

Research on Competitive Behavior of Internet Information Service Industry

—Definition and division of behavior types

Anwen Lu ^{1, a}, Hongyang He ^{1, b}, Jingying Wu ^{2, c}

¹Chongqing University of Posts and Telecommunications, Chongqing, China

²Huaxin Consulting Design and Research Institute Co., Ltd., Hangzhou, China

^acq_hhy@163.com, ^b2422744505@qq.com, ^c2040603908@qq.com

Abstract: In the process of competition, Internet information service companies are unable to make effective responses because of their unclear understanding of competitive behaviors, thus threatening their own market position. This paper uses structured content analysis to obtain representative competitive behaviors of the Internet information service industry. Combined with the characteristics of the Internet information service industry, this paper defines the general characteristics of market behavior and non-market behavior in the Internet industry, and divides the competition behavior of the Internet industry into markets. Behavior and non-market behavior are two major categories, in order to help companies develop a reasonable competitive strategy and enhance their competitive advantage.

Keywords: Internet information service industry, market behavior, non-market behavior.

1. INTRODUCTION

The rapid development of the Internet industry has spawned a large number of Internet companies. In order to compete for market share and safeguard their own interests, competition among enterprises has occurred frequently, such as the WeChat payment and Alipay dispute between Tencent and Ali, and the security guard between 360 and Baidu[1]-[2]. In such a fierce dynamic competitive environment, clearly distinguishing the types of competitive behavior can quickly perceive the competitive behavior adopted by the rival companies, and respond effectively to the offensive behavior in a timely manner to maintain their competitive advantage and market position.

The Internet information service industry started late in China. Scholars have not clearly defined the competition behavior in the industry. The existing research on the type of competition behavior has focused on traditional industries, such as scholar Tian Zhilong and Fan Shuai (2010). The behavior is divided into three types: access to resources, development of products, or acquisition of customer-type and hybrid types, and the unique behaviors of the real estate industry studied by the authors, including “enclosure”, “purchase price discount” and “new real estate” [3]. Scholars Tian

Zhilong, Deng Xinming, etc. (2007) believe that the market behavior of enterprises includes launching new products, entering new markets/industries, alliance mergers and acquisitions, lowering prices, important promotions, and non-market behaviors such as public welfare activities held by enterprises [5]-[6]. Generally, there are four types, namely, participation behavior, participation behavior, public welfare behavior, and public relations behavior.[4][7][8].

Among them, the "lower price" behavior is proposed because the author's research in the home appliance industry has a "price war." Scholar Wei Wu (2008) studied the market behavior and non-market behaviors of China's steel, automobile, pharmaceutical, daily chemical, power and telecommunications industries, and believed that the market behavior of these industries includes "lower prices" and "technical innovation". "Improve service", etc., in which "expanding production capacity" and "improving channels" are the behaviors proposed by combining the characteristics of these six industries[9]. It can be seen from the above research that each scholar, when studying a specific industry, combines the characteristics of the industry to summarize the market behavior and non-market behavior division framework applicable to the industry[10]. Because the Internet industry has the characteristics of network externality and easy replication, the competition behavior of the Internet industry cannot simply apply the existing classification of traditional industries, but should re-divide the competition behavior of the Internet information service industry according to the characteristics of the industry

Based on the classification of traditional industry competition behavior, combined with the characteristics of the Internet industry, this paper summarizes the general characteristics of market behavior and non-market behavior applicable to the Internet industry, and types the competition behavior of the Internet information service industry, so that enterprises can clearly understand the competition behavior category. Thereby improving the performance of the company and being in a favorable position in the competition.

2. GENERAL CHARACTERISTICS OF MARKET BEHAVIOR AND NON-MARKET BEHAVIOR IN THE INTERNET INFORMATION SERVICE INDUSTRY

The general characteristics of market behavior and non-market behavior in the Internet information service industry are the basis for judging the attribution of competition behavior. When summarizing the general characteristics of market behavior and non-market behavior of the Internet information service industry, it is necessary to fully consider the characteristics of the industry. The Internet Information Services industry has several new industry characteristics: Network Externality: In an industry with a network structure, the value of a product or service to a user increases with the number of users who use the same (or compatible) product or service. Improve; free lock: By establishing a platform, enterprises provide free services to users, so that users can choose the products of the company for a long time; standard monopoly: enterprises that master core technologies often set standards and reduce product compatibility. Prevent the entry of competitors; easy to copy: Internet information service industry products and Internet technology are inextricably linked, products are easy to copy, easy to form scale production.

According to the research of traditional industry competitive behavior and the characteristics of the Internet information service industry, the general characteristics of market behavior and non-market behavior in the Internet industry can be summarized. Market behavior is essentially an economic

behavior, usually with the following characteristics: first, the enterprise is implemented in the market environment; second, the enterprise is active in the market field as the subject; third, the enterprise has a clear implementation Economic interest goals, and economic interests are direct value pursuit goals. Non-market behavior is essentially an emotional behavior. It is characterized by: First, the company is generally outside the market, or even if the company is in the market, it is only in the market as an object; Second, enterprises do not pursue economic interests as their goal, but they hope to seek spiritual satisfaction in the interaction between people. Economic interests are usually only used as means to achieve spiritual pleasure.

3. COMPETITION BEHAVIOR STATISTICS OF THE INTERNET INFORMATION SERVICE INDUSTRY

The competition behavior of the Internet information service industry is diverse. How to select the representative competition behavior of Internet information service enterprises will become the key to the reliability of the division results. BAT is an acronym for the English names of Chinese Internet companies Baidu, Alibaba, and Tencent. They are typical representatives of China's Internet information service industry and the three giants of Chinese Internet companies. This ensures that the collected competitive behaviors are representative, and most of the competition behavior of the three companies will be concerned by the technology media or opponents. It also facilitates the collection of competitive behavior.

When acquiring corporate behavior data, many scholars use structured content analysis as an important method. If the data comes from multiple sources, the reliability of the data will be improved. This article is mainly at iResearch (<http://www.iresearch.com.cn/>) and Baidu (<http://home.baidu.com>), Alibaba (<http://www.alibabagroup.com>), Tencent (<http://www.tencent.com>), Sina Technology (<http://tech.sina.com.cn/>), Netease Technology ([Http://tech.163.com](http://tech.163.com)), Sohu IT (<http://it.sohu.com>) and other important industry websites searched the behavior data of the three companies as of December 31, 2017. The specific situation is shown in Table 1.

Table 1 Summary of Competitive Behavior of Internet Information Service Industry

Competitive behavior	Baidu	Alibaba	Tencent	Total
Pricing behavior	7	16	6	29
Promotional behavior	1	33	3	37
Propaganda behavior	55	108	31	194
Launch new products/services	117	164	24	305
Accompanying diffusion	16	10	9	35
Merger	15	23	19	57
investment	22	67	27	116
Cooperative alliance	76	188	24	288
Develop new markets	9	25	1	35
Visit behavior	2	3	0	5
Participation behavior	58	78	38	174
Public welfare act	17	53	4	74
Public relations behavior	25	41	13	79

Product/service upgrade	23	21	5	49
Human resource strategy	20	21	10	51
Financing	10	8	3	21

4. DIVISION OF COMPETITIVE BEHAVIOR IN THE INTERNET INFORMATION SERVICE INDUSTRY

According to the general characteristics of market behavior and non-market behavior of Internet information service industry, many competition behaviors in the Internet industry can be divided into two categories: market behavior and non-market behavior.

4.1 Market behavior

The market behavior of the Internet information service industry mainly refers to the behavior directly affecting the enterprise and competitors implemented by the Internet information service enterprises in the market environment. The purpose of implementing market behavior is to obtain direct economic benefits, customer base, or to help companies establish competitive advantage in a relatively short period of time to safeguard corporate interests. According to the different resources and the degree of efforts made by enterprises, this paper divides the market behavior of Internet information service enterprises into two categories: strategic behavior and tactical behavior. Among them, strategic behavior refers to the need for more resources, or special resource needs, enterprises must make greater efforts to implement the behavior; tactical behavior is often considered as a refinement of strategic behavior, compared to strategic In terms of behavior, tactical behavior requires less resources, or only general resources, and companies have relatively little effort to implement tactical behavior.

4.1.1 Tactical behavior

(1) Pricing behavior

The pricing behavior of Internet information service companies can be divided into free behaviors and personalized pricing behaviors. Enterprises lock users by free behavior, making users sticky about products, thereby increasing the user base. In the Internet information service industry, this is the main way for enterprises to mainstream their products; when enterprises have a large user base, they will Other products are developed on top of its free products. This part of the product company will be promoted to users through personalized pricing. For example, QQ launched by Tencent can be used free of charge by users. This is free behavior, but if you want to differentiate your QQ from other users, you can spend money on it, such as QQ's QQ show product, which is personalized pricing behavior.

(2) Promotional behavior

Mainly refers to an act of increasing sales of products through various preferential promotions. For example, Alibaba Tmall's annual double 11 promotion is a promotion.

(3) Promotional behavior

It mainly refers to an act carried out by an enterprise to increase people's or product's popularity to influence people's thoughts and guide people's actions. This paper defines the propaganda behavior of Internet information service enterprises as three aspects: one is pure propaganda behavior, such as the advertising behavior of enterprises; the second is to establish the corporate image behavior; the third

is to issue the enterprise before the product is officially launched. Product-related messages are defined as promotional actions.

(4) Launch new products/services

Mainly refers to the behavior of companies launching new products or services in their own fields. If the products/services launched are to enter another field, this behavior is not within the count of launching new products/services.

(5) Product/service upgrade

Mainly refers to the improvement of the function, appearance, etc. of the product or the provision of more personalized services based on the original service.

(6) Human resource strategy

Mainly refers to the company's important recruitment behavior, this article does not consider the incentive behavior of the company to employees, regardless of internal staff adjustment behavior.

4.1.2 Strategic behavior

(1) Accompanying diffusion

With the spread, it is a company that builds a considerable user base through core products, and then carries the corresponding platform based on the core products, and through this platform, the related products spread to other fields. At present, enterprises engaged in the Internet information service industry have extensive coverage and rapid dissemination through the Internet, relying on their core products to enter the market in advance to obtain a large number of users, and to develop related products based on their core products for dissemination, which is an Internet information service. An important way for industrial products to generate economic benefits.

(2) Corporate M&A/Investment

Mergers and acquisitions of enterprises are mainly divided into mergers and acquisitions. An acquisition is an act in which an enterprise purchases assets or stocks of other companies to achieve control of the enterprise; mergers refer to mergers between companies. In the current Internet information service industry, M&A is one of the more competitive activities of enterprises. This is also a means for enterprises to adapt to the rapid development of the Internet. The development of the Internet is changing rapidly. In order to quickly compete for users or resources in the field, enterprises will adopt a merger and acquisition method. Investment is also a way for companies to adopt other fields.

(3) Financing

Mainly refers to an act of seeking monetary investment for development. For example, the company issues bonds, stocks, options, etc., or the company conducts investment promotion, or makes loans to banks.

(4) Cooperative alliance

It mainly means that two or more enterprises establish partnerships in the form of contracts in order to achieve specific goals such as sharing resources, sharing risks, and complementing each other's advantages, in order to achieve a win-win situation in the cooperation field. This is a kind of market behavior commonly used by Internet information service enterprises. Nowadays, Internet information service enterprises will carry out cross-domain development. Enterprises need huge resources to invest, which on the other hand has intensified competition in the industry. On the other

hand, it has also increased. The business risks of the company, so the company is more willing to cooperate with other companies.

(5) Market development (into new markets)

An act of entering a new market is mainly based on geographical development. For example, Alibaba's entry into the Korean market is defined as the development of market behavior.

4.2 Non-market behavior

The non-market behavior of the Internet information service industry mainly refers to the behavior that the Internet information service industry enterprises implement in the non-market environment and will not directly affect the enterprise and the competitors. The purpose of implementing non-market behaviors is to establish the image of the company, to improve the inclusiveness of the public and consumers, and to maintain and maintain good relationships with stakeholders.

(1) Public welfare act

It mainly refers to the activities of external stakeholders of enterprises to visit or inspect the enterprise, such as accepting inspections by leaders at all levels of the country; for example, on the 1st and 22nd of 2015, Vice Premier Wang Yang visited Alibaba Group and Ant Financial Group.

(2) Participation behavior

Mainly refers to enterprises participating in various activities organized by the media or the government, such as corporate leaders elected as members of the Politburo or NPC deputies, or rated as advanced, such as March 4, 2013 Tencent CEO Ma Huateng was elected as a National People's Congress representative; Including forums, conferences and other activities in government or media organizations, such as March 3, 2015, Baidu CEO Li Yanhong issued a proposal at the two sessions: suggesting the establishment of the "Chinese Brain" program.

(3) Public welfare act

Mainly refers to the public welfare activities of enterprises supporting education, employment, donations for disaster areas or setting up charitable funds. For example, on April 10, 2015, Alibaba Chairman Ma Yun and Tencent CEO Ma Huateng initiated the "Peach Blossoms" ecological protection fund. For example, on December 22, 2015, Baidu United Concord Medical College researched cancer, and Baidu CEO Li Yanhong donated 30 million to assist in research.

(4) Public relations behavior

Mainly refers to the company to invite relevant media and industry stakeholders to participate in important events. For example, on May 29, 2014, Baidu held the annual Baidu Alliance Summit in Huangshan. Baidu CEO Li Yanhong delivered a speech. The main media and all the partners and suppliers of Baidu participated; the leaders of the company interviewed the media on the company's competitive strategy, future development, etc., or issued a statement to the public on the unfavorable statements of the company, etc., all of which belong to the public relations behavior of the enterprise, such as On May 3, 2013, Tencent CEO Ma Huateng accepted an interview with The Wall Street Journal and claimed that WeChat will start commercialization. It also includes corporate leaders visiting government officials. For example, on June 11, 2015, Alibaba Chairman Ma Yun met in the United States. The mayor of Chicago, and exchanged with the US SME owners.

5. CONCLUSION

This paper summarizes the general characteristics of market behavior and non-market behavior in the Internet industry through literature combing and the characteristics of the Internet information service industry, and defines the diverse and diverse competition behaviors of Internet information service enterprises. It is concluded that the market behavior of Internet information service industry mainly includes: pricing behavior (including free behavior and personalized pricing behavior), promotion behavior, publicity behavior, enterprise launching new products or new services, enterprise upgrading products or services, human resources strategy, It is accompanied by proliferation behavior, corporate mergers/investments/enterprise financing behaviors, cooperative alliances between enterprises and other enterprises, and behaviors of enterprises to develop markets; non-market behaviors of Internet information service enterprises mainly include public relations behaviors, public welfare behaviors, participation Behavior and visits. Through the clear classification of competitive behavior, it provides a reference for Internet information service enterprises to choose competitive behavior in the process of competition, so that enterprises can better participate in the competition process, create competitive advantage and maintain market position.

REFERENCES

- [1] Lu Anwen, Kong Dexing. A Review of Unfair Competition Research in Internet Information Service Industry[J]. Journal of Chongqing University of Posts and Telecommunications(Social Sciences Edition), 2018, 30(01): 96-102.
- [2] Li Yufeng. The Judgment of Unfair Competition Behavior in the Internet Field[J]. Journal of Chongqing University of Posts and Telecommunications(Social Sciences Edition), 2016, 28(01): 25-30.
- [3] Tian Zhilong, Fan Shuai. A Study on the Competitive Interaction between Enterprise Market and Non-Market Behavior--Based on the Case of China's Real Estate Industry[J]. Management Review, 2010, 02: 86-96.
- [4] Tian Zhilong, Deng Xinming, Taieb Hafsi. Corporate Market Behavior, Non-Market Behavior and Competitive Interaction: A Case Study Based on China's Household Appliance Industry [J]. Management World, 2007, 8: 116-128.
- [5] Baron D P. Integrated Strategy Market and Nonmarket Components [J]. California Management Review, 1995, 37(2): 47-65.
- [6] Bonardi J P, Holburn R, Berth V. Nonmarket strategy performance: Evidence from US electric utilities [J]. Academy of Management Journal. 2006, 49(6): 1209-1228.
- [7] Tian Zhilong, Gao Yongqiang, Wei Wu. Research on Chinese Enterprises' Political Strategies and Behaviors[J]. Management World, 2003(12): 98-106.
- [8] Wei Wu. Research on Corporate Political Resources, Political Strategies and Political Performance and Their Relationship in China's Environment[J]. Management World, 2006(2): 95-109.
- [9] Wei Wu. The integration and interaction between non-market and market resources, strategy and performance of enterprises[J]. China Industrial Economy, 2008, (3): 23-31.
- [10] CHEVALIER, JUDITH A. Do LBO Supermarkets Charge More? An Empirical Analysis of the Effects of LBOs on Supermarket Pricing [J]. The Journal of Finance, 1995(50): 1095-1112.