubbard, 1978; Reynolds & Darden, 1972) insisted that consumer characteristics had significant influences on their selection of shopping destinations. However, they mostly used demographic variables, like consumers' age, income, social class and family life cycle, failing to consider consumers' internal or psychological variables, like their involvement in the products that directly affected their selection of shopping destinations(Bucklin, 1967).

Therefore, this study intends to categorize consumers by the criteria that they value in choosing trade areas, and identify the characteristics of each group. To be specific, this study aims at segmenting consumer groups by the criteria of their trade area selection, and examining consumers' area selection behavior, spatial movement type and their characteristics(i.e. fashion involvement and demographics) that affect trade area selection.

Literary Review

Trade Area Selection Criteria

Trade Area

A trade area is a district where commercial transactions take place between producers and consumers, and a combination of a sales territory(a concept of producers' or sellers' transaction area) and a shopping area(a concept of consumers' transaction area). In other words, a trade area is a place where

consumers' lives directly or indirectly overlap with companies' activities(Kim, 1989). Accurate analysis on trade areas is not only important for companies to secure sales territories, but also critical to understand efficiently distribute limited resources and understand consumer purchase behavior(Peterson, 1974). Accordingly, trade areas have long been studies with the focus on those place that were under the control of companies who implement marketing activities, like business territory or tributary area. However, they are defined from corporate perspectives, without reflecting traits or scopes of each trade area. Considering that no commercial transaction could be completed without a consumer, a trade area needs understood a region or a place where consumers could benefit from their interdependent relations with companies.

Therefore, this study is to examine trade areas as subjects of spatial selection when consumers purchase apparel products, and thus a trade area refers to a cluster of retail facilities where actual transactions take place between consumers and sellers. In addition, consumer behavior to select such clusters to obtain necessary resources is defined as trade selection behavior.

Trade Area Selection Criteria

Not many studies have looked into consumers' selection criteria for trade areas, and Huff(1963)'s gravity model on the consumers' selection of urban trade areas was the first of its kind. Huff model assumed that consumers chose trade areas by the size and distance. This idea is relatively accurate when other factors, except sizes and distances, of competing retailers are not much different. However, when consumers precisely recognize differences between trade areas, the model cannot predict consumer behavior about trade area selection or patronage. Accordingly, a later study of Nevin and Houston(1980) added an image dimension with Huff model to measure consumers' selection of trade areas and their intention of selection. The shopping area image dimension consisted of three factors, product assortment, convenience and market characteristics. The study found that consumers' selection of trade areas had static correlations with their intention of selection, but failed to improve predictability of Huff model.

However, based on the studies of Bell(1999), Gautschi(1981), and Hauser and Koppelman(1979) found that the image dimension(fair price, consumer service level, visual pleasure of shopping area, convenience, store and product characteristics) contributed to consumers' selection of shopping areas and modified the influence of distance. In addition, it was also found that consumers who had positive images about a certain shopping area had intention to shop in the area, and continuously shopped in the area. Son et al(2002) examined consumers' selection criteria for trade areas ,not individual stores, of apparel product shopping, and confirmed that consumers used various criteria for their selection of trade areas, and weights of the criteria differed by apparel item and did have significant influences on their selection and visiting frequency.

Each consumer puts different weights on different criteria(Craig et al., 1984), and Ahn(1990) insisted that consumers used subjective criteria when recognizing a space, but the criteria were consistent by sub-group, and thus emphasized needs for consumer segmentation by space selection criteria.

Therefore, this study aims at segmenting consumer groups by their selection criteria for trade areas and identifying consumer types by trade area selection based on the understanding of their spatial behavior.

Consumer Spatial Behavior

Consumers who reside in a certain area tend to choose a district as a shopping destination, go to the area and choose a certain mall and then a certain shop within the mall. In the course of the series of action, choosing a certain shopping destination is called "consumer spatial behavior." This is related to "where" among 5W(who, what, when, where and why), and demonstrates consumer behavior of purchase place selection(Kim, 1986).

Such consumer spatial behavior can be divided into spatial selection(static aspect) and spatial movement(dynamic aspect). Consumers want goods and services to satisfy their needs, and look for retailers that provide the goods and services. As such, consumers select a purchase space and move accordingly(Cho, 1985). Spatial selection and movement are the core components of consumer spatial behavior, and continuously take place in the course of purchase activities.

Studies on consumer spatial behavior have focused on spatial selection, particularly store choice among many competing stores. However, if consumer spatial behavior is limited to spatial selection, not including spatial movement, the scope is too narrow. Therefore, this study that examines consumer purchase behavior in the Seoul deals with not only their movement between stores, but also within a city and between cities, and thus is expected to contribute to extending research coverage to both spatial selection and movement.

Consumer Spatial Behavior

One of critical decisions that consumers face in the urban retail structure is where to shop. This decision includes double selection: selecting not only a certain shop, but also a certain shopping area. (Nevin & Houston, 1980). Some consumers choose a shopping area where their favorite stores are located and do not pay much attention to the area itself, while other consumers choose a shopping area by the area characteristics, not by individual stores. Yet, previous studies have largely overlooked such behavior, but focused on stores as the subject of space selection.

Apparel studies have also focused on consumers' shop selection criteria, shop patronage behavior and shop images(Bush & Joseph, 1976; Jeong & Park, 1992; Kim, 1991; Lee & Jang, 1992; Lee & Lim, 1990). However, if consumers' space selection behavior is limited to their shop selection, the scope of consumer spatial behavior becomes too narrow. In addition, apparel items are highly distinctive and trendy, and consumers tend to compare different items from different stores(Rhee, 1999). Therefore, consumer spatial selection behavior must be studied based on trade areas where individual stores are clustered.

Consumer Spatial Movement Types

Determining factors of consumer spatial movement types are moving distance, the numbers and

types of moving purposes, and the number of stops.

First, the distance factor has been regarded a core factor of consumer spatial behavior. In reality, consumers face numerous spatial decisions, and how they perceive distances always affect their decisions(Saisa et al., 1986). The distance is called perceived distance, to make a distinction from physical distance, and Cadwallader(1975) further divided perceived distance into perceived distance and perceived time distance, and insisted that the latter had stronger impact on consumers' decision making. He verified the gravity model based on perceived time distance and store attractiveness in order to examine how perceived time distance affected consumers' decision making. As a result, store attractiveness had greater influences than the distance factor. However, there were criticism about how to measure the distance factor, and some even pointed out that failing to include other variables led to over-evaluation of the distance factor. Although the approach to explain the distance factor was criticized, the distance factor itself is still an important factor to consumer spatial behavior.

Second, people have purposes for their spatial movements, and the number and type of the purposes affect their destination selection. Previous spatial selection models assumed that consumers have a single purpose for spatial movements, while many studies pointed out that 30-35% of spatial movements are for multi-purposes, and the multi-purpose movements are rational behavior to save time and money(Ghosh & Mclafferty, 1984). O'Kelly(1981) also examined spatial movements of housewives living in Hamilton, Ontario, and claimed that multiple stops and multi-purpose movements are most common, and that 50% of everyday activities, excluding going to work, are for multiple purposes. Therefore, when consumers make multi-purposes movements, they are likely to be attracted by shopping areas or stores where they could handle multiple tasks, and thus moving purposes are an important factor in spatial movement.

Third, consumers stop at least once in the course of spatial movements. When they stop, they do activities for one or more purposes. As such, spatial movements could be understood as a series of one or more stops(O'Kelly, 1981). In general, a stop in the consumer spatial movements is regarded as a stop to perform purchase-related activities, and thus normally refers to look around several shops to compare products(Cho, 1985). Therefore, it is usually applied to examining shop selection within a certain trade area, and thus excluded from this study that focuses on trade area selection.

Based on the three determining factors, Davis(1976) mapped out 3,121 purchase movements of housewives living in Coventry by product categories. This map shows short movements(to downtown), mid-range movements(to downtown) and long movements(to outside of the city). Short movements most frequently appeared on Wednesdays to purchase everyday items, mid-range movements most frequently appeared on weekends to purchase durable goods or everyday items, and long movements did not frequently appeared. Cho(1985) categorized consumer spatial movements into 16 types based on moving distance, purpose and the number of stops, and examined different spatial behavior of each type. He found that there were significant differences in shopping behavior, like product type, store image consideration, purchase frequency and moving time. Kim(1998) identified 4 types of spatial movements based on moving distance and purpose, and examined the number of visiting places, moving time, average purchase

amount and the scores of consumer emotion factors by each type. The study found significant differences in the number of visiting places, moving time and average purchase amount.

Consumer Characteristics

One of the criticisms about previous models on consumer spatial behavior was failing to integrate variables about consumer characteristics(Igene & Lusch, 1981). However, many studies(Darden & Perreault, 1976; Davis, 1976; Herman & Beik, 1968; Reynolds & Darden, 1972) found that consumer characteristics, like age, income, education background, car ownership, attitude toward their residential area and shopping tendency, had impact on consumers' selection of shopping destination. Therefore, in order to identify consumer characteristics which affect their selection of trade areas, this study examined consumers' fashion involvement as internal characteristics and demographics as external characteristics.

Consumers' fashion involvement

Involvement is defined as a perceived importance level of a purchase decision in which a consumer has specific interest. Involvement is an important medium that changes consumers' purchase behavior depending on the level and has significant implications to setting up promotion policies(Tiger et al., 1976). Compared to other products, apparel goods are categorized as high-involvement products as consumers spend significant time and efforts in the purchase process. However, not all apparel items are high-involvement products, and the level of involvement differs by consumer characteristics(Rhee, 1999).

According to the study of Lee et al.(1997) on store images by trend involvement, high-involvement groups preferred dedicated apparel stores located in the crowded downtown and with a free and pleasant atmosphere, and trendy and luxury apparel products, while low-involvement groups preferred dedicated apparel stores located near their houses or schools and with a free and cheerful atmosphere, and basic and practical items. Hong and Kang(2003) examined the influence of shopping motivations and involvement on consumers' selection of and attitude to stores. The study found that the stronger the pleasure and trend involvement, the more consumers consider products, promotion, service and location when choosing a store. Sung(2009) looked into market segmentations by fashion involvement of male consumers and the factors that affect their store image evaluation and purchase intention; and found that high-involvement groups rendered positive evaluation on all store image components, external-involvement groups gave medium scores overall and turned out to be affected by rational pricing and emotional factors of stores, and low-involvement groups were likely to shop online.

As many studies(Lee, 1991; Lim & Park, 1999; Park, 2006; Tiger et al., 1976) confirmed significant correlations between consumers' fashion involvement and their purchase behavior and store selection behavior, fashion involvement may have correlations with their trade area selection, a prior step to store choice.

Consumer Demographics

According to the hierarchy among cities, each city has different characteristics and different types and scales of commerce. Among several cities that have diverse retail establishments, consumers choose a certain city as their purchase destination, which in turn causes movements between cities. In the city, consumers choose a specific trade area, which causes trade area selection behavior within a city. According to previous studies, demographic variables have correlations with consumers selection of purchase destination, particularly with movements between cities.

Herman and Beik(1968) studied purchase behavior of consumers who went to other cities, beyond the city in which they live, for shopping at least once over the previous one year. The study found that consumer characteristics, like income, family size, attitude, number of young children and credit card ownership, had influences on their shopping habit, away from their own city. Reynolds and Darden(1972) also studied out-of-the-town shopping pattern. They adopted psychological variables along with demographics, and examined whether out-of-the-town shopping consumers' choice of shopping area reflected their shopping tendency and life style. The study found that consumers who frequently went out-shopping tended to be young, highly educated high-income earners and showed entertaining shopping tendency. Darden and Perreault(1976) categorized out-shopping consumers into four groups by product and purchase amount: heavy buyer, furniture buyer, appearance/decoration buyer and leisure/entertainment buyer, examined their age, income, life style, family life cycle and frequency of movements, and found that spatial behavior of each group differed by their family life cycle, movement frequency, product to purchase and lifestyle.

Davis(1976) segmented female adults by social class, age and family size and examined their spatial behavior. He found that age affected departure points and destinations of spatial movements and products to purchase, and social class affected transportation, retail area type and moving distance. Hubbard(1978) explained how consumers' social-economic status affected their spatial behavior from two different perspectives. One was that those with high status were likely to own cars and thus easily move to far away, and the other was that high income earners were less likely to be affected by distance because accompanied expenses to shopping had less impact on them than on low income earners.

Such consumer characteristics had strong influences on consumer spatial behavior. In particular, fashion products are selected for social and psychological satisfaction of consumers, and individual consumers display widely different purchase behavior. Thus, consumer characteristics are expected to have greater influences on consumer spatial behavior about fashion products than about other goods.

Empirical Study Method and Procedure

Research Questions

1. Segment consumer groups by their selection criteria for trade area.
2. Identify differences in their spatial behavior(apparel purchase area, visiting frequency and spatial

movement type) between groups.
3. Identify differences in consumer characteristics(fashion involvement and demographics) between groups.

Method

Selecting City

In the late 1980s when the shortage of housing supply triggered many social problems, the government began to build 5 new towns around Seoul, Bundang, Ilsan, Pyeongchon, Sanbon and Joongdong. Among them, Bundang was planned as a self-sustaining city that would accommodate 400,000 people and share some commercial roles of southern Seoul, and Ilsan as a self-sustaining city with a complete set of cultural and art functions in preparation for the reunification of the Korean peninsula. Meanwhile, Pyeongchon, Sanbon and Joongdong focused more on the residential function to solve the housing supply problem(The Ministry of Construction, 1993). As such, only Bundang and Ilsan pursued to be self-sustaining cities, and have secured sufficient distribution conditions, like large retails and discount stores, to meet local demands. Therefore, based on the assumption that consumers in the two cities may show various spatial behavior, including movements within and across cities, Bundang and Ilsan were selected as subject cities.

Instruments

To solve research problems, a survey questionnaire was prepared based on preliminary research and literature review. Based on preliminary research, 15 apparel trade areas were selected by including most frequented areas and well-known apparel trade areas adjacent to Bundang or Ilsan. For each trade area, consumer visiting frequencies except for the purpose of going to work or school were measured based on the 7-point likert scale. The questionnaire also asked to choose trade areas where respondents buy formal wear and casual items. In addition, moving distances and purposes were also asked for each trade area. The moving distance was measured by spending time, and the moving purpose.

Based on the 20 questions about 7 trade area selection criteria(variety of stores and products, service policy, environment and atmosphere, price range, entertainment, location and access convenience, shopping time convenience) of the Son et al. (2002), questions about trade selection criteria were developed by the 5-point likert scale(1: Not at all, 5: Very important). Consumer characteristics were evaluated by consumers' fashion involvement and demographics. For the fashion involvement, 16 questions were extracted from previous studies(Lee, 1991; Zaichowsky, 1985) and developed based on the 5-point likert scale. Demographics were included age, marital status, education background, occupation, work area, residence area, residential period, monthly income and monthly spending on clothing.

Data and Analysis

Among women in the 20s and older living in Bundang and Ilsan, 510 participated in the survey. A total of 485 questionnaires were collected(collection rate 95.1%), and 469(excluding incomplete questionnaires) were analyzed. The analysis was done by using SPSS for window 10.0, and cluster analysis, ANOVA, Duncan test, frequency test, cross-tabulations and Chi-square(χ^2) test were performed.

Analysis Result and Discussions

Identification of Consumer Groups by Trade Area Selection Criteria

The 20 questions that Son et al.(2002) identified as trade selection criteria were used to measure consumers' selection criteria for trade areas. Cluster analysis was conducted on the factor scores of 7 factors among the measured criteria, and five groups were identified by considering frequencies and clear differences in the criteria between groups. To examine how the five groups differ in the trade area selection criteria, ANOVA and Duncan tests were conducted on the factor scores of each trade area selection criteria. <Table 1> presents the result.

Table 1.
ANOVA according to consumer groups by trade area selection criteria

groups / criteria	price oriented group	time convenience oriented group	shopping convenience oriented group	passive shopping group	variety/ entertainment oriented group	F-value
store and product variety	-.4742 Ca	.1727 B	.3313 B	-.4924 C	.6029 A	28.561***
service policy	-.2991 C	-.2198 BC	.6318 A	.0166 B	-.1022 BC	13.192***
environment/atmosphere	.2453 B	-.0630 C	.6212 A	-.9207 D	.3671 B	52.637***
price range	.7262 A	-.1502 C	-.3068 C	-.3396 C	.1317 B	21.299***
entertainment	.2105 B	-.3192 D	-.8930 E	-.0447 C	1.015 A	69.143***
location and access convenience	-.4013 B	-1.0631 C	.3873 A	.3917 A	.6113 A	72.558***
shopping time convenience	-.7283 E	.8147 A	-.4020 D	-.0060 C	.3132 B	44.967***
N (%)	91 (19.4%)	90 (19.2%)	86 (18.3%)	112 (23.9%)	90 (19.2%)	469

*** : $P \leq .001$

a: Results of Duncan test, same letter indicates no significant statistical difference at $p<.05$

Group 1 considered price the most important in selecting apparel trade areas, and gave low scores to other factors, except price, and thus was named 'price-oriented group'. Group 2 gave low scores on most trade area selection criteria, except shopping time convenience, and thus was named 'convenience time-oriented group'. Group 3 rendered high scores to service policy and environment/atmosphere as well as location and access convenience, and thus was named 'shopping convenience-oriented group'. Group 4 considered location and access convenience relatively important with low average scores overall, and thus was 'passive shopping group'. Group 5 gave positive scores to most factors, except service policy, and demonstrated active shopping behavior. They considered store and product variety, and entertainment of a trade area, and thus was named 'variety/entertainment-oriented group'.

As such, the five groups were identified: price-oriented, convenient time-oriented, shopping convenience-oriented, passive shopping and variety/entertainment-oriented groups.

Spatial Behavior Characteristics of Consumer Groups by Trade Area Selection Criteria

To examine consumers' spatial behavior for apparel purchase, 15 trade areas were identified based on the definition of consumer living zone of previous studies(Kang, 1993; Lee, 1996; Lim, 1989). A new town in itself is a large living zone, and includes several middle living zones, like Seohyeon and Jeongja areas in Bundang(Lee, 1996), and Jeonbalsan, Jooyeop, and Madoo areas in Ilsan. Hwajeong area in the Goyang city should be included in an extended living zone, but time distances to the area were equivalent to those to other middle living zones, and thus the area was included as a middle living zone of Ilsan. Small living zones include neighborhood stores, traditional markets and supermarkets, which consumers use once or more everyday(Lim, 1989).

Trade areas in Seoul are located in a different city from the perspectives of two new towns, and thus cannot be included as consumer living zones. Accordingly, they were categorized into downtown trade areas(Myeongdong/Namdaemoon and Dongdaemoon), northern and western trade areas(Shinchon/Ewha Womens university, Yeonshinnae, Itaewon and Yeongdeungpo), and southern and eastern trade areas(Jamsil, Apgujeong/Cheongdam, COEX and Gangnam Station) by considering time distances and locations.

Differences in the Apparel Product Trade Area

To identify how the trade areas differ by groups, cross-tabulation and Chi-square(χ^2) test were conducted, and preferred trade areas were examined by apparel typed(i.e. formal and casual). Table 2 is the cross-tabulation table about formal wear purchase area by sub-group.

The price-oriented group and the convenient time-oriented group were found to prefer out of the town shopping when purchasing formal wear, with higher than expected frequencies of visiting trade areas in Seoul. On the other hand, the shopping convenience-oriented group, the passive shopping group and the variety/entertainment-oriented group preferred trade areas in their own cities when purchasing formal wear, with higher than expected frequencies of visiting local trade areas.

Table 2.
Differences in trade areas for formal wear according to consumer groups

groups / trade areas	price oriented group		time convenience oriented group		shopping convenience oriented group		passive shopping group		variety/ entertainment oriented group	
downtown area of Seoul	17 (17.3)	45 (40.2)	29 (17.1)	56 (39.7)	9 (16.3)	25 (38.0)	20 (21.3)	44 (49.4)	14 (17.1)	37 (39.7)
northern and western area	11 (9.7)		12 (9.6)		3 (9.2)		13 (11.9)		11 (9.6)	
southern and eastern area	17 (13.2)		15 (13.0)		13 (12.5)		11 (16.2)		12 (13.0)	
mid-range living zone	46 (49.7)	46 (50.8)	33 (49.1)	34 (50.3)	60 (46.9)	61 (48.0)	65 (61.1)	68 (62.6)	52 (49.1)	53 (50.3)
small living zone	0 (1.2)		1 (1.2)		1 (1.1)		3 (1.4)		1 (1.2)	
Total: 469	91		90		86		112		90	

χ^2 =33.187** *df*=16( ): expected frequency

To specifically examine differences in the trade areas by sub-group that showed higher frequencies than expected ones, the price-oriented group was found to prefer the southern and eastern trade area of Seoul; and the convenient time-oriented group preferred the downtown area of Seoul, like Dongdaemoon where large wholesalers open 11:00a.m. and close 5:00a.m. in the following morning, and thus they may enjoy shopping after work. The shopping convenience-oriented group, the passive shopping group and the variety/entertainment-oriented group preferred middle living zones within new towns. The three group have in common in that they all value location and access convenience more than the price and time-convenience groups, but the location or the distance may not be the only factor that they consider as the shopping convenience-oriented group values the service policy and atmosphere of stores, and the variety/entertainment-oriented group values diversity and entertainment factors. This is interpreted as rational shopping behavior as local trade areas were well developed and offer products and services as good as those in Seoul, they chose close shopping areas even when purchasing high-involvement products like formal wear.

According to the Chi-square test(χ^2), sub-groups delivered meaningful differences($p \leq 0.001$) in choosing trade areas for casual wear, and the result is presented in <Table 3>.

Table 3.
Differences in trade areas for casual wear according to consumer groups

groups / trade areas	price oriented group		time convenience oriented group		shopping convenience oriented group		passive shopping group		variety/ entertainment oriented group	
downtown area of Seoul	27 (27.4)		54 (27.1)		7 (25.9)		28 (33.7)		25 (27.1)	
northern and western area	17 (13.4)	51 (47.5)	13 (13.2)	70 (47.0)	9 (12.7)	22 (44.9)	12 (16.5)	50 (58.5)	18 (13.2)	52 (47.0)
southern and eastern area	7 (6.8)		3 (6.7)		6 (6.4)		10 (8.4)		9 (6.7)	
mid-range living zone	36 (38.8)	40 (43.5)	18 (38.4)	20 (43.0)	58 (36.7)	64 (41.1)	54 (47.8)	62 (53.5)	34 (38.4)	38 (43.0)
small living zone	4 (4.7)		2 (4.6)		6 (4.4)		8 (5.7)		4 (4.6)	
Total	91		90		86		112		90	

χ^2 =77.710*** *df*=16( ): expected frequency

The price-oriented group presented higher scores than expected frequencies of out-shopping in casual wear, specifically in the northern and western areas of Seoul. The convenient time-oriented group chose the downtown area of Seoul, demonstrating that they preferred trade areas with business hours that they found convenient regardless of apparel types. The variety/entertainment-oriented group preferred out-of-town shopping for casual wear, unlike for formal wear, specifically the northern and western areas of Seoul. This may be attributable to the fact that the northern and western trade areas including Shinchon/Ewha Womens university area are not convenient locations, but may better satisfy their desire for variety and entertainment. The shopping convenience-oriented group and the passive shopping group delivered higher frequencies than expected ones of visiting middle living zones in their home town, and went shopping for casual wear to local trade areas.

Difference in Frequency of Visiting Trade Areas

To identify moving tendency of each sub-group, ANOVA and Duncan tests were performed on factor scores of each trade area. As seen in <Table 4>, meaningful differences were found in the downtown, the northern and western, the southern and eastern trade areas of Seoul and the middle living zone in Bundang.

The passive shopping group showed the lowest frequencies overall, while the variety/entertainment-oriented group delivered the highest frequencies of visiting trade areas. The convenient time-oriented group that preferred the downtown shopping areas in Seoul regardless of apparel types showed higher frequencies of visiting downtown areas than other groups, and the shopping convenience-oriented group that preferred middle living zones in new towns and the variety/entertainment-oriented group demonstrated high frequencies of visiting middle living zones in new towns.

Table 4.
Differences in visiting frequency of trade areas according to consumer groups

groups / trade areas	price oriented group	time convenience oriented group	shopping convenience oriented group	passive shopping group	variety/ entertainment oriented group	F-value
downtown area of Seoul	1.516 B	1.856 A	1.093 C	1.392 B	1.678 AB	7.781***
northern and western area	0.6016 A	0.700 A	0.4041 B	0.4107 B	0.6583 A	5.394***
southern and eastern area	1.1374 A	0.8904 AB	0.7703 BC	0.5491 C	0.9972 AB	4.717**
mid-range living zone	3.650 AB	3.1538 AB	3.8077 A	3.0208 B	3.7245 A	2.625*
small living zone	1.97 ns	1.84 ns	1.53 ns	1.96 ns	1.99 ns	0.681
Mean of visiting frequency	1.2007 A	1.1592 AB	1.000 BC	0.9541 C	1.2244 A	4.373**

* : $p \leq 0.05$ ** : $p \leq 0.01$ *** : $p \leq 0.001$
a: Results of Duncan test, same letter indicates no significant statistical difference at $p < .05$

Differences in Spatial movement Types

To identify differences in spatial movement types by sub-group in purchasing apparel items, spatial movements were typed by moving distances and purpose in according to previous studies(Cho, 1985; Kim, 1998). As this study focuses on apparel product purchase activities, the moving purpose was further divided into apparel and non-apparel product purchase purposes, and then each into single purpose and multiple purposes. The four moving purposes are single purpose for apparel products, single purpose for non-apparel products(other purpose), multiple purpose for apparel and non-apparel products(apparel + other purposes), multiple purpose for other products(other+other purposes). The moving distance was divided into in-city and out-of-city movements, based on consumers' perceived distances. As a result, eight spatial movement types were identified.

Cross-tabulation and Chi-square tests(χ^2) found meaningful differences($p \leq 0.001$) in spatial movement types by sub-group(<Table 5>). Overall, in-city/multiple purpose for apparel and non-apparel products accounted for the largest portion(24.3%), and this can be explained as "rationalizing tendency" of purchase behavior to satisfy multiple purposes at a move(Byeon, 1993). The price-seeking group delivered higher frequences than expected ones in the movements of in-city/single purpose for apparel products and out-of-city/single purpose for apparel products, and the convenient time- oriented group demonstrated higher scores than expected frequencies in the movements of out-of-city/single purpose for apparel products(26.7%).

Table 5.
Differences in Spatial movement Types according to consumer groups

spatial movement types \ groups		price oriented group	time convenience oriented group	shopping convenience oriented group	passive shopping group	variety/ entertainment oriented group	Total
out-of-city	apparel purpose	20(15.3) 22.0%	24(15.2) 26.7%	9(14.5) 10.5%	21(18.9) 18.8%	5(15.2) 5.6%	79 16.8%
	other purpose	9(6.6) 9.9%	10(6.5) 11.1%	2(6.2) 2.3%	7(8.1) 6.3%	6(6.5) 6.7%	34 7.2%
	apparel + other purposes	15(15.1) 16.5%	17(15.0) 18.9%	13(14.3) 15.1%	11(18.6) 9.8%	22(15.0) 24.4	78 16.6%
	other+other purposes	1(3.1) 1.1%	5(3.1) 5.6%	1(2.9) 1.2%	5(3.8) 4.5%	4(3.1) 4.4%	16 3.4%
in-city	apparel purpose	15(11.3) 16.5%	6(11.1) 6.7%	13(10.6) 15.1%	13(13.9) 11.6%	11(11.1) 12.2%	58 12.4%
	other purpose	7(14.4) 7.7%	14(14.2) 15.6%	16(13.6) 18.6%	21(17.7) 18.8%	16(14.2) 17.8%	74 15.8%
	apparel + other purposes	23(22.1) 25.3%	10(21.9) 11.1%	31(20.9) 36.0%	28(27.2) 25.0%	22(21.9) 24.4%	114 24.3%
	other+other purposes	1(3.1) 1.1%	4 93.1) 4.4%	1(2.9) 1.2%	6(3.8) 5.4%	4(3.1) 4.4%	16 3.4%
Total		91 100%	90 100%	86 100%	112 100%	90 100%	469

χ^2 = 58.031*** *df*=28( ): expected frequency

According to Cho(1985), remote movements for single purpose frequently appear when purchasing specialized products or high-involvement products, and those consumers put significant efforts for purchase. The shopping convenience-oriented group showed significant differences between expected and observed frequencies in the movements of in-city/multiple purpose for apparel and non-apparel products, and the variety/entertainment-oriented group showed significant differences between expected and observed frequencies in the movements for out-of-city/multiple purpose for apparel and non-apparel products. The passive shopping group that considers only location showed higher frequendies than expected ones in the movements of in-city/single purpose for other products, demonstrating high possibilities of impulse buying. As the survey questionnaire of this study asked respondents to choose moving purposes if they recently bought any clothing item in their preferred trade areas, the single purpose and the multiple purposes for other products implies possibilities of impulse shopping.

Consumer Characteristics by Their Trade Area Selection Criteria

Differences in fashion involvement

To identify different fashion involvement of each sub-group, ANOVA and Duncan tests were con-

ducted on the four dimensions of fashion involvement(pleasure and trend, symbolic meaning, risk perception, interests) identified by factor analysis and fashion involvement scores calculated by their average factor scores(<Table 6>). ANOVA found that there were significant differences between sub-groups in pleasure and trend, and symbolic meaning dimensions.

Table 6.
Differences in fashion involvement according to consumer groups

groups / fashion involvement	price oriented group	time convenience oriented group	shopping convenience oriented group	passive shopping group	variety/ entertainment oriented group	F-value
pleasure and trend	-.0065 BCa	0.0786 AB	-.0721 BC	-.2563 C	.3159 A	4.465**
symbolic meaning	.0901 A	-.0234 AB	.1315 A	-.2600 B	.1303 A	2.890*
risk perception	.1024 ns	-.1148 ns	0.0707 ns	-.1577 ns	.1399 ns	1.792
interests	-.1365 B	.0365 AB	.0304 AB	-0.0968 AB	.1929 A	1.582
Mean of Involvement	3.5140 B	3.5074 B	3.5394 B	3.3442 C	3.6735 A	7.936***

* : $P \leq .05$ ** : $P \leq .01$ *** : $P \leq .001$
a: Results of Duncan test, same letter indicates no significant statistical difference at $p < .05$

In the examination of differences by sub-group based on clothing involvement, the variety/entertainment-oriented group showed the highest level of clothing involvement whereas the passive group showed the lowest. The former group demonstrated higher involvement in the pleasure and trend dimension than other groups, and the price-oriented, shopping convenience-oriented and variety/entertainment-oriented groups showed higher involvement in the symbolic meaning dimension than the passive shopping group. As such, sub-groups demonstrated significant differences in the clothing involvement dimensions and scores, implying that consumers' clothing involvement levels have correlations with their clothing shopping behavior and trade area selection criteria.

Demographic Differences

To identify demographic characteristics by sub-group, the survey asked respondents' age, marital status, education background, occupation, workplace, residential area and period, and monthly income and spending on clothing, and then cross-tabulation and Chi-square tests were conducted. Among the factors, meaningful differences were found in age, marital status, education background, workplace, residential area and period, and monthly income and spending on clothing, and results are as follow.

First, age showed significant differences($p \leq 0.001$) between sub-groups(χ^2=64.09, df=24). The ma-

jority(55%) of the price-oriented group was 20s and the majority(57.7%) of the variety/entertainment- oriented group was also 20s. The time convenience-oriented group was mainly composed of 20s and 30s, and both the shopping convenience-oriented and the passive shopping groups mainly consisted of 40s or older.

Second, in the examination of marital status, it was found that relatively young groups, like the price-oriented, convenience time-oriented and the variety/ entertainment-oriented groups, included more single women, while the shopping convenience-oriented and the passive shopping groups mainly consisted of married women, with their respective portions of 75.6% and 65.2%(χ^2=27.70, $p\leq0.001$, df=4).

Third, education background also differed by sub-group, but as high as 73.5% of the respondents were college educated and higher, while only 1.3% of them were elementary/middle school graduates. This cannot provide enough evidence of the influence of education background(χ^2=29.29, $p\leq0.05$, df=16)

Fourth, in terms of their occupations, 43.7% of the respondents were housewives. The price-oriented and the variety/entertainment-oriented groups have high portions of college/graduate school students, and the convenience time-oriented group has a high portion of office workers. The shopping convenience-oriented and the passive shopping groups have high portions of housewives(χ^2=38.79, $p\leq0.01$, df=20).

Fifth, by asking students and office workers to describe the location of their schools or offices, differences in the school or work locations were also analyzed by sub-group. Many of the price-oriented groups that preferred secondary central areas of Seoul for their apparel shopping were found to work in the northern or southern part of Seoul, while many of both the shopping convenience-oriented and the passive shopping groups that preferred middle living zones in new towns for shopping were found to work in new towns(χ^2=30.23, $p\leq0.01$, df=16).

Conclusion and Suggestions

This study was to categorize consumer types by their selection criteria for trade areas, and to identify the spatial behavior and consumer characteristics by sub-group. This empirical study identified five sub-groups: price-oriented, convenient time oriented, shopping convenience-oriented, passive shopping and variety/entertainment- oriented groups, and characteristics of each group are as follows.

First, the price-oriented group values the price range the most when choosing trade areas, and mainly consists of college students in their 20s. Among involvement dimensions, they tend to respond to the symbolic meaning the most, demonstrating that price is not the only factor that they pursue. Accordingly, they prefer the southerns and eastern areas of Seoul, for formal wear, and the northern and western areas of Seoul, for casual wear, rather than the downtown where cheap or affordable large wholesalers are clustered. They also travel outside of their hometowns for the single purpose of apparel purchase, meaning that they spend a significant amount of time and efforts on clothing purchase.

Second, the convenient time-oriented group is mainly comprised of office workers in their 20s and 30s, living in new towns and working in Gyeonggi-do, but shows high frequencies of visiting downtowns

in Seoul to purchase apparel products. Many of this group also travel to outside of their hometowns for the single purpose of apparel purchase, but have to choose shopping areas that fit their lifestyle due to time constraints.

Third, the shopping convenience-oriented group is mainly comprised of housewives in their 40s or older, and frequents middle living zones in new towns for both suits and casual items, and tend to movement short distances for multiple purposes of apparel and other products. As they show high involvement in the symbolic meaning dimension, they do care about apparel shopping, but pursue easy and comfortable shopping.

Fourth, the passive shopping group also mainly consist of housewives in their 40s or older, and infrequently visits any trade area. This groups usually travels short distances for a single purpose of other products, showing that they have weak interest in shopping.

Fifth, the variety/entertainment-oriented group is mainly composed of single college students in their 20s, shows high scores in all apparel involvement dimensions but risk perception, and frequents most trade areas, meaning that they are active shoppers. However, as they travel long distances for multiple purposes of apparel and other products, it can be assumed that they do not simply enjoying impulsive shopping.

Among many components of retail business strategy, one of the most important is location. Location is a component of fixed investment, and it is not easy to change once decided(Craig et al., 1984). Accordingly, choosing a location is a difficult decision, and requires meticulous and thorough consideration. Therefore, the aforementioned empirical study results have significant implications for the management of retail apparel stores, particularly their location selection. For sure, most shop owners may think that running a business in the downtown or secondary central areas would be ideal, but not every retailers can afford space in the limited areas. Accordingly, retailers must understand their target customers' criteria for trade area selection, and choose a location to absorb the customers.

Limitations of this study and suggestions for further researches are as follows. First, as this study selected two cities whose living zones are entirely independent, the results may not be generalized to consumers living in other new towns or in Seoul. Thus, it is recommended that further studies on consumer spatial behavior should examine consumers living in Seoul or other new towns. Second, consumers' trade area selection or involvement regarding a single items may differ according to their purchase situation, but this study failed to consider situation-specific variables. Thus, future studies may as well examine how consumers' spatial selection and movements differ according to their purchase situation.

References

Ahn, T. (1990). *Study on consumer spatial behavior and spatial choice -cognitive-behavioral approach-*. Master's thesis, Seoul National University, Seoul, Korea.

Bell, S. J. (1999). Image and Consumer Attraction to Intraurban Retail Area: an Environmental Psychology Approach. *Journal of Retailing and Consumer Services, 6*, 67-78.

Bucklin, L. P. (1967). The Concept of Mass in Intraurban Shopping. *Journal of Marketing, 31*, 37-42.

Bush, R. F., & Joseph, F. H. (1976). Consumer Patronage Determinants of Discount versus Convintional Models. *Journal of Retailing, 52*, 41-52.

Byeon, M. (1993). *Modern retail business.* Seoul: Jayusidaesa.

Cadwallader, M. (1975). A Behavioral Model of Consumer Spatial Decision Making, *Economic Geography, 51*(4), 329-349.

Cho, H. (1985). *Studdy on consumer's spatial selection and spatial movement.* Master's thesis, Seoul National University, Seoul, Korea.

Craig, C. S., Ghosh, A., & Mclafferty, S. (1984). Model of the Retail Location Process: A Review, *Journal of Retailing, 60*, 5-29.

Darden, W. R., & Perreault (1976). Identifying Interurban Shopper: Multiproduct Purchase Patterns and Segmentation Profiles. *Journal of Marketing Research, 14*, 51-60.

Davis, W. (1976). Centrality and Central Place Hierachy. *Urban Studies, 14*, 18-23.

Gautschi, D. A. (1981). Specification of Patronage Models for Retail Center Choice, *Journal of Marketing Research, 18*, 162-174.

Ghosh, A., & Mclafferty. (1984). A Model of Consumer Propensity for Multipurpose Shopping. *Geographical Analysis, 16*, 244-245.

Golledge, R. G., & Rushton, W. A. (1966). Some Spatial Characteristics of Iowa's Dispersed Farm Population and Their Implications for the Grouping of Central Place Fuctions. *Economic Geography, 42*(July), 261-272.

Han, H. (1983). *Marketing management.* Seoul: Dasan.

Hauser, J. R., & Koppelman, F. S. (1979). Alternative Perceptual Mapping Technique: Relative Accuracy and Usefulness. *Journal of Marketing Research, 16*, 495-506.

Herman, R. D., & Beik, L. L. (1968). Shoppers Movements Outside their Local Retail Area. *Journal of Marketing, 32*, 45-51.

Hong, K., & Kang, H. (2003). Study on the store choice criteria and store-related attitudes of consumers in accordance with the clothing shopping motives and involvement of customers. *Journal of the Korean Society for Clothing Industry, 5*(4), 363-371.

Hubbard, R. (1978). A Review of Selected Factors Conditioning Consumer Travel Behavior. *Journal of Consumer Research, 5*(June), 1-21.

Huff, D. L. (1963). A Probabilistic Analysis of Shopping Centre Trade Areas. *Land Economics, 29*, 81-90.

Igene, C. A., & Lusch, R. F. (1981). A Model of Retail Structure. *Research in Marketing. 5*, 104-115.

Jeong, B., & Park, E. (1992). Study on clothing store selection and relevant factors. *Journal of the Korean Society of Clothing and Textiles, 17*(2), 207-217.

Kang, S. (1993). *New town department store planning considering consumers' spatial behavior.* Master's thesis, Yonsei University, Seoul, Korea.

Kim, W. (1986). *Retail administration.* Seoul: kyungmoon.

Kim, B. (1989). *Trading area analysis and strategy*. Seoul: Myoungji.

Kim, H. (1991). *Study of classification of fashion stores according to store images.* Master's thesis, Seoul National University, Seoul, Korea.

Kim, Y. (1998). *Consumers' spatial movement types and influential variables.* Master's thesis, Seoul National University, Seoul, Korea.

Kim, H., & Rhee, E. (2007). The qualitative study on the types of store choice behaviors in the purchase of apparel products. *Journal of the Korean Society of Clothing and Textiles, 31*(4), 603-614.

Lee, W. (1996). *Spatial patterns of consumer shopping behaviour in Bundang new town.* Master's thesis, Seoul National University, Seoul, Korea.

Lee, S., Hwang, S., & Byun, Y. (1997). The store attributes af fashion specialty store with fashion involvement. *Journal of the Korean Society of Clothing and Textiles, 21*(2), 346-356.

Lee, S., & Jang, E. (1992). Market segmentation and marketing strategy according to apparel retail store selection criteria of consumer. *Journal of the Korean Society of Clothing and Textiles, 16*(4), 471-484.

Lee, J., & Lim, S. (1990). A study on store image preferences which is followed by clothing buying motives. *Journal of the Korean Society of Clothing and Textiles, 14*(4), 252-261.

Lim, J. (1989). Principle of modern marketing. Seoul: Bobmunsa.

Lim, S., & Park, S. (1999). A study of the influence of the attribute perception of clothing upon preference and purchase intentions. *Journal of the Korean Society of Clothing and Textiles, 23*(7), 929-940.

Nevin, J. R., & Houston, M. J. (1980). Image as a Component of Attraction to Intraurban Shopping Areas. *Journal of Retailing, 56*, 77-93.

O'kelly, M. E. (1981). A Model of the Demand for Retail Facilities, Incorporation Multistop, Multi-purpose Trips. *Geographical Analysis, 13(2)*, 134-148.

Park, E. (2006). Effects of fashion involvement and hedonic consumption on impulse buying - comparison of Korean and American young consumers. *Journal of the Korean Society of Clothing and Textiles, 30*(9/10), 1413-1422.

Peterson, R. A. (1974). Trade Area Analysis using Trend Surface Mapping. *Journal of Marketing Research, 11*, 338-342.

Reynolds, F. D., & Darden, W. R. (1972). Intermarket Patronage: A Psychographic Study of Consumer Outshoppers. *Journal of Marketing, 36*, 50-54.

Rhee, Y. (1991). *Consumer's clothing involvement.* Doctoral dissertation, Seoul National University, Seoul, Korea.

Rhee, E. (1999). *Fashion marketing*. Seoul: Kyomunsa.

Saisa, J., Garling, E., & Lindberg (1986). Intraurban Cognitive Distance: The Relationship between Judgements of Straight Line Distances, Tranvel Times. *Geographical Analysis, 18(2)*, 167-174.

Son, J., Rhee, E., & Park, H. (2002). Trade Area Selection Criteria for Apparel Products. *Journal of the*

Korean Society of Clothing and Textiles, 26(6), 889-900.

Sung, H. (2008). Effects of price perception and store attributes on fashion-related store choice behavior -focused on department store, discount store, and internet shopping mall. *Journal of the Korean Society of Clothing and Textiles, 32*(8), 1274-1285.

Sung, H. (2009). Male Market Segmentation: A Comparative Analysis of Retail Choice Behavior According to Fashion Involvement and Store Attributes. *Journal of the Korean Society for Clothing Industry, 11*(3), 390-398.

The Ministry of Construction. (1993). *Statistical data of new town development.* Korea Land Corporation.

Tiger, D. J., Ling, & King, C. W. (1976). Fashion Involvement and Buying Behavior: A Methodological Study. *Advances in Consumer Research, 3*, 46-52.

Zaichowsky, J. L. (1985). Measuring the Involvement Construct. *Journal of Consumer Research, 12*, 341-351.