

Segments and Responses to Marketing of Older Consumers in China

Ying Bin¹⁾
Jingjian Xiao²⁾

Abstract: This paper describes market segments of consumers aged 50+ in China. Two innovative dimensions are used to construct market segments: a broadly defined health dimension and a traditional-modern value orientation dimension. Based on data collected from six representative cities in China, older consumers are divided to four segments: healthy liberal (13.86%), healthy conservative (37.34%), unhealthy liberal (13.43%), and unhealthy conservative (35.37%). Segment differences in consumer responses to marketing activities are then presented and discussed.

Introduction

In 1999, Chinese consumers aged 60 or older reached 125 million, signaling that China joined the aging countries of the world (Editorial Board, 1999). Since then, this age group has been increasing at an annual rate of 3.2%. In 2010, Chinese consumers aged 60 or older will account for 12.18% of the total population. In 2050, the older population (60+) will reach 400 million and by then, one in every four Chinese will be at least 60, signifying a highly aged country (Zeng, 2001).

The rapid growth of the older population brought the growth of its purchasing power. In 2000, the purchasing power of the mature market reached 400 billion yuan (or about US\$57 bil-

lion). In 2025 and 2050 it will grow to 1.4 trillion yuan (US\$200 billion) and 5 trillion yuan (US\$714 billion), respectively (Zhu & Lu, 2001).

Because of the growth of the mature market in China, many companies are facing opportunities and challenges when they serve these older consumers. In China, marketing strategies for younger consumers have been developed but strategies for older consumers are lacking (Ying, 2007). Previous research indicates that older consumers have many demands that are different from younger consumers (Moschis, 1996). In addition, older consumers have diverse needs since their aging processes, values and lifestyles, and life events are diverse. Segmenting this market effectively would help companies develop differentiated marketing strategies to reach each segment and serve these consumers better.

Segmenting the mature market has been conducted in western countries since the 1970s (Bastro, 1980). Many segmentation models and methods are used to segment the mature market (for reviews of this line of research, see Bone, 1991; Carrigan, 1998; Moschis, 1996). Most studies have been done in developed countries.

This is the first study using a Chinese sample

1) Associate Professor, Department of Marketing, Zhongnan University of Economics and Law, China. Email: yingbincn@yahoo.com.

2) Professor, Department of Human Development and Family Studies, University of Rhode Island, USA. Email: jfei.editor@gmail.com.

to segment the mature market. In addition, this study is the first to use two innovative dimensions for the segmentation: a traditional-modern value orientation developed in the context of a transitional economy and a broader health definition that counts not only physical, but also mental and social health, consistent with the one proposed by the World Health Organization.

In this study, we define the older consumers as those who are aged 50 years or older, which is consistent with many previous studies in the literature of mature market (Bastro, 1980; Burt & Gabbot, 1995; Kang & Ridgway, 1996). In addition, using an age of 50 to define the mature market is appropriate for the Chinese situation. In China, the legal retirement age is 60 for male professionals (carders), is 55 for female professionals (carders), is 55 for male workers, and is 50 for female workers. Because of the current transitional nature of the economy, many workers are retired at 50 or younger because enterprises they work for do not operate profitably. From the socio-psychological perspective, many Chinese perceive age 50 as an old age, a view which is implied by the traditional Chinese culture (Confucius said that a person aged 50 should know the fate) and affected by a shorter life expectancy compared to western countries.

Previous Research on Segmenting the Mature Market

Segmenting the mature market started in the 1970s (Bastro, 1980). According to an early review, during 1970s-1990s, more than 30 methods

were used and six variables were repeatedly employed in the research, which is about demographic (age and health), economic (discretionary income), lifestyles (activity level and discretionary time), and socio-psychological factors (social interaction) (Bone, 1991). A later review identified several models for segmenting the mature market such as age-based, buying style, lifestyle, "adjust to old age," attitude, geromarket, lifestyles and values, and psychographic models (Moschis, 1996). After reviewing the strengths and weaknesses of these models, Moschis (1996) proposed his comprehensive model, Gerontographics. This model acknowledges both individual differences in aging processes as well as differences in type of aging dimensions that occur in late life. According to this model, older consumers are divided to four segments: healthy indulgers, healthy hermits, ailing outgoers, and frail recluses. In recent years, research on segmenting the mature market has focused on specific countries (e.g., UK, Ahmad, 2002), products (e.g., healthcare, Pak & Pol, 1996; rehabilitation products, Lancaster & Williams, 2002), strategies (e.g., advertising, Carigan & Szmigin, 1998), or public policies (e.g., social support, Kang & Ridgway, 1996).

This study builds on previous research, especially Gerontographics. Considering the transitional nature of the current China, two factors, a broad definition of health proposed by WHO and a newly-developed measure of values and lifestyles with an emphasis on the traditional-modern value orientation, are used to segment the mature market in urban China. We chose health and

value as two dimensions to segment the mature market in China for several reasons.

In a review of mature market segmentation, about one-half of reviewed studies used health as a major segmentation factor (Bone, 1991). Health not only affects older consumers' consumption behaviors but also affects other aspects of their daily lives (Moschis, 1996). Compared to age, gender, and income, health is a more effective way to segment the mature market (Bone, 1991). In this study, we used a broadly-defined health factor that includes not only physical but also mental and social factors to measure health.

According to the literature, values and lifestyles as a factor can reveal consumer consumption behavior more effectively than socio-economic status, which marketing scholars use to study consumer behavior and market segmentation (Mitchell, 1983). The current Chinese society is in a transitional period that experiences conflicts between values representing tradition and modernity, advances and setbacks, and east and west (Yang, 1997). Older Chinese consumers also experience value transition and diversity. Research in a transitional economy on the impact of values among older consumers on their consumption behaviors will result in new findings that are unique compared to research conducted in stable economies. In this study, we use the two innovative dimensions, a broadly-defined health dimension and an originally-developed traditional-modern value orientation dimension to segment the mature market in China and exam-

ine segment differences in consumer responses to marketing strategies. We also provide a discussion on how marketers can better serve the needs of older consumers in various segments in China.

Method

Data

Data were collected from Chinese consumers in urban areas. We chose conducting the survey among urban consumers for two reasons. First, even though the population size of rural consumers is much larger than that of urban consumers, their aggregate purchasing power is much smaller than that of urban consumers. Most companies in China focus their marketing efforts on urban consumers. Another reason is because of sampling error. According to an expert at Nielson's China branch, the error range in big cities is 3-5% while the error range in rural areas can be in the double digits. Since market segmentation research is still a new field in China, we would like to start with urban areas.

To fully reflect characteristics of mature consumers in China, we selected six representative cities in China: Beijing, Shanghai, Wuhan, Shenzhen, Kunming, and Jiangmen. Beijing is the capital of China and national center of politics and culture, located in the north. Shanghai is in the east, has a strong economy, and has a high level of openness to the outside world. Wuhan is a large inland city in central China with a long history. Shenzhen and Jiangmen are coastal cities in the south, close to Hong Kong and Macao.

Shenzhen is also the first economic reform zone established in China. Kunming is in the west and has a relatively slower economic growth. Among the six cities, Beijing, Shanghai, Wuhan, and Shenzhen are big cities and Kunming and Jiagen are medium ones. Together, they are representative of urban areas of China.

We used cluster random sampling for data collection. First, we selected six representative cities. Then in each city, we used stratified random sampling to collect 160-240 samples. To demonstrate the procedure, we use Wuhan as an example. First, we decided we needed 240 samples in Wuhan, which has seven districts. According to the population size of each district, we decided to use 5-7 survey locations. For each location, we planned to collect 6 samples randomly. In total, Wuhan had 40 survey locations and 240 planned samples. The actual number of surveys received was 218, resulting in a response rate of 90.83%. In the six cities, the response rates ranged from 69.38% to 90.83%. The total number of completed surveys collected was 916, with a response rate of 81.79% (see Table 1 for more details). Each survey was completed in 10-25 minutes.

To ensure the representativeness of the sample, we employed three criteria during the survey: the respondent should have lived in the city for three or more consecutive years. In addition, we ensured a balance of genders and a variety of locations. We used a 50-50 division to issue surveys to both genders in each location. We collected surveys at various locations such as public squares, residential districts, senior apartments, senior universities, and parks.

The surveys were conducted by the principal investigator of this study and his research assistants. The assistants are university sophomores and juniors in marketing and completed a 3-hour training course before conducting the survey.

Descriptive statistics of the sample are presented in Table 2. During the survey, we tried to ensure a balance of genders. However, because of nonresponses, males had a slightly larger proportion in the sample, especially in the samples of Wuhan, Beijing, Shenzhen, and Kunming. The average age of the total sample was 60.67 years. The majority, or 87%, of the respondents were married. Over half (58%) of the

Table 1: Number of Samples and Response Rates by Cities

City (location, size)	Surveys Issued	Surveys Received	Response Rate
Wuhan (Central, large)	240	218	90.83%
Shanghai (East, large)	160	141	88.13%
Beijing (North, large)	160	138	86.25%
Shenzhen (South, large)	160	121	75.63%
Kunming (West, middle)	160	111	69.38%
Jiangmen (South, middle)	240	187	77.92%
Total	1120	916	81.79%

respondents were not working. The average of 12 years of education is equivalent to the level of high school graduation. The mean and median personal monthly incomes were 1601 and 1250 yuan, respectively. The mean and median numbers of people living at home were 3.14 and 3.00, respectively.

Health

Two dimensions were used for the segmentation, health and value orientation. A self-rated health measure scale (SRHMS) was used to measure the health dimension. SRHMS includes three

subscales to measure physical health, mental health, and social interactions based on the definition of health developed by the World Health Organization (Wang, 1999). The original measure has 48 items and an 11-point scale for each item (0-10). Considering that the focus of this study is older consumers and that the survey time was limited, we selected 24 items and changed the 10-point scale to a 5-point scale for each item (1-5). The wording of the items is presented in the appendix. Based on the survey data, the internal reliability was high ($\alpha = .9194$).

Table 2: Descriptive Statistics of the Sample

	Total	Wuhan	Shanghai	Beijing	Shenzhen	Kunming	Jiangnan
Sample size	916	218	141	138	121	111	187
<i>Gender</i>							
male	58.19%	60.55	48.23	63.04	65.29	63.96	52.41
female	41.81	39.45	51.77	36.96	34.71	36.04	47.59
<i>Age</i>							
50-54	28.82	17.89	41.84	25.36	19.01	16.22	48.13
55-59	22.60	21.1	17.02	28.26	27.27	8.11	29.95
60-64	17.80	27.06	10.64	17.39	19.83	17.12	11.76
65-69	15.28	16.06	12.06	11.59	15.7	38.74	5.35
70-74	10.04	10.09	11.35	13.04	11.57	14.41	3.21
75-79	4.26	6.88	4.96	2.17	4.13	5.41	1.6
80 or older	1.20	0.92	2.13	2.17	2.48	0.00	0.00
mean	60.67	62.21	59.94	60.76	61.87	64.16	56.52
median	57.00	62.00	57.00	57.00	62.00	67.00	57.00
<i>Marital status</i>							
married	87.34	89.45	94.33	80.43	82.64	80.18	91.98
not married	12.66	10.55	5.67	19.57	17.36	19.82	8.02
<i>Work status</i>							
work	41.70	35.78	63.12	45.65	21.49	19.82	55.08
not work	58.30	63.76	36.88	54.35	78.51	79.28	44.92
<i>Education (year)</i>							
3 or fewer	4.91	8.26	2.13	5.07	2.48	6.31	3.74
6-8	13.10	10.55	4.96	7.97	4.96	24.32	24.6
9-11	21.40	16.06	23.4	13.04	15.7	30.63	30.48
12-14	16.48	14.68	17.73	12.32	31.4	13.51	12.83
15	27.84	29.36	31.91	39.85	24.79	15.32	23.53

16-17	14.30	18.81	19.86	15.94	19.01	8.11	4.28
19 or more	1.97	2.29	0.00	5.8	1.65	1.8	0.53
mean	11.67	11.94	12.56	12.91	12.63	9.96	10.19
median	12.00	15.00	15.00	15.00	12.00	9.00	9.00
<i>Personal monthly income (yuan)</i>							
<400	10.26	19.72	0.00	9.42	3.31	7.21	13.9
400-599	8.84	11.93	2.13	4.35	8.26	8.11	14.44
600-799	10.70	9.63	9.22	7.25	8.26	9.91	17.65
800-999	13.97	8.26	18.44	5.07	29.75	18.92	10.7
1000-1499	16.27	17.89	14.89	10.14	11.57	27.03	16.58
1500-1999	10.81	9.63	17.73	10.87	9.92	10.81	7.49
2000-2499	11.46	10.09	16.31	20.29	9.92	9.01	5.35
2500-2999	3.93	3.67	7.09	3.62	4.13	0.9	3.74
3000-3499	5.02	3.21	4.26	10.14	5.79	3.6	4.28
3500-3999	2.62	1.38	3.55	5.8	1.65	0.9	2.67
4000 or higher	6.11	4.59	6.38	13.04	7.44	3.6	3.21
mean	1601.26	1366.06	1890.07	2218.84	1653.72	1387.39	1294.92
median	1250.00	1250.00	1750.00	2250.00	1250.00	1250.00	900.00
<i>Number of people living at home</i>							
1	5.79	9.17	0.71	2.9	2.48	20.72	1.07
2	28.38	42.2	30.5	21.01	18.18	45.05	12.83
3	30.13	19.27	49.65	44.2	14.05	18.92	34.76
4	17.25	15.6	11.35	24.64	12.4	9.01	26.2
5 or more	18.45	13.76	7.8	7.25	52.89	6.31	25.13
mean	3.14	2.83	2.95	3.12	3.95	2.35	3.61
median	3.00	2.00	3.00	3.00	5.00	2.00	4.00

Value Orientation

We developed a measure of a traditional-modern value orientation. According to Chinese scholars, oriental values are different from western ones. In China, major economic reforms and social changes are taking place, which also influences values of Chinese consumers, including older ones. Some scholars believe that the core of Chinese value is harmony and balance (Li, 1998). Chinese traditional values are summarized into five aspects: (1) In production and life, value hard work and frugality; (2) In self image, value respect for superiority and virtues; (3) In human relationship, value kindness; (4) In social politics, value loyalty and fidelity; and (5) In the relationship between human and nature, value

the balance between human and natural world (Jiao, 2004). In recent years, the Chinese government has also advocated building a society with a balance of harmony and growth. Based on the literature on Chinese traditional values and referencing the Values and Life Styles II (VALS II), we developed 28 items, 14 in the modern and 14 in the traditional orientation. The wording of the items is presented in the appendix. Based on the survey data, the internal reliability was high ($\alpha = .8187$).

Responses to marketing

Based on the literature, we developed 36 items on consumer responses to marketing activities, of which 17 items were adapted from Moschis

(1996). Seven categories are used for these items: responses to product, promotion, price, and place strategies, as well as product satisfaction, current market evaluation, and transfer payment.

Results

Segments of Older Consumers

For the health dimension, if a respondent's health score is greater than the average, he or she is included in the healthy group. Otherwise, he or she is included in the unhealthy group.

The value dimension has 24 items, 12 representing the modern value orientation and another 12 representing the traditional value orientation. Each modern orientation item is counted as a positive score and each traditional item is counted as a negative score. If a respondent's value orientation score is negative, this person is included in the traditional group. Otherwise, the respondent is categorized in the modern group.

Using the above criteria, we divided the mature market in urban China into four segments: healthy conservatives (37.34%), unhealthy conservatives (35.37%), healthy liberals (13.86%), and unhealthy conservatives (13.43%).

Profiles of Older Consumers in Four Segments

Table 3 presents descriptive statistics of age, income, and education by segment and Table 4 presents a comparison between biological age and psychological age by segment. Table 5 presents ANOVA results of individual items of the value orientation by segment. The following are profiles of these consumers (for more details, see Ying, 2007).

Healthy liberals. These consumers have the highest per capita monthly income and education level compared to consumers in other segments. On average, they have the youngest subjective age, 46.75, and the youngest actual age, 59.13. Also they have the largest difference between subjective and actual age, 12.38. They had the highest scores in all 14 items of the modern orientation. They believe they are more capable than the majority and enjoying life is more important to them than work. They pursue new trends and fashion and like changes in life. They would like to try new things. They like free and independent life. They like doing things their own way and believe they are not young and it is time to enjoy and spend money. They wear more fashionable clothes than their peers.

Table 3: Market Segment by Age, Income, and Education

	Segment (%)	Age (year)	Monthly personal income (yuan)	Education (year)
Healthy liberal	13.86	59.13	2077.56	13.28
Healthy conservative	37.34	59.94	1672.37	12.58
Unhealthy liberal	13.43	62.66	1269.92	10.56
Unhealthy conservative	35.37	61.29	1263.43	10.85

Table 4: Market Segment by Subjective and Objective Age

	Average Subjective Age	Average Objective Age	Difference
Healthy liberal	46.75	59.13	-12.38
Healthy conservative	52.49	59.94	-7.45
Unhealthy liberal	56.02	62.66	-6.64
Unhealthy conservative	56.41	61.29	-4.88

Table 5: ANOVA Results: Values by Segments

	Unhealthy conservative	Healthy conservative	Unhealthy liberal	Healthy liberal
<i>Traditional Orientation</i>				
1. I believe we should be industrious and thrifty in home management	4.30	4.58	3.01	4.13
3. The leaders and superiors are always right	2.17	2.67	2.40	2.52
5. It's perfectly justified that the children contribute money to their parents to show filial piety after getting a job	3.57	4.09	2.73	3.77
7. I hate to spend a lot of money for going out and travels	3.32	3.62	2.51	3.42
8. For my spouse and children I am willing to spend whatever I can, but for myself I am very frugal	3.43	4.04	2.69	3.43
10. I prefer saving money for my children and grandchildren to spending for myself	2.94	3.19	2.53	2.65
12. I care about a lot other people's opinions on me	2.79	3.14	2.49	2.98
14. I hope to be accepted by the society	3.34	3.95	2.93	3.72
17. I should work hard whether I like my job or not	3.61	4.16	2.93	3.78
19. People should treat others generously	4.16	4.62	2.93	3.91
20. I like living in a big family	3.58	4.09	2.89	3.49
22. I can't bear with the things I don't like	3.37	3.57	2.91	3.59
26. I'll not praise myself before others	3.35	3.73	2.97	3.31
27. Money should not be spent freely but saved for emergency	3.98	4.33	3.15	3.45
<i>Modern orientation</i>				
2. I like trying new things	2.82	3.54	3.12	4.32
4. I go along with the latest trend and fashion	2.00	2.49	2.93	3.35
6. I'm more capable than most people	2.68	3.38	2.89	3.95
9. It's more important to enjoy life than work	2.69	3.12	3.11	3.70
11. I'm always eager for stimulation	1.78	2.13	2.89	3.25
13. I'll not buy things that are cheap but useless	3.41	3.96	3.11	4.09
15. I like to be the leader in a group	2.37	2.88	3.15	3.46
16. I prefer changes in life	2.50	3.02	3.16	3.69
18. I prefer doing things in my own way	3.52	4.13	3.15	3.93
21. I like free and independent life	3.17	3.53	3.10	4.02
23. If I see something I like, I'll buy it even I need to borrow money	1.90	2.10	2.76	3.00
24. I'm poor when I was young. Now I'm rich and can spend for whatever that is worthy	2.85	3.09	3.28	4.06
25. I'm not young now, I should enjoy whatever I can	3.03	3.47	3.22	4.11
28. My clothes are more fashionable than most same-ages	2.41	3.05	3.33	3.67

Note: Each of the value statements has a score range from 1 to 5. The number of each statement is the original order number in the survey. For example, for the first statement, healthy conservatives have the highest mean score, 4.58, while unhealthy liberals have the lowest mean score, 3.01. All results of ANOVA are significant at 5%. Results of Tukey tests indicating specific segment differences are available upon request.

Healthy conservatives. These consumers have the second highest income and educational level. Their average subjective age and actual age are second youngest at 52.49 and 59.94, respectively. The gap between subjective and actual age is the second largest, 7.45. They rated highest in almost all items (13 out of 14) of the traditional orientation. They believe in frugality. They think it is natural that children provide financial support to their parents when they work. They treat others nicely and like doing things their own way. They like living in a big family. They would like to spend more for their spouse and children but be frugal for themselves. They believe money should not be spent casually and should be saved for emergencies.

Unhealthy liberals. Their average income is the second lowest and education level is the lowest. Their average psychological age is 56.02. On average, their subjective age is the second oldest, 56.02, and actual age is the oldest, 62.66. The gap between subjective and actual age is the second smallest, 6.64. They rated lowest in most traditional oriented items (13 out of 14). They don't care about other people's views. They like spending money for going out and travel. They prefer spending money for themselves instead of saving for their children and grandchildren. They are not willing to spend money for their spouse and children.

Unhealthy conservatives. These consumers' average income is the lowest and education level is second lowest. They have the highest subjective

age, 56.41, and the second highest actual age, 61.29. The gap between subjective and actual age of this group is the smallest, 4.88. They rated lowest in most modern oriented items (10 out of 14). They don't like adventure. They don't want to borrow money to buy what they want. They don't go along with the latest trends and fashions. They don't like to be the leader of a group. Their clothes are less fashionable than those of most of their peers.

Responses to Marketing Strategies: Individual Items

Table 6 presents ANOVA findings about consumer responses to individual items of marketing activities. Judging from the means of these items, as a group, these older consumers are most likely to tell their relatives and friends if they are not satisfied with products used (mean=3.86 on a 5-point scale) or if they are satisfied (3.78). They believe that elderly people should learn to use electronic products to make life more convenient (3.75). They feel most healthcare products in the market are useless (3.71). They believe businesses never treat them as friends and just want to make money from them (3.70). On the contrary, they are least likely to buy things through mail order (mean=1.95 out of a 5-point scale), shop in stores with attractive products shown in the windows, be attracted by discounts to buy something unplanned (2.50), buy a product because of liking its advertisement (2.57), and like to buy famous brands (2.64). The following are differences between the segments.

Table 6: ANOVA Results: Marketing Responses by Segments

	Unhealthy conservative	Healthy conservative	Unhealthy liberal	Healthy liberal	Mean
<i>Product</i>					
3. I like buying new products	2.63	2.91	2.98	3.20	2.86
8. I will use my favorite brands all times	3.08	3.63	3.07	3.59	3.36
18. I will not buy new products unless acquaintances have used and satisfied with them	3.41	3.62	3.04	3.20	3.41
20. I seldom pay attention to the quality guarantees ^{ns}	2.61	2.66	2.65	2.91	2.68
27. I like to buy famous brands	2.25	2.65	2.86	3.35	2.64
<i>Product satisfaction and complaints</i>					
21. If I use a product and am not satisfied with it, I usually tell my relatives and friends	3.81	4.11	3.12	4.01	3.86
25. If I feel satisfied with a product I have used, I will usually tell my relatives and friends	3.78	3.99	3.10	3.83	3.78
<i>Promotion</i>					
1. I don't believe products promoted by advertisements	3.49	3.64	3.25	3.15	3.21
2. I bought a product because I like its advertisement	2.50	2.49	2.81	2.72	2.57
4. I will use coupons whenever I can	3.09	3.37	3.16	3.07	3.20
14. I am usually go shopping in the shops with attracting products shown in the windows	2.20	2.33	2.59	3.15	2.43
15. Discounts will always attract me to buy something unplanned	2.52	2.35	2.52	2.84	2.50
19. I usually do not buy new foods without trying free samples	3.07	3.22	2.86	3.25	3.12
30. I do not like coupon-promotion as they are inconvenient and causing price-rising	3.34	3.64	3.07	3.61	3.45
36. Businesses never treat me as a friend and just want to make money out of me	3.62	3.89	3.27	3.77	3.70
<i>Price</i>					
17. I would like to pay more for high quality products	2.96	3.70	2.93	3.82	3.35
<i>Channel</i>					
5. When shopping I like the salesperson helping me choose products ^{ns}	2.59	2.68	2.85	2.78	2.69
6. I don't mind if I need to pay more in the shops nearby my home	2.70	3.18	2.93	3.14	2.97
7. I hope that more cashiers in shops accept credit cards	2.72	2.99	2.92	3.25	2.92
9. When shopping I prefer cash to credit cards for payment	3.46	3.89	3.15	3.54	3.59
12. I like to buy things in the shops that I go frequently	3.46	3.77	3.06	3.91	3.59
13. I often buy things through mail order	1.72	1.71	2.56	2.60	1.95
28. I hope there are shopping guides in shopping places	2.75	3.01	2.81	3.28	2.93
29. I prefer buying in big shops instead of small shops	3.07	3.61	2.88	3.77	3.34
33. I go shopping frequently	2.59	2.80	2.67	3.47	2.80
34. I like to interact with salespeople, service people, and other buyers	2.56	2.77	2.91	3.53	2.82
35. I once had unpleasant experiences with salespeople and service people	2.68	2.55	2.96	3.01	2.72
<i>Evaluation on current markets</i>					
10. I often feel difficult to open packages ^{ns}	3.28	3.37	3.03	3.31	3.29

11. I often feel hard to read package labels and price tags	3.49	3.66	2.95	3.56	3.49
16. Elderly people should learn to use electronic products to make life more convenient	3.61	4.06	3.11	3.91	3.75
22. I feel many user guides (especially for electronics) are too complicated, too long and too hard to understand	3.70	3.84	3.13	3.71	3.68
23. I feel most healthcare products in the market are useless	3.70	3.90	3.20	3.75	3.71
26. There are too few cloths in the market suitable for elderly people	3.33	3.56	3.03	3.54	3.40
<i>Transfer payment</i>					
24. My children bought me many things ns	2.95	3.08	2.91	3.12	3.01
31. I buy things for my children frequently	2.98	3.44	2.85	3.41	3.19
32. I buy things for my grand children frequently	3.32	3.64	2.93	3.62	3.43

Color code: **Highest scores**, **lowest scores**, **lower than the mean score in that item**.

Note: Each of the response statements has a score range from 1 to 5. The number of each statement is the original order number in the survey. For example, for the first statement, healthy liberals have the highest mean score, 3.20, while unhealthy conservatives have the lowest mean score, 2.63. All ANOVA results are significant at 5% except for items 5, 10, 20, and 24. Results of Tukey tests indicating specific segment differences are available upon request.
^{ns} = not statistically significant.

Product. Compared to the other three segments, unhealthy conservatives are least likely to buy new products and famous brands. Both healthy conservatives and liberals are more likely than their unhealthy counterparts to use their favored brands always. Conservatives, healthy and unhealthy, are more likely than their liberal counterparts to report that they will not buy new products unless acquaintances have used and were satisfied with them.

Product satisfaction and complaints. Healthy conservatives are most likely to tell their relatives and friends if they are satisfied or dissatisfied with products they have used, while unhealthy liberals are least likely to do so. Responses of healthy liberals and unhealthy conservatives are more similar to those of healthy conservatives.

Promotion. Compared to the other three segments, healthy liberals are least likely to agree that “I don’t believe products promoted by ad-

vertisements” and unhealthy conservatives are least likely to agree that “I usually do not buy new foods without trying free samples.” Healthy conservatives are least likely to agree that “discounts will always attract me to buy something unplanned” and most likely to agree that “I will use coupons whenever I can.” Liberals, both healthy and unhealthy, are more likely than conservatives to buy a product because they like its advertisement and to go shopping in the shops with attractive products shown in the windows. The healthy, both conservatives and liberals, are more likely than the unhealthy to agree with the statements “I do not like coupon-promotion as they are inconvenient and causing price-rising” and “businesses never treat me as a friend and just want to make money out of me.”

Price. Healthy liberals and conservatives are more likely to pay more for higher quality products than their unhealthy counterparts.

Channel. Compared with the other three segments, unhealthy liberals are least likely to hope that more cashiers in shops accept credit cards, healthy conservatives are most likely to prefer cash to credit cards for payment when shopping, and healthy liberals are most likely to go shopping frequently. The unhealthy, both conservatives and liberals, are less likely than the healthy to pay more in the shops nearby home, buy things in the shops that they go to frequently, hope there are shopping guides in shopping places, and prefer buying in big shops instead of small shops. Compared with liberals, healthy or unhealthy, conservatives are less likely to buy things through mail order, interact with salespeople, service people, and other buyers, and have had unpleasant experiences with salespeople and service people.

Evaluation on current markets. Compared to the other three segments, unhealthy liberals are least likely to perceive difficulties to read package labels and price tags, and report many user guides are too complicated, too long, and too hard to understand. The unhealthy are less likely than the healthy to agree with the statements, "elderly people should learn to use electronic products to make life more convenient," "I feel most healthcare products in the market are useless," and "there are too few cloths in the market suitable for elderly people."

Transfer payment. Healthy conservatives are most likely to buy things for their children and grandchildren while unhealthy liberals least

likely to do so. Responses of healthy liberals are more similar to those of healthy conservatives.

Table 7: Composite Variables of Responses to Marketing

Voice (reliability $\alpha = .7280$)

When shopping I prefer cash to credit cards for payment
 I often feel difficult to open packages
 I often feel hard to read package labels and price tags
 I will not buy new products unless acquaintances have used and satisfied with them
 If I use a product and not satisfied with it, I usually tell my relatives and friends
 I feel many user guides are too complicated, too long and too hard to understand
 I feel most self-claimed healthy products in the market are useless
 If I feel satisfied with a product I have used, I will usually tell my relatives and friends
 There are too few selections of clothes in the market suitable for elderly people

Promotion (reliability $\alpha = .6336$)

I like buying new products
 I bought a product because I like its advertisement
 I use coupons whenever I can use them
 Discounts always attract me to buy something unplanned
 When shopping I like the salesperson helping me choose products

Price (reliability $\alpha = .4966$)

I would like to pay more for high quality products
 I don't mind if I need to pay more in the shops nearby my home
 I like to buy famous brands

Store (reliability $\alpha = .5371$)

I like to buy things in the shops that I go frequently
 I go shopping frequently
 I like to interact with salespeople, service people, and other buyers

Responses to Marketing Strategies: Composite Variables

An exploratory factor analysis was employed to identify dimensions of these items and six factors emerged. We selected four out of six factors that have meaningful contents and labeled them voice, promotion, price, and store. For each of these dimensions, only items with a loading of 0.4 or higher were retained to form a com-

posite variable. The item wordings, categories, and reliabilities are presented in Table 7. Each of the composite variables is a mean score of all retained items in that category. The composite variables were interpreted in this way: If consumers score high in voices, they are more likely to voice their opinions about markets and products, dissatisfactions in most cases. If consumers rate high on promotion, they are more open to marketing promotions. If consumers score high on price, they are concerned more with quality and are willing to pay a higher price for it. If consumers rate high on store, they are more likely to visit stores and more willing to interact with salespeople.

Both ANOVA and multiple regressions were used to test segment differences in responses to marketing activities of older consumers in China, which are presented in Table 8 and 9.

Voice. The variable voice means the degree of consumer willingness to express their opinions on the markets. They often voice dissatisfaction about the market. Based on the bivariate analy-

ses (ANOVA and Tukey tests), healthy conservatives rated the highest, unhealthy conservatives the second highest, healthy liberals the third highest, and unhealthy liberals the lowest on the voice factor. Four specific group differences were found between unhealthy and healthy conservatives, unhealthy conservatives and liberals, healthy conservatives and unhealthy liberals, and unhealthy and healthy liberals. When control variables were added in the multiple regression, compared to unhealthy conservatives, healthy conservatives are still more likely and unhealthy liberals are less likely to voice. In addition, male consumers are less likely than female consumers to voice. Compared to consumers in Wuhan, those in Kunming and Shenzhen are less likely to voice. Education showed a weak positive effect. Higher educated consumers are more likely than the less educated to voice.

Promotion. Bivariate analyses indicated that only unhealthy conservatives have a significant lower mean score than that of healthy liberals. In other words, unhealthy conservatives are less likely than healthy liberals to respond to promo-

Table 8: Results of ANOVA: Consumer Segments and Responses to Marketing

	Voice ^a	Promotion ^b	Price ^c	Store ^d
1. Unhealthy conservative	3.55	2.67	2.64	2.87
2. Healthy conservative	3.77	2.76	3.18	3.11
3. Unhealthy liberal	3.08	2.86	2.91	2.88
4. Healthy liberal	3.60	2.92	3.44	3.64

Note: Scores ranged from 1 to 5. For voice, the higher score means more likely to voice opinions on current markets, frequently dissatisfaction with the market. For promotion, the higher score means more receptive to marketing promotions. For price, the higher score means willing to pay a higher price for quality products. For store, the higher score means more willing to visit stores and interact with salespeople. ANONVA results indicated significant differences between groups ($p < .05$). Tukey tests indicated specific group differences ($p < .05$):

- For voice: there are differences between groups 1 and 2, 1 and 3, 2 and 3, and 3 and 4.
- For promotion: only groups 1 and 4 are different.
- For price: all four groups are different from each other.
- For store: there are differences between groups 1 and 2, 1 and 4, 2 and 4, and 3 and 4.

tion offers of marketers. When control variables are added in the multiple regression, the result showed a weak difference between unhealthy conservatives and liberals. Unhealthy liberals are more likely than unhealthy conservatives to respond to marketing offers. In addition, higher educated consumers are more likely than less educated consumers to respond to marketing offers. Cities show differences. Compared to consumers in Wuhan, consumers in other the five cities are more likely to respond to marketing promotions and offers.

Price. Bivariate analyses show strong segment differences in willingness to pay a higher price for quality products. Healthy liberals are most willing, healthy conservatives second most will-

ing, unhealthy liberals third most willing, and unhealthy liberals least willing to pay a higher price for quality goods. All group differences are significant. Multiple regression results confirmed the results that unhealthy conservatives are least willing to do so compared to consumers in the other three segments. In addition, subjective age and personal income showed positive effects on price paying. Male consumers and consumers with larger household sizes showed negative effects on price paying. Consumers in three cities—Kunming, Jiangmen, and Shenzhen—are less likely than consumers in Wuhan to pay a higher price for quality products.

Store. According to the results of bivariate analyses, healthy liberals are most willing, healthy

Table 9: Parameter Estimates of Linear Regressions on Responses to Marketing (N=916)

	Voice		Promotion		Price		Store	
Intercept	3.57827	***	2.2625	***	3.03913	***	2.60823	***
Unhealthy conservative ^{r.c.}								
Healthy conservative	0.12001	*	0.03668		0.31454	***	0.28091	***
Unhealthy liberal	-0.38075	***	0.15758	†	0.26883	**	-0.03165	
Healthy liberal	-0.00542		0.06457		0.41886	***	0.79073	***
Subjective age	-0.00731		0.00432		-0.11016	***	0.06237	*
Male (vs. Female)	-0.08436	*	-0.08287		-0.10836	†	-0.1413	*
Age	0.01768		-0.02325		0.01975		-0.05744	*
Married (vs. not married)	0.10166		-0.06994		56879		-0.02917	
Work (vs. not working)	0.00451		0.03514		-0.0407		-0.09782	
Education	0.02561	†	0.04915	**	0.03133		0.064	**
Family income	0.00139		0.01123		0.01061		-0.00169	
Personal income	-0.015		-0.00725		0.05591	***	-0.00425	
Household size	0.00445		-0.0165		-0.06212	*	-0.06536	*
Wuhan ^{r.c.}								
Beijing	-0.09065		0.93258	***	0.08186		0.21489	*
Shanghai	0.07805		0.456	***	-0.06905		0.46005	***
Kunming	-0.50725	***	0.27302	**	-0.39991	***	0.14689	
Jiangmen	-0.05518		0.45811	***	-0.21933	*	0.32933	***
Shenzhen	-0.29482	***	0.26209	**	-0.25599	*	0.68087	***
F	12.31		10.51		15.12		9.32	
p	<.0001		<.0001		<.0001		<.0001	
R2	.1890		.1660		.2225		.1500	

† p < .10; * p < .05; ** p < .01; *** p < .001.

Note: r.c.=reference category.

conservatives are second most willing, and unhealthy conservatives and liberals are least willing to visit stores and interact with salespeople. Multiple regression results confirmed the findings when demographic and other variables were controlled for. Interestingly, subjective age has a positive but actual age has a negative effect on this variable. Male consumers and consumers with larger household size are less willing to visit stores and interact with salespeople. Higher educated consumers are more willing than the less educated to do so. Compared to consumers in Wuhan, consumers in Beijing, Shanghai, Jiangmen, and Shenzhen are more willing to visit stores and interact with salespeople.

Conclusion and Implications

This study segmented the mature market in China based on two innovative dimensions, a broadly defined health and an originally-developed traditional-modern value orientation. Based on the two dimensions and using data collected from consumers aged 50 years or older in six representative cities in China, the mature market in urban areas is segmented into four categories: unhealthy conservatives, healthy conservatives, unhealthy liberals, and healthy liberals. In addition, segment differences in responses to marketing were examined by both bivariate and multivariate analyses. Based on the sample used in this study, most older consumers in urban China are healthy conservatives (37.34%) or unhealthy conservatives (35.37%). A small portion of them are liberals, healthy (13.86%) or unhealthy (13.43%). In terms of responses to

marketing activities, healthy liberals are most responsive while unhealthy conservatives are least responsive to marketing activities, including promotion, price, and store strategies. In terms of voice, healthy conservatives are the most responsive while unhealthy liberals are the least responsive.

When relationships between consumer segments and responses to marketing are considered, promotion strategies showed the least segment differences—only one pair—while price showed the most differences. All four segments are different from each other. In addition, several demographic variables also show differences in marketing responses. These findings have managerial implications for marketers who are interested in the mature market in China.

Implications for Marketers

Findings of this study have revealed differences and similarities of responses to marketing among various segments of older consumers in China. The following are implications for marketers who are interested in older Chinese consumers and would like to provide better products and services for them.

Product Strategy. Both bivariate and multivariate analyses indicate that healthy conservatives are most likely to voice satisfactions and dissatisfactions about market products and services while unhealthy liberals are least likely to do so, with the other two types in between. When marketers collect feedback about their products and

services, they may receive suggestions and criticisms from healthy conservatives. They should take extra efforts to reach unhealthy liberals and the other two types to collect comprehensive feedback information to further improve their products and services to better meet the needs of older consumer in all segments of the market.

Promotion Strategy. Compared to other aspects of marketing, older consumers in the four segments showed few differences. For example, in multiple regression analyses, price showed three significant differences among the segments, promotion and store showed two significant differences out of three comparisons, and promotion showed only one less significant difference. The finding implies that when marketers consider promotion strategies for Chinese older consumers, they may use mass marketing promotion strategies and ignore the segment differences since the segment differences may be small.

Price Strategy. Price showed most differences in both bivariate and multivariate analyses. It seems that the factor of health is more important than value in this aspect. Healthy consumers who are either conservatives or liberals are more likely to seek quality products and services and to be willing to pay higher prices for them. Marketers with different product and service categories may target these consumers with differentiated price strategies. For instance, marketers with higher quality products and services may target primarily healthy consumers and marketers with average quality products

and services may actively approach less healthy consumers.

Place Strategy. The findings of this study show a pattern for the store factor that is similar to the price factor. Healthy consumers are more likely to visit stores and interact with salespeople than less healthy consumers. Marketers may use the information to design effective place strategies to meet the different needs of consumers in various segments. To reach healthy consumers, marketers should provide more opportunities for in-person interactions in stores. For less healthy consumers, the marketer should consider other channels that require less in-person interactions to better serve these consumers' needs.

References

- Ahmad, R. (2002). The older or ageing consumers in the UK: Are they really that different? *International Journal of Marketing Research*, 44(3), 337-360.
- Bastro, R. (1980). Over 49: The invisible consumer market. *Harvard Business Review*, 58(January-February), 140-148.
- Bone, P. F. (1991). Identifying mature segments. *Journal of Consumer Marketing*, 8(4), 19-31.
- Burt, S., & Gabbot, M. (1995). The elderly consumer and non-food purchase behavior. *European Journal of Marketing*, 29(2), 15-43.
- Carrigan, M., & Szmigin, I. (1998). The usage and portrayal of older models in contemporary consumer advertising. *Journal of Marketing Practice: Applied Marketing Science*, 4(8), 231-248.
- Editorial Board. (1999). On February 20, 1999, China entered the older society. *Population Research*, 23(5), 32.

- Jiao, G. (2004). Core traditional values and national spirits. *Journal of Hebei*, 24(4), 60-63.
- Kang, Y., & Ridgway, N. M. (1996). The importance of consumer market interactions as a form of social support for elderly consumers. *Journal of Public Policy and Marketing*, 15(1), 108-117.
- Lancaster, G., & Williams, I. (2002). Consumer segmentation in the grey market relative to rehabilitation products. *Management Decision*, 40(4), 393-410.
- Li, Y. (1998). Traditional values and healthy behaviors. *Journal of Guangxi Institute of Nationalities (Philosophy and social science)*, 20(1), 17-26.
- Mitchell, A. (1983). *The nine American lifestyles*. New York: Warner.
- Moschis, G. P. (1996). *Gerontographics*. Westport, CT: Quorum Books.
- Pak, S., & Pol, L. G. (1996). Segmenting the senior health care market. *Health Market Quarterly*, 13(4), 63-77.
- Wang, X. (ed.). (1999). *Handbook of mental health measurements* (Enhanced edition). Beijing: Press of China Mental Health Magazine.
- Yang, X. (1997). Current statuses and trends of values in China's transition period. *Journal of Congqing Normal College (Social Science Edition)*, (3), 75-80.
- Ying, B. (2007). *Segmentating the mature market in China*. Beijing: China Press of Economics and Finance.
- Zeng, Y. (2001). Characteristics of and strategies to aging issues in China. *Population and Economy*, 5, 3-9.
- Zhu, G., & Lu, Y. (2001). Growth potential of Chinese industry for old ages: A demand analysis. *Population Research*, 25(6), 39-43.