Benefit Segmentation: An Empirical Study for On-Line Marketing

Shwu-Ing Wu, Department of Business Administration, National Chin-Yi Institute of Technology, No. 35, Lane 215, Section 1, Chungshan Road, Taiping, Taichung, Taiwan 411, R.O.C.

Abstract

This research, used benefit needs to segment the online marketing market. Focus groups and a random sampling survey were used to search for consumer benefit needs. The online marketing market was then segmented using the benefits sought by consumers. The results showed that the different segments have significant differences in the benefits sought, lifestyles and demographics etc. Thus the benefits sought is an effective segmentation variable for the online marketing market. Based on the benefit segmentation results, marketing managers can focus on one or a few segments that show salient consumer preferences for the benefits provided by their products or services. Satisfying the consumers' needs produces company success.

Keywords: benefit segmentation, online marketing

Introduction

On-line marketing is a popular marketing tool today. It is conducted through interactive on-line computer systems that link consumers with sellers electronically. There are two types of on-line marketing channels: commercial on-line services and the Internet (Armstrong and Kotler, 2000). The on-line marketing products include Catalog Centre, Personalization Centre, Marketing Studio, and Syndication Centre (Messmer, 2000). Many companies take one or more products that fit Internet-style delivery, build a minimum number of pages and infrastructure to allow customers to purchase that product and then agree to deals with certain key media owners that target their prospective customers (Sinden, 2001). Companies such as Volkswagen, Sony Playstation.com, Winstar, Nike and New Line Cinema have produced the five bets e-marketing campaigns (Cholewka, 2001). Many of their approaches to on-line marketing can be practiced across a variety of expenditure brackets. In the traditional marketing method, consumer research into brand awareness and consumer need identification is highly developed within the TV and print media has created information aggregation and choice via direct marketing and transactions via POS. On-line marketing includes all of the functions in the purchase decision process (Goodwin, 1999).

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Consumer purchase decisions are influenced by many factors, including: direct marketing (TV, print and radio advertising), in-store marketing (POS displays and price promotions), personal referrals from friends and families, and now, the Internet (Stanley, 2000). Using on-line marketing solutions, major retailers can drive both on- and off-line purchase behaviours. The Internet can be used as an effective marketing tool to drive brand understanding and continuity of purchase because it is a medium that allows time for consumers to discover how a particular brand is relevant to their wants and needs. The Internet market has begun to mature now. This rapid Internet adoption has resulted in an extraordinary pace of change on the marketing landscape - and it has opened up a variety of opportunities for marketers (Pollack, 1999). However, only approximately half of the current Internet users in America have purchased products or services online (Sefton, 2000). In other countries, the online purchasing rate is lower than ten percent. Most Internet users worry about information privacy, including issues related to the acquisition and dissemination of consumer data (Rohm and Milne, 1998). The US FTC (Federal Trade Commission) echoed those findings, noting that a vast majority of web users are concerned about the privacy of their personal information (Sheehan and Hoy, 2000).

Many studies (e.g. Culnan, 1999, Federal Trade Commission (FTC) 2000) have deemed consumer risk perceptions to be the primary obstacle to the future growth of on-line commerce. Higher levels of Internet experience may lead to lower risk perceptions. Thus, the perceived risk at least partially mediates the impact of the Internet experience for online purchasing behaviour (Miyazaki and Fernandez, 2001). Those studies have shown that there were significant relationships among Internet experience levels, risk perceptions and on-line purchasing rates. In other words, lower risk perceptions correspond to higher benefit perceptions followed by higher on-line purchasing rates.

Many of the researchers involved in online retailing assume a relationship between Internet users/consumers and a perceived risk regarding online shopping. However, few researchers have investigated whether the benefit needs perception is related to on-line marketing or shopping. Who are the target consumers of on-line marketing? What are their benefit needs for the on-line shopping process? These are the important keys in on-line marketing strategy planning. Thus, presented here is the identification of benefit needs and search characteristics for the on-line marketing benefit segment. The relationships among the benefit needs and consumer-purchasing behaviour are explored in on-line marketing.

This study begins with an identification of the benefit needs for on-line marketing using Internet user concerns. An empirical study of on-line marketing segmentation using the benefits sought is then provided. Implications for on-line retailers are then discussed with strategy considerations about on-line marketing for a variety of benefit segments.

Segmentation Method

Identification of benefit needs

Benefits are the sum of product advantages or satisfactions that meet an individual's needs or wants. Benefit needs can be identified through a variety of techniques, including but not limited to focus groups, the Delphi approach, in-depth interviewing and quantitative research (Weinstein, 1987). Maloney (1961) suggested three general sources of benefit identification: 1. Incidental-to-use-experiences; 2. Use experience, and 3. Results experience (Lautman, 1991). Young and Feigin (1975) proposed the "Benefit Chain," that asked respondents to write two benefits associated with a product attribute and then identify successively two more (secondary) benefits derived from each of the benefits previously identified. Lautman (1991) introduced a benefit identification method called an End-Benefit Hierarchy. In this method, inherent product attributes are at the base of the hierarchy with the higher levels associated with the end-benefit and payoffs that will fulfil consumer needs and wants. This technique was most often associated with consumer values as identified and modified by Kahle (1986). Sharma and Lambert (1994) conducted in-depth interviews with a range of buyers to identify and verify the customer service elements. O'Connor and Sullivan (1995) produced a benefit/attribute number compatible with Fishbein's recommendation. This was accomplished by submitting the benefit/attribute importance ratings and the unidimensional scale values derived from the paired comparison data to inverse factor analysis for clustering.

As this study's first objective is to search and identify consumer benefit needs for on-line marketing, the job of discovering consumer benefit needs is accomplished through focus groups. Griffin and Hauser (1993) suggested that while a single 2-hour focus group can identify about 50% of the needs, two focus groups can identify about 67% of the needs and nine customers and eight focus groups can identify 98% of customer needs. Accordingly, this study first reviewed consumer needs and their characteristics by conducting focus groups on two occasions. Each group had ten target consumers participating. A third focus group was then used to verify the benefit needs perception of on-line marketing and to design a questionnaire. A five-point Likert scale was employed to measure the significance of each question. The questionnaire about benefit needs included incidental-to use experiences, use experiences and results experiences from on-line marketing.

Benefit segmentation

Benefit segmentation is widely acknowledged as one of the best ways to segment markets. Some of the benefits in the benefit dimension are: benefit segments are based on causal factors rather than descriptive factors and this is a method with great flexibility (Haley, 1968). Benefit segmentation can be used in conjunction with several closely related segmentation bases/variables. These include product/firm loyalty, psychographics, perceptions,

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preferences, purchase intention and purchase situations/occasions (Weinstein, 1987). Benefit segmentation divides a heterogeneous population into homogeneous groups on the basis of product benefits consumers perceive as important (Chang and Chen, 1995). This approach provides a more direct measure of the differences in preferences among customers and offers a more action-oriented analysis for managers (Haley, 1968).

To satisfy the target consumer's needs, benefit needs and product attributes are the most popular variables for segmenting the market (Calantone and Sawyer, 1978, Dubow, 1992, Haley, 1995, Toombs and Bailey, 1995). Some literature has pointed out that benefit needs variables are effective variables for market segmentation (Haley, 1968, Wind, 1978). John and Miaoulis (1992) evidenced that benefit needs variables integrated with benefit segmentation analysis can contribute to more focused and effective marketing strategies for health-related products and services. Myers (1976) saw benefit structure analysis as a method for finding new product opportunities in "very broad product/service categories," such as new foods, drinks, etc. Beane and Ennis (1987) proposed that a benefit segmentation study should attempt to do three things: 1. determine the benefits people look for in a product, 2. the kinds of people looking for each benefit, and 3. the proximity of existing brands to these benefits needs. Once people have been classified into segments in accordance with the benefits they are seeking, each segment is contrasted with all of the other segments in terms of demographics, volume of consumption, brand perceptions, media habits, personality and lifestyle and so forth. Over the longer term, systematic benefit segmentation research is likely to produce a higher proportion of successes (Haley, 1995). In many markets, segmentation based on benefits, needs, or motivations has proven to be more powerful than demographic factors or product features in understanding market dynamics (Plummer, 1974, Wind, 1978, Lesser and Hughes, 1986, Cermak, File and Prince, 1994). Accordingly, this article used benefit needs as the segmentation variable by performing an empirical study of online marketing in Taiwan. On-line marketing has replaced more important marketing methods in Taiwan, and become the more popular purchasing channel. Taiwan was one of the first ten developed Internet countries. The Internet users in Taiwan are between 15 and 40 years old.

The Study

Research Procedure

This article proposes a benefit segmentation procedure and reports on an empirical study that shows how the proposed procedure can be applied to on-line marketing. The following procedure is divided into five sections. First, identification of the benefit needs is discussed. Second, the consumers were surveyed about their benefit needs, lifestyle and common characteristics. Third, segmentation variables were determined using factor analysis. Fourth, the consumers were clustered by benefit-sought factors using cluster

and discriminant analysis. Finally, segments with benefits sought, lifestyle and common characteristics were identified. This article used factor, cluster, and discriminant analyses as the major techniques for market segmentation. Through a random sampling survey, this study began by performing the principal component factor analysis method to obtain the initial benefit needs factors. Varimax rotation was used to produce the independent benefit sought factors. Using K-mean's cluster analysis, respondents were grouped according to similarities exhibited by the factor scores. Analysis of variance and discriminant analysis were then employed to evaluate the discrimination among the cluster groups. Segments with benefits sought, lifestyle and common characteristics were then identified. The procedure is presented as follows:

1. Identification of benefit needs (via focus groups)
2. Consumer survey (using questionnaires)
3. Determination segmentation variables (via factor analysis)
4. Clustering consumers with benefits sought factors (via cluster and discriminant analysis)
5. Identification of segments with benefits sought, lifestyle and common characteristics (via cross tabulation and analysis of variance).

The Empirical study

The research process is summarised below.

First, an initial focus group with ten potential customers was conducted to collect original consumer needs associated with on-line marketing. About 150 descriptions of benefit needs were collected. All possible and non-redundant needs obtained from the first focus group were recorded as primary needs. The second focus group, with ten customers, was used to combine and reduce the primary needs. The results generated 40 representative items about the respondents' benefit need perceptions toward on-line marketing. A third focus group, composed of ten Internet users, was used to verify the descriptions in order to design a questionnaire concerning the benefit needs of on-line marketing. Finally, 38 items concerning benefit needs were obtained and put into a questionnaire for a random sampling survey. The SRI Value and Lifestyles (VALS) Program (Piirto, 1991) was used to design 26 lifestyle questions. Lifestyle is defined as a person's pattern of living. It involves measuring consumers' major AIO dimensions: Activities, Interests and Opinions.

Second, a survey of consumer benefit needs for on-line marketing, that would be major factors applied for market segmentation was then conducted. The primary data from this research were collected using a survey of 600 Internet users. Members were randomly selected in Taiwan. Five hundred thirty-nine questionnaires were returned for a response rate of 89.83%. For a

95% confidence coefficient, the tolerated research error for the effective data was less than 0.042. Consumers' benefit needs and lifestyle were collected using a five-point Likert scale, and demographic data and the degree of on-line shopping used were assessed using a nominal scale.

Third, because factor analysis is a suitable method for providing the benefits sought, consumer benefit needs data were submitted to a principal component factor analysis with a varimax rotation. Using an eigenvalue greater than 1 as a selection criterion, nine factors emerged. These nine factors accounted for 71.05% of the variance. Cronbach's α of all factors was greater than 0.52, as shown in Table 1.

Fourth, once the benefits sought dimensions were established, the important benefit factor scores could be clustered to form segments with similar consumer benefits sought. K-mean cluster analysis was used to segment consumers because it has gained acceptability in the literature over the hierarchical approach (Afifi and Clark, 1990). The purpose of cluster analysis is to group respondents who rate the importance of a benefit sought similarly. When consumer responses on these benefit factors were subjected to cluster analysis, three distinctive market segments emerged, as presented in Table 2.

In order to evaluate discrimination among cluster groups, analysis of variance (ANOVA) and discriminant analysis was used to evaluate the clustering effect. The results showed that these segments were significantly different on every benefit factors (p < 0.01). This means that these segments differed on all benefit factor importance scores that were significantly different among the three clusters, shown in Table 2.

The discriminant analysis result was significant (p = 0.000), and the ratio of correct classification was 98.7% (see Table 3).

The last stage of the analysis was the identification of segments based on a cluster's characteristics. There were lifestyles, demographics, benefits sought and other relative variables. There were twenty-six lifestyle variables employed to a principal component factor analysis with varimax rotation, using eigenvalues greater than 1 as the criterion. Eight lifestyle factors were successfully retained. The eight common factors account for 64.19% of the total variance. Based on the corresponding factor loads of each variable, the eight common factors are named in Table 4. The three segments differed on all eight lifestyle factor important scores and demographic relative variables, which were significantly different among the three clusters. The subsequent managerial task is to examine the characteristics of each segment so that the marketing manager may select target customers accordingly. Each segment was appropriately named based on its most unique characteristics. This study characterised the three segments as "Effective-

ness and Modern seeker," "Convenience, Information and Safety seeker," and "Service and Freedom seeker," presented in Table 6.

Cluster Characteristics

Cluster characteristics with consumer lifestyle, demographics and benefits sought for online marketing are reported individually in this section.

Cluster 1: *Effectiveness and Modern seeker*. This was the largest segment (40.63%). The members of this segment have a regular life. Effectiveness and modern characteristics were the most important factors to these consumers. Demographically, these consumers were in the prime of their life with 29.22% between 36 and 40 years old and 23.29% between 26 and 30 years old. About 39.27% of them were high school graduates, 33.33% have college degrees, 57.08% were female and most of them were office workers or labourers (41.55%) with a median income between 551 and 1150 US dollars per month. About 57.08% of these consumers were married and living in the city (52.51%), with 35.16% living in the downtown area. Their major interest was music. Only 6.85% of these consumers used online shopping.

Cluster 2: *Convenience, Information and Safety seeker*. Members of this segment (33.77% of the sample) preferred the benefit factors of purchase convenience, information abundance, multiform and safety. Their lifestyle was leadership, active and they liked computers. Most of them were male (58.24%), 21.98% were between 15 and 20 years old and 21.98% were between 31 and 35 years old. About 34.07% of them were high school graduates and 47.25% with college degrees. Most were students (34.62%) or labourers (28.02%) with a median income between 551 and 1150 US dollars per month. About 52.20% of them were single with most living in the city (69.78%). Their major interest was sports. Only 8.79% of these consumers used online shopping.

Cluster 3: *Service and Freedom seeker.* The size of this segment was relatively small (only 25.60%). They preferred the benefit factors of service quality, delivery speed, selection freedom and company name familiarity. Their lifestyle was knowledge searcher, attached to own appearance, and spend time at home. These consumers were evenly male and female, with 28.99% between 31 and 35 years old and 26.09% between 21 and 25 years old. Most had college degrees (51.45%), 33.33% were students with a lower income of 550 US dollars below per month. About 55.80% of them were single with most living in the city (51.45%). 38.41% lived in villages. Their major interest was reading. 15.94% of them used online shopping.

Conclusion

The study showed how benefit segmentation could be a useful tool for online market marketing. The benefit segmentation approach is of particular interest because it never fails to provide fresh insight into markets (Haley,

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1995). Most previous segmentation studies involved market segmentation based on consumer demographics or common characteristics. These approaches helped marketing managers to understand various groups of consumers. However, for many Internet users, the psychographic variable is more important than the other variables because benefit need is a primary factor that influences the growth of on-line commerce. This study therefore segmented the on-line market by benefits sought and described the cluster characteristics by lifestyle and demographics etc. Through benefit segmentation, a marketing manager can understand the benefit needs of every segment, and then select the target segment and produce an on-line marketing strategy for the target consumer.

This research used benefit needs to segment the on-line market. It first used focus groups and a random sampling survey to search for the consumer benefit needs. The on-line market was then segmented using the benefits sought. The result demonstrated that different segments seek different benefits and have different lifestyles, demographics etc. Thus, benefit sought is an effective segmentation variable for the on-line market. Based on the benefit segmentation results, marketing managers can focus on one or a few segments that exhibit a salient preference for the benefits provided by their products. To focus on the "Effectiveness and Modern seeker," the marketing manager must emphasise the effectiveness, prompt and modernisation of on-line marketing to match their benefit needs. This target segment is primarily female, married and living in cities, about 26 to 40 years old with regular life and they like music. The manager can promote products related to music such as CD, audio, etc. on online. If the target segment is "Convenience, Information and Safety seeker," the manager must emphasise the benefits of on-line marketing for purchasing convenience, information abundance, multiform and trade safety. This segment's members are mostly group leaders, active, computer lovers, young males, students or labourers, single, loves sports and live in the city. To focus on this group, on-line commerce for sports products is the target selection. If the target segment is "Service and Freedom seeker," the manager must emphasise the advantage of on-line shopping for service quality, delivery speed, selection freedom, company name familiarity etc. This group's characteristics are knowledge seeker; attached to own appearance, spend time at home and like reading. They have the highest rate of on-line shopping but with lower income. The marketing manager might offer lower priced products related to reading such as maps, magazines or books for online shopping. Through benefit segmentation, companies can divide large, heterogeneous on-line markets into smaller segments that can be reached more efficiently with products and services that match the consumers' unique needs. As consumers obtain satisfaction for their needs, a company can become more successful.

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Table 1: Factor analysis and reliability for benefit sought			
Factor	Eigenvalue	Cumulative percent of variance %	Cronbach's alpha
1. Effectiveness and modern	15.2807	39.95	0.9298
2. Purchase convenience	2.2481	45.87	0.8460
3. Information abundance	1.9507	51.00	0.8138
4. Multiform and safety	1.7709	55.66	0.8191
5. Service quality	1.3427	59.19	0.8079
6. Delivery speed	1.2481	62.48	0.6373
7. Homepage design	1.1377	65.47	0.5181
8. Selection freedom	1.0780	68.31	0.7044
9. Company name familiarity	1.0420	71.05	0.6084

Table 2: Cluster analysis and analysis of variance for benefit factor

Cluster	N	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8	Factor 9
1	219	1.822	-2.124	-2.743	-0.785	-1.355	-1.519	-1.044	-1.695	-1.996
2	182	-2.232	2.542	1.960	2.412	-1.431	-2.739	0.079	-0.328	-0.460
3	138	-2.442	-0.000	-4.053	0.195	1.615	0.903	-1.606	2.019	0.834
F		20.608	67.303	54.-19	7.068	52.280	87.501	105.440	7.269	9.365
p		*0.000	*0.000	*0.000	*0.001	*0.000	*0.000	*0.000	*0.001	*0.000
Scheffes'		(1,2)	(1,2)	(1,2)	(1,2)	(1,2)	(1,2)	(1,2)	(1,2)	(1,2)
test		(2,3)	(1,3)(2,3)	(2,3)	(2,3)	(1,3)(2,3)	(1,3)(2,3)	(1,3)(2,3)	(1,3)	(1,3)

*: p < 0.01

Table 3: Discriminate analysis				
	Predictive cluster			
	1	**2**	**3**	**Total**
Original cluster				
1	219 (100.0%)	0 (0.0%)	0 (0.0%)	Total 219
2	3 (1.64%)	179 (98.35%)	0 (0.0%)	182
3	3 (2.17%)	1 (0.72%)	134 (97.10%)	138
Correctly classified = 98.7% p = 0.000				

Table 4: Factor analysis and reliability for lifestyle			
Factor	**Eigenvalue**	**Cumulative percent of variance %**	**Cronbach's alpha**
1. Leadership	4.9407	19.00	0.7051
2. Actively	2.7998	29.77	0.5341
3. Knowledge seeker	2.0005	37.47	0.7094
4. Like computer	1.6255	43.72	0.6344
5. Fashion	1.5153	49.55	0.6337
6. Attach to appearance	1.4273	55.04	0.4527
7. Spend time at home	1.3298	60.15	0.5364
8. Regular life	1.0504	64.19	0.4784

Table 5: Analysis of variance for lifestyle

Factor name	Segment name			F	p	Scheffe's test
	(1) Effectiveness and Modern seeker	(2) Convenience, Information and Safety seeker	(3) Service and Freedom seeker			
1. Leadership	-0.1406	0.2130	-0.0562	6.62	*0.001	(1,2)
2. Actively	-0.1002	0.3435	-0.2915	18.81	*0.000	(1,2)(2,3)
3. Knowledge seeker	-0.0658	-0.1870	0.3496	12.59	*0.000	(1,3)(2,3)
4. Like computer	0.0416	0.1138	-0.2153	4.62	*0.010	(2,3)
5. Fashion	0.0142	-0.0387	0.0283	0.21	0.809	
6. Attach to own appearance	0.0728	-0.1922	0.1365	5.29	*0.005	(1,3)(2,3)
7. Spend time at home	-0.1916	0.0070	0.2949	10.37	*0.000	(1,3)(2,3)
8. Regular life	0.0894	0.0047	-0.1480	2.40	0.092	

*: $p < 0.01$

Table 6: Characteristics of segments			
Item	**Segment name**		
	(1) Effectiveness and Modern seeker	**(2) Convenience, Information and Safety seeker**	**(3) Service and Freedom seeker**
Benefit sought	Effectiveness and modern	Purchase convenience Information abundance Multiform and safety	Service quality Delivery speed Selection freedom Company name Familiarity
Lifestyle	Regular life	Leadership Actively Like computer	Knowledge searcher Attach to appearance Spend time at home
Sex	Mostly female (57.08%)	Mostly male (58.24%)	Evenly of male and female
Age	36-40 (29.22%) 26-30 (23.29%)	15-20 (21.98%) 31-35 (21.98%)	31-35 (28.99%) 21-25 (26.09%)
Education	High school (39.27%) College (33.33%)	High school (34.07%) College (47.25%)	Mostly college (51.45%)
Occupation	Office worker and labourers (41.55%)	Students (34.62%) Labourers (28.02%)	Students (33.33%)
Income (US dollars per month)	551-1150 (45.66%)	551-1150 (42.86%)	550 below (42.75%)
Marriage	Married (57.08%)	Single (52.20%)	Single (55.80%)
Interest	Music (26.94%)	Sports (24.73%)	Reading (21.74%)
Residence area	City (52.51%) Downtown (35.16%)	City (69.78%)	City (51.45%) Village (38.41%)
On-line shopping	6.85%	8.79%	15.94%