

Research on the Brand Niche Overlap of the B2C Websites: A Case of four Online Cosmetics Stores

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Received 21 November 2013; accepted 29 January 2014

Abstract

This paper uses theories in ecology for resource competition to study the brand competition in business. It provides a quantitative method to measure brand breadth and brand overlap and examines their relationships with brand competition. Four Chinese online Cosmetics stores are used as examples to illustrate the utility of the proposed method in evaluating their degree of competition. This study can help companies identify main competitors in the industry and the main aspects that they are competing in.

Key words: Brand niche; Brand niche breadth; Brand niche overlap; Online cosmetics stores brand

YAO Huili, GUO Fengjuan, WANG Shanshan (2014). Research on the Brand Niche Overlap of the B2C Websites: A Case of four Online Cosmetics Stores. *International Business and Management*, 8(1), 26-31. Available from: <http://www.cscanada.net/index.php/ibm/article/view/j.ibm.1923842820140801.1015>
DOI: <http://dx.doi.org/10.3968/j.ibm.1923842820140801.1015>

INTRODUCTION

In recent years, China's B2C e-commerce industry is developing rapidly. According to its operation mode, it is further divided into comprehensive B2C and vertical B2C. Comprehensive B2C can also known as integrated shopping mall, refers to the online sales of various types of

commodities, such as Taobao, and DangDang, Jingdong. Vertical B2C is e-commerce mode which operates in a particular industry or market segment of electronic commerce; For example, the main shoes site Paixie, main cosmetic site JUMEI, with development of the B2C online shopping market, Competition between electronic commerce is increasingly intensified, malignant price war are common. Many vertical industry websites have found a good market with the strategy of differentiation and positioning precision. The market resources are further divided with the increase of website, vertical B2C showed some problems, Such as scramble for venture investors, high storage and logistics costs, all of which lead to the vertical B2C brand convergence. The Existing researches have shown that the brand homogeneity phenomenon gradually aggravate, brand overlap problem is common in enterprise brand construction. About 86% of the brands share common key properties. The modern market competition is brand competition; brand plays an important role in enterprise operation. Competition among Vertical B2C become the focus of theoretical research, brand ecological is strategic direction of electric business enterprise survival and development.

Brand can be regarded as the things of life and it has the birth, growth, maturity, aging and death biological characteristics (Johnson R. H., 2008). Winkler presents a new concept of brand ecological environment, and points out that the combination of brand and ecological become one of the brand theory development trend. With the deepening of the research, brand niche theory becomes the Bridges to solve the complexity problem. WANG (2006) argues that brand niche refers to a brand's position in the market and the integrated use of market resources, and is the total collection of brand survival condition. Niche overlap degree is an important indicator in niche description and measure. It can reflect the commonality or similarity between two or more species in adapting to the environment and using resources. Brand niche overlap

is refers to the market position and resources used by brand exist state of the intersection, and it is one research perspective of brand overlap.

Theorists have long been engaged in the study of brand niche, but lack of empirical analysis on the electricity companies (DU, 2009). This article applied brand niche theory to the empirical analysis of the overlapping research. Combining the theory of niche overlap and competition and using niche breadth and niche overlap degree to describe site occupancy of the electric enterprises. By analyzing the present situation of competition between commercial enterprises to identify their main competitors within the industry and make a theoretical basis for future decision-making competition.

1. CONCEPT AND MEASUREMENT OF BRAND NICHE

Johnson (2008) proposed “Niche” firstly in 1910 and put that different species in one place occupy different niche in the environment. Grinnell (2011) then defined niche as “the final distribution of units occupied by a species”. Hutchinson (2010) proposed the n-dimensional hyper volume niche which lay the foundation for modern ecological niche theory research. Using the theory of mathematical point set, he describes niche as a total package of biological existence condition of a species needs for survival. There are also other definitions by different ecologists (COLWELL, 1971). In general, the concept of ecological niche covers three key words: the position, function and relativity. Position including time location and space location, function refers to the function relationship and interactions between this species and another species. Relativity refers to the niche with independence and exclusivity.

Some scholars shift the further research to the assessment of ecological niche with the concept of niche gradually clear, and accordingly put forward a series of quantitative index for measurement of the ecological niche (ZHAO, 2008), such as niche breadth, niche overlap, niche suitability, ecological niche volume, etc., in which niche breadth, niche overlap are the most closely watched indicators.

1.1 Measuring Brand Niche Breadth and Brand Niche Overlap

1.1.1 Brand Niche Breadth

Brand niche breadth indicates part of the ability the brand adapting to the environment and competing for market resources, which is measured as formula 1. Where B_i is the niche breadth of brand i , P_{ir} stands for respectively the amount of resource r utilized by brand i . The practical significance of the niche width calculation formula is: the richer one brand using market resources, the lower the degree of dependence on all kinds of resources, the greater the brand niche breadth. Brand niche breadth is an index

which is used to measure the ability the brand utilizing the market resources, narrower niche breadth not necessarily means the brand’s poor living condition; it just means the brand depends too much on a particular resource. When the more powerful competitors fight with it for the resource and the brand’s viability will be threatened.

1.1.2 Brand Niche Overlap

Brand niche overlap is a measure of the amount of resources that are shared by two brands within a market environment. A greater overlap indicates similar niches between brands, thus signaling greater competition between those brands. Lots of formulas have been put forward to measure the niche overlap, among which the most typical one is the asymmetric α method as formula 2. Where a_{ij} measures niche overlap of brand i compared with species j , which is unequal to a_{ji} . The formula is commonly used, because it takes the unequal position of different brands competing for resources into account, which is obviously closer to real world.

$$B_i = \frac{\sum_{r=1}^n P_{ir}^2}{\sum_{r=1}^n P_{ir}} \left(\sum_{r=1}^n P_{ir}^2 \right)^{-1/2} \sum_{r=1}^n P_{ir} \quad (1)$$

$$\tilde{a}_{ij} = \frac{\sum_{r=1}^n (P_{ir} P_{jr})}{\sum_{r=1}^n P_{ir}} \quad (2)$$

1.2 Brand Niche and Brand Competition

Different enterprise brands produced similar products or alternative products compete for all kinds of resources in market ecological environment, which inevitably lead to brand niche overlap. As resources are limited, there is competition among the brands. Classic niche theory, brand competition is closely related to the niche breadth and the overlap degree. Generally, the higher the intensity of competition between two species, the greater the degree of overlap, in turn, it may be not necessarily true. The degrees of brands compete for the same resource determines the intensity of the competition. As showed in Figure 1, the inter-brand Competition can be divided into six cases based on the relationship theory between the brand niche breadth and brand niche overlap and competition (HU, ZHAO & WANG, 2012).

Case 1: Both of the two brands have narrow niche breadth, but with large degree of niche overlap, which implies that they are heavily dependent on the same resources. They would face fierce competition when such resources are not enough for their survival.

Case 2: Niche overlap between the two brands is big, but niche breadth of one is wider than the others, that is the ability one brand competing for certain kinds of resources is bigger than the other’s. So the brand with narrower niche breadth can get the resources both they need. The other brand with wider niche breadth can

survival using others resources. Though there is a certain competition, they can survival together. The result of the competition is the former may be squeezed out of the market by the latter if it cannot maintain its ability to capture the pivotal resources.

Case 3: With a wide niche breadth and a large niche overlap existing between brand A and brand B, the competition exists on each kind of resources. As both brands have a soft ability in employing the resources, intense competition happens but is not fatal.

Case 4: Niche breadth of brand A and B are relatively smaller, but niche overlap does not exist within them. That is to say, the two brands using different resources for survival and there is little competition between them.

Case 5: Brand B' niche breadth is bigger, brand A smaller niche breadth, and the niche overlap of the two degree is small, the two brands with different survival resources, only brand B use resources sort is more, A resource is A single brand, but there is no competition between.

Case 6: Brand A and B both have big niche breadth and the overlap is small. There is no competition between the two brands, but this kind of situation is much less common in the market.

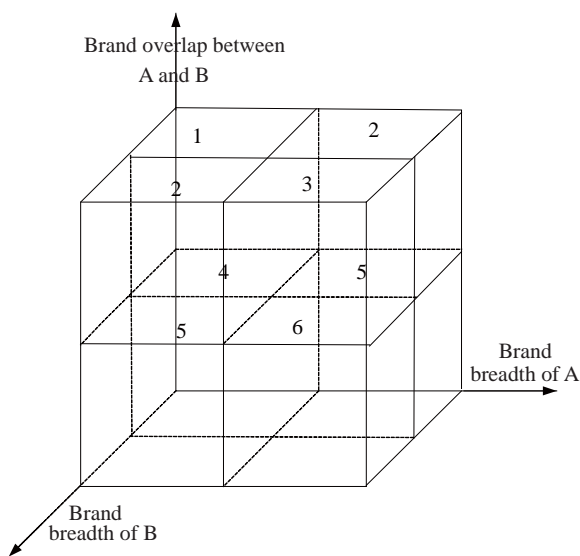


Figure 1
Brand Niche and Brand Competition

2. EMPIRICAL STUDY

2.1 The Selection of Object of Study

Online shopping has increasingly become one of the important channels of cosmetics sales. From the point of growth, 2011 compared to 2010 increased by 15.2 billion yuan, the growth rate is 67.98%, growth rate 75.64% for 2012, which is expected to be 33.09% in 2013.

According to the B2C websites of China rank in 2013 (source: Alexa statistical data in 2013), we select the top 4 website: JUMEI, LAFASO, Tiantian, N05. The

four sites accounted for 60% of the market share. On behalf of the Chinese cosmetics in electrical business, they provide consumers with the whole category of skin care and beauty products and solutions. It is necessary to analyze these four species in the e-commerce ecology environment, to a certain extent; it can reveal the competition situation of online cosmetics stores.

2.2 Market Resources used by Cosmetics Website Brand

In one dimension niche space, the niche of the same brand only have competitors from two sides, but in two-dimensional niche space, there are a lot of adjacent brands. With the increase of niche dimensions, the number of potential adjacent similar brand is increasing exponentially, so there is more adjacent competitors, thus greatly dispersed competition. Similar brands can have many Niche dimensions, so it is necessary to reduce the dimensions of brand ecological niche.

Vertical B2C cosmetics website brands employ diverse resources, including users and partners in the industrial chain and time dimension (LI & GENG, 2012). There are a lot of secondary indicators, but many of them are difficult to measure. So, this article chooses some key resources to host the study. Consumers are the main source of revenue; at the same time, B2C website brand can establish a foundation of providing products and services to consumers though keeping good relationship with their partners (including investors, suppliers, and logistics providers). The key resources are concluded and showed in Table 1. The explanation and data source are also provided.

Table1
Recourses Employed by B2C Website Brand

Dimensions	Indicators	Explanation	Data sources
Consumers	Registered Users	Membership	Analysys
	Market Share	Average share in 10-12	Analysys
	Market Growth Rate	Average growth rate in 10-12	Analysys
	Traffic	Cumulative traffic	Alexa traffic rank
Partners	Popularity	Search Volume in Google	Google Insight
	Commodities	Number of category	B2C Websites
	Logistics	Geographic coverage	B2C Websites
	Payment	Categories of payment	B2C Websites
Time	The time of service	Hot line, online customer service	B2C Websites
	The return time	Return period	B2C Websites

The performance of brands in competing for resources is measured with the scores (1, 3, 5, and 7) according to

the statistics and their ranks. Higher scores expressed higher utilization rate. Score results are shown in Table 2, look at traffic rank, for example: according to Alexa traffic rank, in the past three months, JUMEI ranks 243, LAFASO ranks 375, Tiantian ranks 1558, and N05 ranks 1306, correspondingly, JUMEI gets 7 point and the last one gets 1. Similarly given other indicators score, as shown in Table 2.

Scoring rules: the highest score 7 points (optimum utilization), the lowest score of 1 (worst utilization).

Table 2
Resource List and Scores of four Websites

Dimensions	Indicators	JUMEI	LAFASO	Tiantian	N05
Consumers	registered users	5	7	3	1
	Market Share	7	5	1	3
	Market Growth Rate	5	7	3	5
	Traffic	7	5	1	3
	Popularity	7	5	3	1
Partners	Commodities	5	7	3	3
	Logistics	5	5	7	1
	Payment	5	3	7	1
Time	The time of service	7	3	1	5
	The return time	3	5	7	1

The brand niche overlap situation of B2C website can be represented by the Figure 2, a line graph though analyzing the scores of indicators.

On the whole, JUMEI and LOFENG are more competitive and easier access to the resources and the competition between them is fiercest. Tiantian and N05 have certain comparative advantage on the logistics and service time. Four website brands niche breadth can be calculated by the formula (1), JUMEI is 9.50, LAFASO is 10.77, Tiantian is 7.08, and N05 is 7.02. All the B2C website brands occupies larger niche brand, and suggests that they made full use of ecological resources in the B2C market. The conclusion is consistent with the actual situation.

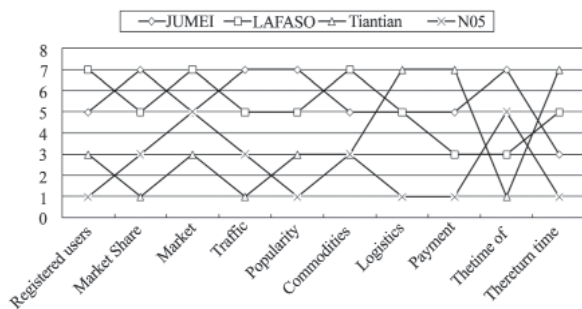


Figure 2
The Brand Niche Overlap Graph of four Websites

According to score list of indicators, you can also draw a website brand niche overlap figure in three-dimensional

space. This kind of fig can visually show the degree of overlap in the different dimensions. To demonstrate the results more clearly, consumer dimension (traffic, brand awareness, market share) and partner dimensions (logistics and distribution system, payment and security systems, product categories coverage) were analyzed in the Figure 3 and Figure 4. Each site ecological niche can be expressed by a point in the three-dimensional ecological space. Longer distance the point away from the original on behalf of the wider niche.

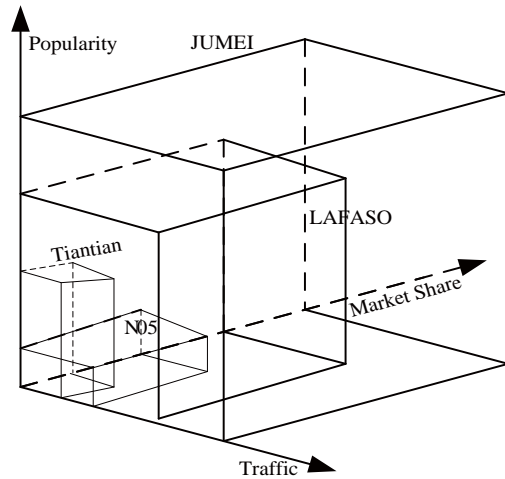


Figure 3
Brand Overlap in Customer Resources Space

In Figure 3, let x axis, y axis and z axis denote respectively the flow rate, market share and brand awareness. In this space, the niche of JUMEI, LAFONG, Tiantian, N05 are respectively expressed by red, blue, purple, black four color cube. On the user's dimension, niche overlap of four sites is very big; the spatial niche of JUMEI completely overlapped that of LAFOSA. Tiantian and N05 both were partially overlapped. All of these indicate that the degree of competition among four sites is very big in the user dimensions.

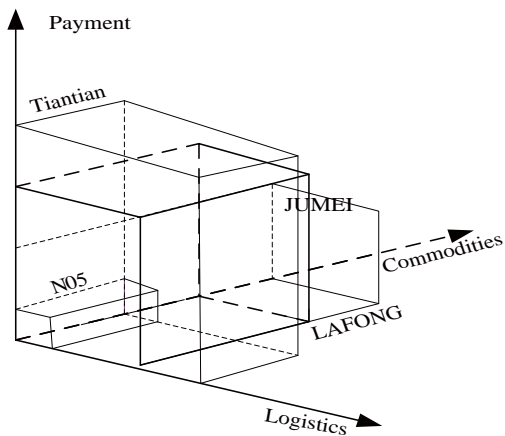


Figure 4
Brand Overlap in Partner Resources Space

In Figure 4, let x axis, y axis and z axis denote respectively the Logistics, Commodities and payment. In

this space, the spatial niche is not completely overlapped between the JUMEI, LAFONG and Tiantian. The niche of N05 is contained in the niche of other three. Tiantian and N05 have the relative competitive advantage in logistics and payment.

CONCLUSIONS

On the basis of the above analysis, four B2C cosmetics websites have large brand niche breadth and the brand overlap degree is also big. Competitive relationship between brands belong to the case 3 showed in Figure 1, that is the competition is fierce, But it is not fatal for every website. The result of the competition is: Each site can find their unique advantages in specific areas; this is also how to avoid too fierce competition. But the market environment is constantly changing. If one of the brands can't maintain the existing ability to occupy a particular resource, thus possessed by other brands, this competition situation will be changed. Enterprise brand which loss the particular competitive advantage will be excluded from the market.

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