Research on Brand Value Evaluation Based on Interbrand Model in the Era of Big Data—Taking Anta as an Example

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Abstract: With the development of the national structural reform, the competition of sports brands in the international market share is becoming more and more fierce, and the consumption trend of consumers has formed an inseparable relationship with the brand value. The brand not only reflects the image and core competitiveness of the country, but also represents the development status of national enterprises. The enterprise brand value evaluation is paid more and more attention in the asset evaluation industry, and the enterprise brand value evaluation business also appears more in the asset evaluation practice. Because China's market development is relatively late compared with other countries, people's brand awareness is relatively shallow, so China's enterprise brand value research still needs to be more thorough. This paper takes Anta Company as the evaluation object, based on the questionnaire scoring method, combined with the improved Interbrand model, determines the indicators in the model, and evaluates the value of Anta brand under the assumption of continuous operation. When evaluating the value of Anta brand, through big data mining, screening and analysis of the required data, brand income, brand function index and brand strength coefficient are formed, which can make enterprises better understand their own situation and strengthen their brand building.

1. Introduction

Under the background of contemporary society, brand value assessment plays a crucial role in influencing the development strategy of enterprises. The management of enterprises is also paying more and more attention to brand value assessment, and the business volume of brand equity assessment is increasing year by year. Sports brands have developed rapidly in recent years. The emergence of the "Xinjiang Cotton" event in 2021 has suddenly burst out Chinese people's enthusiasm for Chinese sports brands. Especially after the 2022 Beijing Winter Olympics, more and more consumers have learned about Chinese local sports brands, and people's attention to local sports brands is also rising. Eager for more high-quality Chinese sports brands to compete with foreign Nike, Adidas and other leading sports brands. Anta, as the leader of Chinese sports brands in recent years, was successfully selected as one of the top 50 Interbrand brands in China in 2021

and won the top 10 "Light of National products" brands, showing good strength, but there are still problems in Anta's enterprise development. Therefore, in the context of big data, Anta Sports is selected as the main object of investigation. Based on the revised Interbrand model, this paper evaluates Anta's brand value, and puts forward reasonable suggestions for enhancing Anta's brand value based on the relevant theoretical basis learned.

2. Model and Analysis of Brand Value Evaluation

Brand value is the most critical part in the process of brand management, and it is also an important symbol of the brand that is different from other market competitors [1]. In the brand value evaluation, the classic models include the Sinobrand model proposed by Professor Wang Chengrong from the perspective of consumers, the WBL brand evaluation method of World Brand Lab from the perspective of the market, and the Interbrand model proposed by British Interbrand Company. interbrand model is the most widely used.

Sinobrand model. The model is based on the public financial statement data of the enterprise as the main data, screening and eliminating unnecessary financial indicators as auxiliary tools, and multiplies the brand advantage value with the brand strength coefficient to obtain the brand value, and the brand advantage value is determined by the excess profits brought by the enterprise brand. Therefore, the main disadvantage of Sinobrand model is that in terms of the selection of refinancial indicators, the market indicators measured by experts lack certain objectivity. The rationality and accuracy of the evaluation results need to be further verified, and the time cost is high [2].

WBL model is a comprehensive analysis of the main financial data of the enterprise from the perspective of consumers, such as sales revenue, profit, etc. This study uses the idea of excess return method to calculate the profitability of enterprises. In addition, we fully use our unique value toolbox (BVA Tools) to calculate the degree of brand contribution to value, and predict the weight of corporate brands in future operating income and intangible assets. Among them, although WBL model adopts the same calculation method as Interbrand model, which uses expert scoring method to score the seven factors, Interbrand model further quantifies the brand strength coefficient into the return on assets through "S" curve to reduce financial risks. Moreover, WBL model is more subjective than the modified interbrand model, so it is not suitable for the study of this paper.

The Interbrand model is characterized by the fact that the formation of brand value does not come from the cost of the brand itself, nor does it come from the premium created by the brand beyond the use value of the product, but from the stable earnings that the brand can bring to its operators in the future [3]. Similar to the income approach, you have to think about free cash flow. The model also has shortcomings, such as lack of analysis of brand value from the perspective of consumers, high cost of market research, and more subjective components.

On the whole, the Interbrand model uses intangible assets and market factors indicators to obtain brand value, and takes market factors into consideration comprehensively and evaluates them objectively and fairly, which is relatively feasible for this study.

3. Improved Interbrand Model

The original calculation formula of Interbrand model is: brand value = brand strength coefficient × brand income [4].

Brand strength refers to the status of a brand in the industry. The higher the brand strength, the higher the industry status of the enterprise, the greater the discount ability of the brand's future earnings. The brand strength coefficient is obtained by using the calculation formula based on the brand strength score. Brand income is the annual income of the first three years determined by multiplying intangible asset income by brand effect coefficient. The calculation of brand income is

based on the fact that the income closer to the base date of evaluation is more representative of the actual income of the enterprise. Therefore, the historical average income of the enterprise is calculated as the brand income of the enterprise with the ratio of 3:2:1 in accordance with the brand income of the enterprise in the recent three years [5]. The original Interbrand model is based on various financial data of the past few years and adopts the after-tax approach, so it lacks the forecast of future earnings.

The calculation formula of the improved Interbrand model is: brand value = brand income $\times$ brand function index $\times$ brand strength coefficient. Among them, brand income refers to the precipitation income of brand equity, which is usually determined by multiplying intangible asset income by brand effect coefficient. Brand function index refers to the influence of various brand factors on consumers' purchase of products. This paper uses questionnaire method to obtain brand function index. The brand strength coefficient refers to the profitability of an enterprise in recent years, and the greater the value, the less the risk of the brand. It is usually obtained through the expert scoring method, which is comprehensively scored by the experts according to their professional knowledge and practical experience.

The brand function index represents the brand's contribution to intangible asset income, which is actually the brand's influence on decision-making and the prediction of future income. At present, there is no clear method for the calculation of brand function index, and the subjective factor is strong and the degree of openness is large. In this paper, the method of questionnaire survey is used to determine. The improved Interbrand model takes net profit as the observed value of brand income, and revises the brand function index from the perspective of consumers, which can better reflect the fair value of brands, and the evaluation system is also relatively perfect. Therefore, this study is based on the model, through the case analysis method, the brand evaluation value, is committed to establishing a more suitable for the development strategy of Chinese enterprises evaluation model, for the enterprise brand value evaluation to add a more perfect evaluation basis.

4. The Brand Value Evaluation Process Taking Anta as an Example

In recent years, the consumption trend of domestic sports brands has been rising, and Anta's revenue scale has ranked first in China's sporting goods enterprises for 10 consecutive years. Anta easily surpassed Adidas in the domestic market, and Nike is only one step away, to achieve the transformation from independent rise to surpass the leading. Anta continues to improve the multi-brand matrix, highlighting the strong brand operation ability, which is the strong voice of Chinese brands beyond international brands. In 2020, the company surpassed Adidas Group to become the world's second largest sports brand by market value. China's Anta has become the Anta of the world.

4.1 Determination of Intangible Assets

Based on the historical record of intangible asset income, the weighted average method is adopted to obtain the expected value of the next three years. Finally, according to the brand income forecast of the previous three years and the next three years, different proportions are given according to the distance of time, so as to obtain the brand income forecast [6]. The formula is as follows:

Pre-tax intangible asset income = (10% x N-2 year intangible asset income) + (15% x N-1 year intangible asset income) + (25% x n+1 year intangible asset income) + (25% x n+1 year intangible asset income) + (15% x n+2 year intangible asset income) + (10% x n+3 year intangible asset income)

After-tax intangible asset income = (operating profit - tangible asset income) x income tax rate

Tangible assets return = tangible assets x rate of return on capital

Tangible assets = current assets + fixed assets

Table 1: Main operating performance indicators of Anta from 2019 to 2021 (Unit / 100 million yuan)

Year	2021	2020	2019
Operating profit	109.89	91.52	86.95
Net profit	77.2	51.62	53.4
Fixed assets	37.79	27.29	25.69
Current assets	399.02	327.17	233.21
Total assets	626.68	518.67	412.18
Return on capital (net profit/total assets)	12.32%	9.95%	12.96%
Income tax	25%	25%	25%
Tangible assets (current assets + fixed assets)	436.81	354.46	258.9
Return on tangible assets (tangible assets x return on capital)	58.18	35.27	33.55
Income on intangible assets (operating profit - income on tangible assets)	51.71	56.25	53.40
Earnings on intangible assets after tax	12.93	14.06	13.35

Data source: Baidu Stock Connect

The financial data of Anta Company in the past three years and the weighted average method are used to forecast and analyze the intangible asset income in the next three years with weights of 0.5, 0.3 and 0.2.

Table 2: Forecast of Intangible Asset income in the next three years by weighted average method (Unit / 100 million yuan)

weight	0.5	0.3	0.2	Forecast earnings value
2022	12.93	14.06	13.35	13.35
2023	13.35	12.93	14.06	13.37
2024	13.37	13.35	12.93	13.28

According to the above Table 1 and 2, the pre-tax intangible asset income of Anta Company = $(10\% \times 13.35) + (15\% \times 14.06) + (25\% \times 12.93) + (25\% \times 13.35) + (15\% \times 13.37) + (10\% \times 13.28) = 1.335$ billion yuan

4.2 Determination of Brand Function Index

The traditional Interbrand model analyzes brand value from the perspectives of finance and market. The improved model incorporates the perspective of consumers in the form of questionnaires, and quantifies the questionnaires collected from the perspective of consumers to determine the brand function index [7].

First of all, there are six factors that affect the overall purchasing behavior of consumers in the sportswear industry. They are brand influence, price advantage, product production process, purchase convenience, advertising and sales incentives and other. Secondly, the questionnaire was developed and the feasibility and rationality of the questionnaire contents were verified [8].

The main content of the questionnaire consists of the fundamentals of the investigated brand and various factors that need to be investigated and analyzed in this study. Therefore, the questionnaire content of the brand power index is designed as follows:

Of the following factors that influence your purchase, please rank them in order of importance. If

you feel that when buying a product, if you feel that the brand influence is the most important in choosing a product, then it is ranked first, marked 1 in parentheses, and the importance of other factors and so on.

Price advantage

Brand influence

Product manufacturing process

Purchase convenience

Advertising efforts and sales incentives

Other

Finally, collect the survey results and analyze the data in the questionnaire.

A total of 121 questionnaires were issued in this study, and 100 valid questionnaires were collected. The questionnaires were sent and received from November 25, 2022 to November 28, 2022. The questionnaire was issued and filled out by means of star scan code. The survey objects were students in Fuzhou University of Foreign Studies.

After sorting out the questionnaire data, the survey results are shown in the following table:

Table 3: Ranking of factors affecting ANTA consumers

Anta	1	2	3	4	5	6
Brand influence	14	34	41	12	14	1
Price advantage	11	28	12	20	9	2
Production process	68	23	18	12	15	3
Convenience of purchase	3	5	16	24	10	11
Publicity and promotion	2	7	6	26	38	24
other	2	3	7	6	14	59
Assign points	6	5	4	3	2	1

Data source: questionnaire

As can be seen from Table 3, for Anta consumers, the quality of products ranks first among the six influencing factors, followed by the price of products. It can be seen that the quality of products is the decisive factor affecting consumers' purchase of products.

Calculate the brand function index = total score of brand elements $\div$ total score of each element =334$\div$2100=15.90%

4.3 Determination of Brand Strength Coefficient

Brand strength is the risk in the process of reflecting future returns. Expert scoring method is based on experts' understanding and familiarity with various fields of enterprise business activities and brand building, and professional judgment and scoring on various factors of brand strength according to their years of experience and professional knowledge.

The higher the brand scores in the following seven factors, the stronger the brand competitiveness and the longer the expected profit life of the brand [8]. It can be seen from Figure 1 that Anta has a high score in the marketing scope and market position, indicating that Anta's brand sales ability and influence are relatively large, but its score in brand protection is low, and it is easy to be seized by competitors. Therefore, it is urgent to strengthen brand protection measures and improve brand protection awareness.

As can be seen from the figure above, Anta's marketing scope has the highest score, so it has the greatest impact on Anta's brand value, indicating that Anta has a strong ability to transcend regional and cultural boundaries in the market. After obtaining the brand strength score T, the S-curve of the interbrand model is shown as follows:

$$S \overset{=}{} 2T \quad T\epsilon[0,50]$$

$$(S-10) \overset{=}{} 2T-10 \quad T\epsilon[50,100]$$

We get anta S=18.12

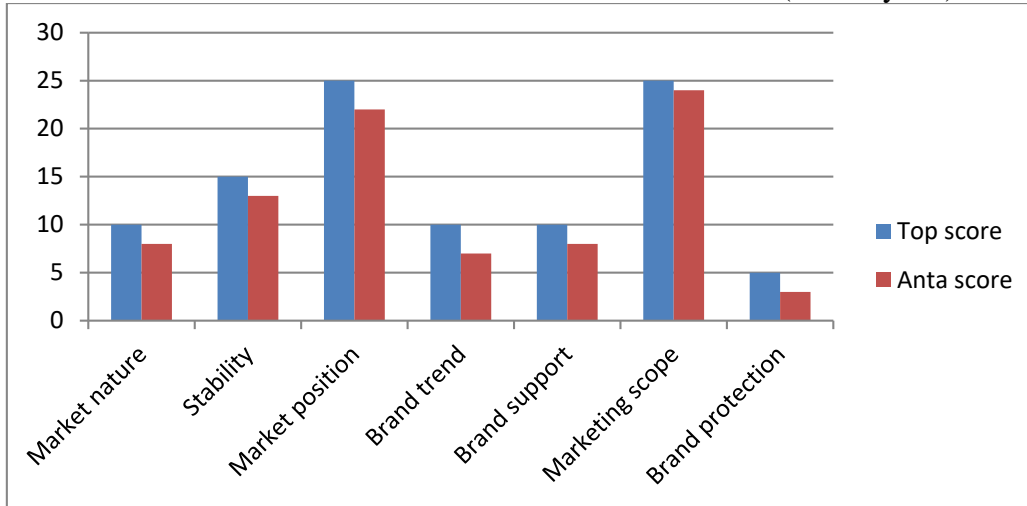Evaluation result: Anta's brand value =18.12×13.35×15.9%=38.46 (billion yuan)

Figure 1: Index score

5. Analysis of Evaluation Results

The brand value of Anta calculated by the improved evaluation model is 3.846 billion yuan, which is significantly different from the 29.719 billion yuan published on the Interbrand China List in 2022. The reason is that the Interbrand list does not include the perspective of consumers, and the gap with the perfect competition market of Anta is large, and the degree of subjectivity is large. The results of evaluation are biased. The measurement basis of intangible asset income is the net profit of the enterprise, but the factors that affect the net profit of the enterprise are operating income, macro environmental policy, industry development, enterprise management strategy and so on. Because there are many influencing factors, there may be irregular fluctuations in corporate net profit, so there may be certain errors in brand income.

When the Interbrand model is applied to brand value evaluation, it needs to carry out strict brand selection and establish the scope of application of evaluation methods. First of all, in terms of brand sales, more than 20% must come from outside the local market, Anta has the FILA brand to meet the market demand; Secondly, only those brands whose public information is available are eligible to participate in the evaluation. Anta's information sharing mechanism ensures the openness and transparency of public information. Finally, the industry distribution requirements for brands need to be followed, that is, the evaluation results only include the top three leading brands in each industry. The so-called "leading brand" not only considers the brand's existing market share, but more importantly, considers the brand's market leadership. Anta is ranked third among global sports brands and has proven market leadership, so it fully meets this requirement. However, the applicability of this model is still uncertain, and if it is to be applied to the evaluation of other brands, the model needs to be adjusted and improved according to the specific situation.

6. Suggestions for Anta Brand Building

Brand value is a long-term accumulation process, in the competition with Li Ning, Nike and

Adidas and other big brands, slowly grow into more well-known brands. Through the above analysis of Anta brand value evaluation, the following suggestions are put forward for Anta:

6.1 Brand Differentiation

Based on big data to accurately position the brand, the use of big data technology to carry out technical mining, in-depth analysis of Taobao, Jingdong and offline sales data of multiple channels, clear the market consumer preferences, habits and purchase efficiency. In the current information age, most consumers are confused in front of massive information, so they have no way to choose their favorite brand. In similar brands, to occupy a larger market share, it is necessary to improve visibility, have differences between the brand and other brands, and highlight the brand's professionalism. As the official partner of the fire of the Winter Olympics, in the promotion of the era, industry elements, in the young people's favorite emerging sports, with Gu Ailing and other sports attributes of the spokesperson cooperation, the use of its star effect, enhance the popularity of anta brand and stimulate the sales of related products. Big data can be applied to establish a brand management platform, starting from various aspects to maximize brand value.

6.2 Improve Product Quality and Win Customer Loyalty

The original brand is not built by publicity, but by high-quality products, high-quality service and good word-of-mouth, which has become an enduring brand deeply rooted in people's hearts. In the 2022 Winter Olympic Games, Anta, as an official partner, deeply participated in the Winter Olympic Games, so that the brand in the hearts of the people impressed, many times on the hot search, so that its heat is higher than other similar brands, the enthusiasm of the people eventually transformed into the purchase of Anta products, in the premise of ensuring the original quality and constantly improve product quality, so that it is more favored by consumers.

6.3 Focus on Brand Concept and Enhance Corporate Culture

Corporate culture is the initial way for consumers to understand the brand, corporate culture is also affecting generation after generation, so that the company can survive for a longer time, do not forget the original intention, and take its essence to its dross on the original basis. Corporate culture also needs to accumulate precipitation, but also need innovation. The Times are changing, and the target audience should be younger and more inclined to the post-00s with social influence. We can increase innovation efforts, take young people as the main body, create a sports brand that is extremely relevant to young people, cultivate young vitality, develop together with young people, and create a better future.

6.4 Comply with Brand Trends and Implement Green Marketing

In the past two years, the state has also emphasized the dual-carbon policy, and under the general trend, the continuous emergence of green actions will push the brand environmental protection marketing to a new wind. Anta strengthens the supply chain, helps to produce differentiated products, considers suppliers from various aspects such as type, price and quality, selects the most suitable suppliers, combines the performance of suppliers' various capabilities with performance, encourages the development of innovative products, diversifies products, and makes products green marketing. In its raw materials, packaging and other environmental elements can be used, actively respond to the call of the state, follow the trend of The Times, and strive to lead the trend of The Times.

7. Conclusion

This paper assumes that ANTA Sports continues to operate, evaluates the value of Anta Sports brand, and uses the improved Interbrand model to analyze Anta Sports as an example. Interbrand model has been unanimously recognized by scholars and professional evaluation institutions at home and abroad. Different from previous income prediction methods, Interbrand model introduces the concept of brand strength. By comprehensively considering various factors affecting brand value, the estimated income obtained is more in line with the actual situation [9]. By using the improved Interbrand model to evaluate Anta's brand value, it is not difficult to find that in promoting brand building, brand value assessment helps brand subjects know the value of their own brands, and helps enterprises to put forward more targeted and detailed professional suggestions for improving brand management. On the other hand, it helps the society to understand the value of the brand, which is conducive to strengthening the social brand building and promoting the brand competitive advantage of "product + service". The market environment and development status of different industry brands are not the same. Therefore, it is difficult to achieve very accurate brand value evaluation results. However, with the derivation and improvement of brand value assessment methods in contemporary society, the influence factors are constantly adjusted in the process of social development, and the influence is comprehensively analyzed according to the weight, which makes brand value more and more accurate [10-11].

Acknowledgement

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