Means-End Chain Based Brand Positioning Strategy for Lin'an *Carya Cathayensis Sarg*

Lingyan GAO, **Yueli ZHANG** *

College of Economics and Management, Zhejiang A&F University, Lin'an 311300, China

Abstract   Based on the theory of Means-End Chain, this paper surveyed value cognition structure of 36 member consumers through the laddering interview. According to the survey, it made an in-depth analysis on brand positioning strategy for Lin'an *Carya Cathayensis Sarg*, and obtained the existing brand operating model. It is hoped to explore effective strategy of brand positioning for agricultural product enterprises in Zhejiang Province, and accordingly lift core competitiveness of agricultural products of Zhejiang Province.

Key words   Lin'an *Carya Cathayensis Sarg*, Means-End Chain, Agricultural products, Brand positioning

1   Introduction

As a characteristic name card of Lin'an City, *Carya Cathayensis Sarg* has long history of development. However, in the current industrial upgrade and transformation, Lin'an *Carya Cathayensis Sarg* is faced with many difficulties in regional brand development. At the primary stage, Lin'an *Carya Cathayensis Sarg* brand is indispensible, but regional brand is not complete, the market positioning is single, and function of industrial association lags behind, and specialized personnel are in shortage. These problems further restrict its development. With reference to the theory of Means-End Chain, we analyzed value cognition structure of consumers from the perspective of consumers. Taking Lin'an *Carya Cathayensis Sarg* as the sample, we made one-to-one interview of 36 member consumers of Lin'an *Carya Cathayensis Sarg*, to make consumers play progressive guidance role in attributes, consequences and values of the product. Finally, we obtained implication matrix diagram and hierarchy value chart of the chain, and determined value orientation of consumers.

2   The theory of Means-End Chain

The focus of Means-End theory is on understanding how consumers think about products and actions. More specifically speaking, the center of attention is on examining the important meanings that consumers associate with the products they purchase and consume. As a research paradigm, the theory of Means-End Chain explains the relationship between value and product attribute from psychology (Hu Jie *et al.*, 2008).

Exactly speaking, products consumers purchase have their attributes. They perceive consequences from these attributes, and accordingly satisfy their value pursuit. The Means-End Chain reflects the process and connotation of consumers purchasing products and accordingly satisfying their value pursuit, it connects product attributes with ultimate value of person, and integrates it to hierarchy ladder of Means-End Chain, which includes one or many types of attributes, consequences or values (Chen Weiping, 2012).

As shown in Fig. 1, a *Carya Cathayensis Sarg* consumer may cognize attribute of *Carya Cathayensis Sarg*: green and healthy food; this brings about consumption consequence: health care and rest assured; finally, it satisfies his inner value pursuit: sense of safety. On the basis of this, we took the theory of Means-End Chain as framework, "attributes – consequences – values" as progressive sequence, connected attributes and consequences, so as to know preference and value connotation of consumers for *Carya Cathayensis Sarg*, and build brand positioning strategy that has universal significance and value.
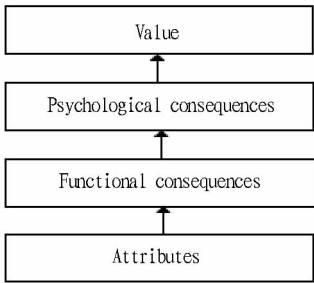
Fig. 1   Hierarchy framework for Means-End of value of *Carya Cathayensis Sarg* consumers

3   Study methods

On the basis of Means-End Chain, we made a laddering interview of consumers. By content analysis method, we built interviewee ladder. Then, we determined leading orientation of value chain using the relationship described by implication matrix diagram and the hierarchy value chart obtained from the matrix diagram. Finally, we determined the relationship between cognition attributes, consumption consequences and values of *Carya Cathayensis Sarg* consumers.

3.1 Data collection By laddering method, we collected and analyzed data. Following the theory of Means-End Chain, we converted attributes of products to the chain of self value. The interview was carried out in July to November, 2013. Each time of interview lasted about one hour. In the interview, we asked progressive questions, to guide Lin'an *Carya Cathayensis Sarg* member consumers to describe their psychological feeling. Questions in the interview mainly involve "which aspect of Lin'an *Carya Cathayensis Sarg* attracts you", "which factor will you consider", and "which benefits are consistent with your value orientation". Some other questions were added to obtain more comprehensive information.

3.2 Interviewees We adopted convenience sampling method to survey Lin'an *Carya Cathayensis Sarg* member consumers in the form of in-depth interview. Table 1 lists statistical results of characteristics of interviewee samples. On the basis of referring to selection of sample quantity in literature, we interviewed a total of 36 member consumers, the specific data of consumers are listed in Table 1.

Table 1 Statistical characteristics of interviewees

Variables	Percentage // %
Sex	
Male	44.4
Female	55.6
Age	
Younger than 25	8.1
25 – 40 years old	56.8
41 – 60 years old	29.2
Older than 61	5.9
Academic attainment	
College and below	21.4
University	63.7
Master and above	14.9
Occupation	
Specialized technical personnel (scientific research personnel, teachers, and doctors)	18.8
Private owners	23.3
Company clerks	14.6
Officers in government organs and institutions	23.0
Freelancers	7.4
Retirees	7.2
Others	5.7

3.3 Data analysis

3.3.1 Data coding. Firstly, we drafted definition of "attribute", "consumption consequence" and "value" according to the Means-End framework of consumption value of *Carya Cathayensis Sarg*. Secondly, on the basis of independent coding, research team members put forward elements of "attribute", "consequence" and "value". Later, we designated attributes and assigned code for each element, and measured similarity of their concept. Finally, we made discussion and revision according to ambiguity, so as to reach unanimous opinion and complete the entire content analysis.

3.3.2 Building implication matrix. In the integration ladder, the implication matrix is an important tool for chain times. The line and column denote elements of "attribute", "consequence" and "value", and number in the matrix signifies the direct chain times between hierarchy elements. For example, chain times of "green and free of additive" and "healthy and health care" being 31 means the direct chain times is 31. The larger the number, the closer the chain relationship will be between two elements.

3.3.3 Plotting hierarchy value chart. It is required to determine which number of chain relationship can be plotted into the hierarchy value chart. In this aspect, setting of intercept point value is particularly important. If there is no criterion for selection of intercept point value, researchers may use trial and error method to plot hierarchy value chart for different intercept point values, make their choice in information and diagrams provided by the hierarchy value chart, and finally select the optimum intercept point value (Lin Yuling *et al.*, 2009). We selected different intercept point values and plotted the hierarchy value chart, and finally selected 5 as the intercept point value.

3.3.4 Determining leading value orientation. The leading value orientation is the Means-End Chain with closest relationship in the entire hierarchy value chart. The representative value orientation chain is the path from the bottom attribute to the highest value. The value chain with the greatest chain times is the critical path.

4 Research results

4.1 Attributes, consequences and values of Lin'an *Carya Cathayensis Sarg* Through content analysis, we finally extracted 7 attributes (A), 6 consequences (C) and 7 values (V), as shown in Table 2. From the mentioned times, "green and free of additive" appears most frequently, and the next is "unique taste" and "brand popularity". Among the 6 consequences, "safe and rest assured" appears most frequently, and the next is "healthy and health care", "delightful", "personal life grade", and "feeling of contact with friends and relatives". In the 6 values, "sense of safety" appears most frequently, followed by "enjoying life", "happiness", and "family bond and friendship". More frequent appearance indicates close attention of more consumers.

4.2 Implication matrix of value chain of consumption of Lin'an *Carya Cathayensis Sarg* Table 3 lists implication matrix of value chain of consumption of Lin'an *Carya Cathayensis Sarg*. This table was obtained through analyzing times of direct chain of "attributes", "consequences" and "values" in the interview.

In the chain from attributes to consequences, "green and free of additive" and "safe and rest assured" have the highest chain times (36), indicating that consumers hope to obtain safe and rest assured consumption consequence through the attribute of green and free of additive in the purchase of Lin'an *Carya Cathayensis Sarg*. . In the chain from consequences to values, the "safe and rest assured" and "sense of safety" have the largest times (34), indicating that consumers want to obtain safe and rest assured consequences and have sense of safety.

Table 2 Statistics of hierarchy elements of attributes, consequences and values

Attribute (A)	Description	Times of appearance
A1 green and free of additive	Except necessary sugar and salt, no other pigment or essence	36
A2 unique taste	Fragrant and crisp	30
A3 high popularity of brand	Local leading enterprise and many people know the brand	24
A4 excellent technology	National patent protected for entire *Carya Cathayensis Sarg* meat	23
A5 convenient acquisition channel	Diversified sales channels, such as on-line and off-line	15
A6 exquisite package	Chinese cultural element as pattern	11
A7 moderate price	Price in acceptable range	5

Consequence (C)	Description	Times of appearance
C1 safe and rest assured	No need to worry about food safety	36
C2 healthy and health care	Eating more *Carya Cathayensis Sarg* is beneficial for health	32
C3 delightful	Making people delightful	25
C4 personal life grade	Like eating *Carya Cathayensis Sarg*	20
C5 demand of interpersonal interaction	Social engagement between customers	10
C6 feeling of contact with friends and relatives	Giving present on New Year festival or other holidays	8

Value (V)	Description	Times of appearance
V1 sense of safety	Safe and rest assured	41
V2 enjoying life	Enjoying delicious taste of *Carya Cathayensis Sarg*	37
V3 happiness	Happy	37
V4 sense of achievement	Gaining face	12
V5 family bond and friendship	Enhancing relation with friends and relatives	6
V6 sense of self satisfaction	Improving self grade	4

Table 3 Implication matrix of value chain of consumption of Lin'an *Carya Cathayensis Sarg*

Hierarchy element (Code)	C1	C2	C3	C4	C5	C6	V1	V2	V3	V4	V5
A1 green and free of additive	36	31	20	7			35	8	6		
A2 unique taste	5	11	30	33				25	22		
A3 high popularity of brand	27		16	29	34	30	14			36	13
A4 excellent technology	33		17		18		34	4			
A5 convenient acquisition channel			12		20	21			15		
A6 exquisite package			31	29	34	32		13	24		
C1 safe and rest assured		35	33	12	5	6	36	28	29		
C2 healthy and health care			25				30	23	14		
C3 delightful								16	33		
C4 personal life grade								31	23		
C5 demand of interpersonal interaction										30	
C6 feeling of contact with friends and relatives								28			35

4.3 Value hierarchy of Lin'an *Carya Cathayensis Sarg* On the basis of Table 3, we plotted the hierarchy value chart of Lin'an *Carya Cathayensis Sarg*, as shown in Fig. 2. Overall, the 6 values, *i.e.* "sense of safety", "enjoying life", "happiness", "sense of achievement", "family bond and friendship" and "sense of self satisfaction", are major ultimate value pursuit of consumers.

From chain number, we knew that "happiness" is the core value and mainly comes from "safe and rest assured", "healthy and health care", and "delightful", while these consequences are brought by "green and free of additive" and "unique taste" attributes.

From the chain approaches, it is known that consequences and attributes bringing "happiness" also can generate ultimate value of "enjoying life" and "family bond and friendship", indicating that consumers can obtain diversified consequences and value pursuits from diversified attributes.

Besides, approaches of ultimate value "sense of safety" come from "safe and rest assured" and "healthy and health care" consequences and connect with "green and free of additive" attribute. This indicates direct and simple demand of consumers in purchasing Lin'an *Carya Cathayensis Sarg*.

Finally, "popularity of brand" and "excellent technology" attributes bring about consequences of "demand of interpersonal interaction", to obtain the ultimate value of "the sense of achievement".

4.4 Main value chain of Lin'an *Carya Cathayensis Sarg*
The leading value chain of consumers of Lin'an *Carya Cathayensis Sarg* is "green and free of additive" → "safe and rest assured" → "sense of safety". This indicates that consumers hope to purchase safe foods in current situation of frequent occurrence of food accidents.

In addition, there is another main value chain of consumers: "unique taste" → "delightful" → "happiness". This main value chain reflects pursuit of consumers for core value happiness, main-
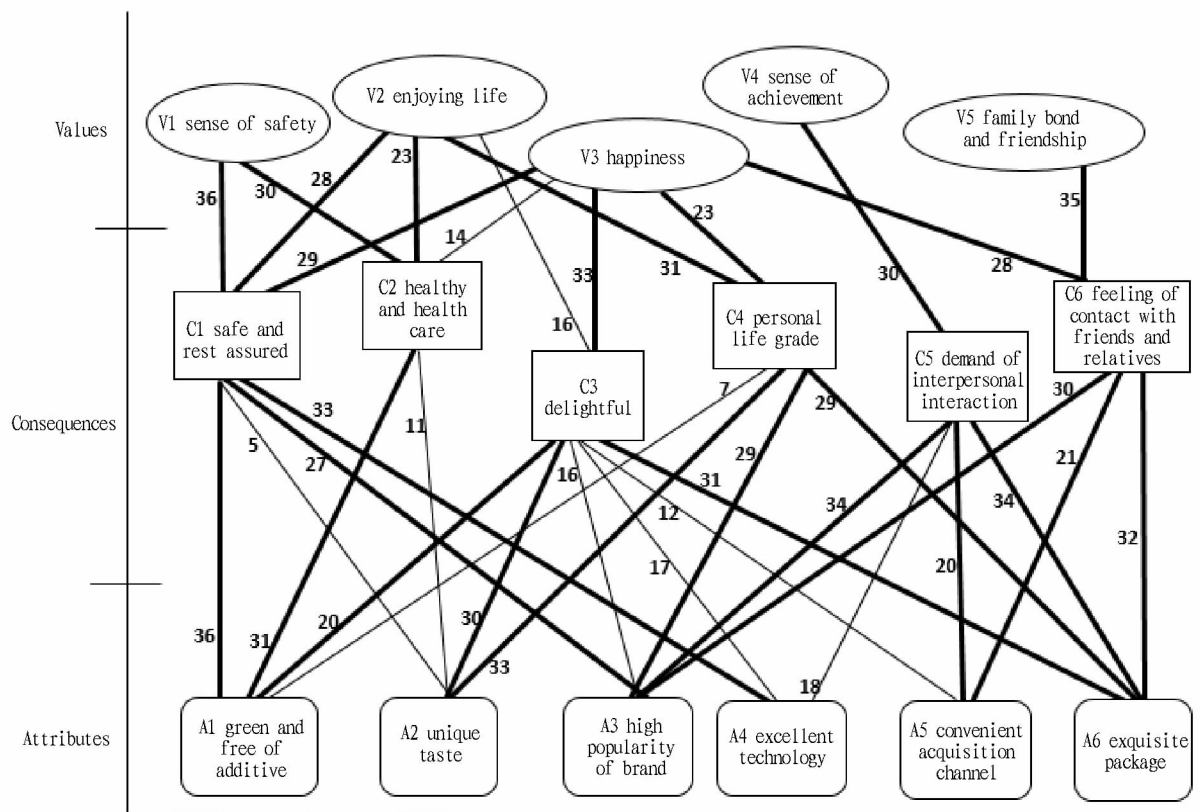
Note: thick lines means higher connection between hierarchies, with 20 times and above as basis.

Fig. 2   Hierarchy value of Lin'an *Carya Cathayensis Sarg*

ly based on "unique taste".

5   Conclusions and recommendations

5.1   Conclusions   With the aid of framework of the Means-End Chain, we used "attribute", "consequence" and "value" to analyze value cognition structure of Lin'an *Carya Cathayensis Sarg* consumers. Through laddering interview and analysis of 36 member consumers, we reached following conclusions:

(i) Consumers preference for Lin'an *Carya Cathayensis Sarg* include 7 attributes and they wanted to satisfy 6 psychological consequences through these attributes, and ultimately obtain 6 intangible inner values. According to the theory of Means-End Chain, consumers generate not single means and end. Our research results also reflect that consumers of Lin'an *Carya Cathayensis Sarg* have diversified attributes for pursuing diversified values, indicating that *Carya Cathayensis Sarg* consumption is an act of pursuit for diversified values.

(ii) We plotted hierarchy value chart for Lin'an *Carya Cathayensis Sarg* consumers. Through the hierarchy value chart, we knew outline of consumers' entire value pursuit of Lin'an *Carya Cathayensis Sarg*. We analyzed attributes, consequences and values of consumers, strength, element description focus, highest hierarchy and entire chain characteristics of selection act (Zhan Dingyu *et al.* , 2010), thus to help us analyze selection act and consumption psychology of consumers.

(iii) We found the main value chain of Lin'an *Carya Cathayensis Sarg* in "attribute" →"consequence" → "value" chain. Among all chains, "green and free of additive" → "safe and rest assured" → "sense of safety" chain lies in the critical path. In the current situation of frequent occurrence of food accident, consumers are eager to have safe foods.

5.2   Implication of management   From the perspective of consumers, we plotted hierarchy value chart for Lin'an *Carya Cathayensis Sarg*, which has management implication for enterprises. Firstly, we elaborated how consumers can realize inner consumption value through attributes of *Carya Cathayensis Sarg*. Application of these research results can provide reference for enterprises creating consumption value. Lin'an *Carya Cathayensis Sarg* provides consumers with not merely nut foods. It can also create more values for consumers from building cultural concept. Secondly, this study can provide reference for brand positioning of *Carya Cathayensis Sarg*, make market segmentation, and conduct different positioning of *Carya Cathayensis Sarg* according to different preference of consumers. For example, for consumers preferring to healthy and green foods, enterprises can provide ecological brands; for consumers pursuing sense of achievement, enterprises can build luxurious brand; for consumers eager to keep family bond and friendship, enterprises can focus on relation type brand positioning.

seed talents at the master level are mainly engaged in technical or management work. Since masters have excellent theoretical foundation, they should focus on deepening theories, strengthening skills and attaching importance to innovation. Through more than one year of learning, they should have a great leap in specialized theories and grasp current theories and technologies, strengthen learning of social science knowledge, and study industrial rules and laws and regulations related to the seed industry. Under the guidance of enterprise tutors and school tutors, with 1 − 2 years of technical practice in enterprises, they should well grasp various industrial skills. Besides, they should participate in certain product design and research and development to cultivate their innovation ability. Also, they should participate in enterprise management to learn certain management experience. Students completing learning tasks at the master level can undertake technical work in seed enterprises. With 2 − 3 years of practice and exercise, they can participate in product research and development and enterprise management, and become outstanding seed talents good at technologies and innovation.

3. 3 Cultivating "fine products" at the doctor stage In line with market demands, outstanding seed talents at the doctor level should be those talents with well command of technologies, good at innovation and management. Considering continuity of the talent cultivation, it is required to pay attention to exercise, improving innovation ability and management ability at the doctor level. On the basis of the master level, it is recommended to focus on cultivation of their innovation ability. They should participate in product design and research and development and work in enterprise for at least two years. Besides, they should participate in enterprise management and decision making, so that they can implement decisions and management according to market and enterprise situation, and become outstanding seed talents with well command of technologies, good at innovation and management after working 2 − 3 years in seed enterprises.

4 Conclusions

With the drive of national policies and market development, large-scale, group and internationalization are inevitable results and development direction of merge and reorganization of China's seed enterprises, and integrated "breeding, propagating and selling" mode will become mainstream operation mode of the seed industry. To adapt to integration and internationalized trend of "breeding, propagating and selling", China's seed enterprises have different demands for different levels of seed talents. Their demands for undergraduates are mainly marketing and technical; for masters, their demands are mainly technical talents; their demands for doctors are mainly interdisciplinary talents. In line with market demands and existing talent training mechanism of China, the hierarchical training mode is an ideal mode for training outstanding seed industry talents. Specifically, it is recommended to lay solid foundation at the undergraduate stage, enhance innovation and skills at the master stage, and reinforce innovation and management at the doctor stage.

References

[1] ZHANG FA. Ministry of Education will start remarkable agricultural and forestry talents training plan[EB]. http: //weekly. sdau. edu. cn/html2006/2006/lygw/2011_09_50_96587. htm. (in Chinese).
[2] ISF World Seed Congress. Seed statistics[EB]. http: //www. worldseed. org/isf/seed_st atistics. html.
[3] DING QF, ZHOU SY. China considers opening of seed market[EB]. http: //www. chinadaily. com. cn/bizchina/2011 −08/25/content_13186235. htm.
[4] ADAM KL. Seed production and variety development for organic systems [M]. NCAT Program, 2011: 1 − 16.
[5] Jeff Schahczenski and Katherine Adam. Transgenic crops[M]. NCAT Program, 2012: 1 − 23.
[6] SONG M, REN J, LIU LJ. Investigation report of China seed intellectual property[J]. China Rice, 2011, 17(6): 19 − 20. (in Chinese).
[7] ZHENG FT. The development direction of China's seed industry is too partial[R]. http: //www. hsnjf. com/display. asp id = 4203. (in Chinese).
[8] General Office of the State Council. Opinions about promote annexation and reorganization of enterprises by the State Council[EB]. http: //www. gov. cn/zwgk/2010 −09/06/content_1696450. htm. (in Chinese).
[9] FENG YQ, ZHANG XH, LI CS, et al. Analysis on the features and advantages of foreign seed industry and the enlightenment to China[J]. China Rice, 2011(6). 11 − 15. (in Chinese).
[10] LI Q. Science and technology innovation of foreign seed industry[J]. Beijing Agriculture, 2011(11): 12 − 14. (in Chinese).

◇◆

5. 3 Research limitations and future direction Since our study is only a start, there will be some weak points. Firstly, our study only takes Lin'an *Carya Cathayensis Sarg* as sample. The quantity has space for increase. In future, research can be expanded, to study consumption groups of *Carya Cathayensis Sarg*. Secondly, our study focuses on member groups of *Carya Cathayensis Sarg*. Thus, in future, researches can be carried out for ordinary consumers, to obtain overall cognition of consumer value in pursuing healthy life. Finally, this research has certain lagging feature. It starts from value connotation after consumption. Therefore, future researches can be carried out from expected value before consumption and make comparison of differences.

References

[1] HU J, ZHANG JF. The means-End chain model focused on consumer values[J]. Advances in Psychological Science, 2008, 16(3): 504 − 512. (in Chinese).
[2] CHEN WP. Consumers' value cognitive structure based on community supported agriculture labors' share: The application of means-End chain theory [J]. Journal of Agrotechnical Economics, 2012(9): 84 − 95. (in Chinese).
[3] LIN YL, LI ZY. A study of using means-End chains on examination of the video game for customer value judgment[J]. Academic Forum of Nandu, 2009(1): 171 − 192. (in Chinese).
[4] CHAN DY, PENG XX. A study on the value of honeymoon: An application of means-End chain[J]. Journal of Outdoor Recreation Study, 2010(23): 20 − 21. (in Chinese).