Analysis on the Effect of Airline Service Brand Construction

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Abstract: The paper evaluates airline service brand from the perspective of consumer perception, after analyzing the theories and practices of brand evaluation and combining with the service characteristics of airlines. Taking A, B, C and D as examples, a total of 468 questionnaires were collected through questionnaire survey method.The results show that the brand awareness, brand recognition, brand favorite and brand loyalty are relatively high, but the conversion rate of brand favorite of B, C and D is not ideal. Finally, this article proposes strategies and suggestions to improve passenger loyalty.

Keywords: Airline, Service, Brand, Construction effect

1.Introduction

Construction a Civil Aviation service brand is an important way to achieve transformation from large aviation industry to power one, and an important lever to effectively enhance the people's sense of gain[1-2]. More and more airlines gradually realize the importance of brand for enterprise development, and actively invest in brand construction work[3-5]. However, it is currently unknown whether brand construction has brought about an improvement of service quality and whether it meet the growing needs of the people for a better life. That is, what is the effect of brand construction.

Existing brand evaluation methods mainly include cost method, market method, income method, interbrand evaluation method and brand equity model method, etc[6-9]. These methods are mainly developed from the perspective of finance and brand market power, etc. It is difficult to fully reflect the comprehensive value of the brand, so as to effectively guide brand construction and brand management. In addition, existing research mainly focuses on brand construction in the manufacturing industry, with less attention to service industry brand construction. Therefore, this article takes airlines as the object to study the effect of brand construction from the perspective of consumer perception.

2.Evaluation indexes and calculation methods

According to the consumers' familiarity and recognition of the brand, this paper selects better, more comprehensives that reflect consumers' sense of experience, namely brand awareness, recognition, favorite and loyalty, to evaluate the effectiveness of airline brand construction, see Fig. 1.

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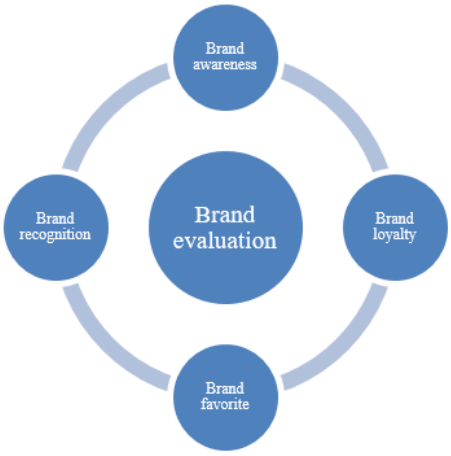

Fig. 1 Four-dimension model of brand evaluation

2.1 Brand awareness calculation

Brand awareness refers to the measurement of the audience's level of awareness of a certain brand, that is, how many people among the audience know the brand. The specific calculation is as follows:

The brand awareness of the i-th sample is shown in (1)

$$z_i = \frac{j_i}{q_i} \times 100\% \quad \text{.....(1)}$$

After the combination of all layers, the calculation of brand awareness is as follows (2):

$$Z = \sum_{i=1}^{n} \frac{q_i}{Q} \times \frac{j_i}{q_i} \times 100\% = \frac{1}{Q} \sum_{i=1}^{n} j_i \times 100\% \quad \text{.....(2)}$$

Notice:z_i represents the brand awareness of the i-layer sample; j_i represents the number of consumers who know the brand in the i-layer sample; q_i represents the number of consumers in the i-layer sample; Z represents for brand awareness; Q represents the total number of consumers.

2.2 Brand recognition calculation

Brand recognition is the audience's in-depth understanding of the brand's knowledge, connotation and other information. This indicator examines the audience's in-depth cognition of the brand on the basis of awareness. The specific calculation is as follows:

The brand recognition of the i-th sample is shown in (3):

$$\overline{r_i} = \frac{1}{j_i} \sum_{i=1}^{j} X_{ir} \times 100\% \quad \text{.....(3)}$$

After the combination of all layers, the calculation of brand awareness is as follows (4):

$$\bar{R} = \frac{1}{Q} \sum_{i=1}^{n} q_i \times \overline{r_i} \quad \text{.....(4)}$$

Notice: $\overline{r_i}$ represents the brand recognition of the i-layer sample; j_i represents the number of consumers who know the brand in the i-layer sample; X_{ir} represents the cognitive level of consumers in the i-th sample layer; $\overline{R}$ represents the brand recognition of all consumers; Q represents the total number of consumers; q_i represents the number of consumers in the i-layer sample.

2.3 Brand favorite calculation

Brand favorite refers to consumers' praise and recommendation of the brand. It is worth noting that brand favorite does not refer to the level of praise from a certain consumer, but refers to how many of them are from the mutual influence of others. The specific calculation is as follows:

The brand favorite of the i-th sample is shown in (5):

$$m_i = \frac{x_i}{j_i} \times 100\% \quad \text{.....(5)}$$

After the combination of all layers, the calculation of brand favorite is as follows (6):

$$\mathrm{M} = \sum_{i=1}^{n} \frac{q_i}{Q} \times \frac{x_i}{j_i} \times 100\% = \frac{1}{Q} \sum_{i=1}^{n} \frac{q_i \times x_i}{j_i} \times 100\% \quad \text{.....(6)}$$

Notice: m_i represents the brand favorite of the i-layer sample; x_i represents the number of self-spreaders in the i-layer sample (the number of consumers who have received recommendations and have recommended behaviors to others); j_i represents the number of consumers who know the brand in the i-layer sample; q_i represents the number of consumers in the i-layer sample; Q represents the total number of consumers; M represents the brand favorite.

2.4 Brand loyalty calculation

Brand loyalty refers to the behavioral tendency of consumers to a certain brand in the purchase decision. The specific calculation is as follows:

The brand favorite of the i-th sample is shown in (7):

$$l_i = \frac{F_i}{E_i} \times 100\% \quad \text{.....(7)}$$

Notice: E_i represents the number of consumers who have purchased the brand's products in the i-layer sample; F_i represents the number of consumers who meet the brand loyalty criteria.

After the combination of all layers, the calculation of brand loyalty is as follows (8):

$$\mathrm{L} = \sum_{i=1}^{n} \frac{q_i}{Q} \times \frac{F_i}{E_i} \times 100\% = \frac{1}{Q} \sum_{i=1}^{n} \frac{q_i \times F_i}{E_i} \times 100\% \quad \text{.....(8)}$$

Notice: l_i represents the brand loyalty of the i-layer sample; F_i represents the number of consumers who meet the brand loyalty criteria in the E_i-layer sample; L represents the brand loyalty; q_i represents the number of consumers in the i-layer sample; Q represents the total number of consumers.

3. Results and analysis

A,B,C and D are very representative, because they are in a leading position in terms of transport volume, service quality, brand construction investment and so on. Therefore, this article conducts a survey on A,B,C and D, collecting a total of 468 samples, and ultimately drawing a brand construction map based on the analysis, see Fig. 2 .

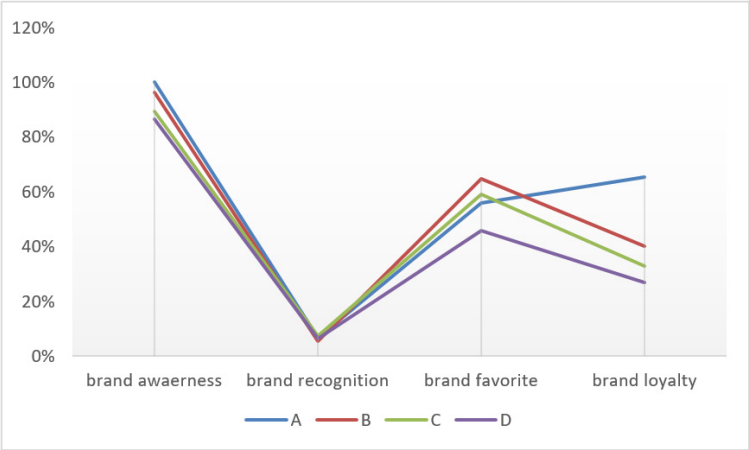

Fig. 2 Brand construction map

3.1 Brand awareness results and analysis

Firstly, this paper divides the hierarchy according to gender, and then calculates according to formula (1) and (2). The results are as follows：

$$Z_{\mathrm{A}} = 100\%$$

$$Z_{\mathrm{B}} = 96.32\%$$

$$Z_{\mathrm{C}} = 89.52\%$$

$$Z_{\mathrm{D}} = 86.72\%$$

According to the calculation, the popularity of the four major airlines has reached over 84.45%. This indicates that the brands of the four major airlines have gained high awareness and are well-known brands to the public. The brands of the four major airlines are very influential in the industry, and more than half of the passengers are familiar with their advertising or brand connotation.

3.2 Brand recognition results and analysis

This article divides the problem of brand recognition into four equidistant levels, with levels from low to high representing the gradual increasing recognition of passenger for brand. Subsequently, the article calculates the brand recognition of the i-th sample based on formula (3), and then calculates the brand recognition based on formula (4).The results are as follows：

$$\bar{R}_{\mathrm{A}} = 6.74\%$$

$$\bar{R}_{\mathrm{B}} = 5.31\%$$

$$\bar{R}_{\mathrm{C}} = 7.30\%$$

$$\bar{R}_{\mathrm{D}} = 6.41\%$$

the threshold of recognition does not exist independently, because simply studying the absolute value of recognition without awareness is meaningless. Therefore, the threshold for recognition should be the ratio of the absolute value of recognition to popularity, as shown in formula (9):

$$\partial = \frac{\bar{R}}{Z} * 100\% \ldots\ldots\ldots\ldots\ldots\ldots \quad \ldots(9)$$

Notice: $\bar{R}$ represents the brand recognition of all consumers; Z represents for brand awareness.

Then, the paper calculates the recognition threshold of the four major airlines according to formula (9). The results are as follows：

$$\partial_{\mathrm{A}} = 67.40\%$$

$$\partial_{\mathrm{B}} = 55.13\%$$

$$\partial_{\mathrm{C}} = 81.55\%$$

$$\partial_{\mathrm{D}} = 73.92\%$$

The calculation results show that the relative recognition values of the four major airlines are all greater than 50%, indicating that the recognition of the four major airlines is effective and the dissemination effect is sufficient.

3.3 Brand favorite results and analysis

Firstly, this article divides the hierarchy based on gender, and then calculates according to formulas (5) and (6). The results are as follows:

$$M_{\mathrm{A}} = 55.95\%$$

$$M_{\mathrm{B}} = 64.76\%$$

$$M_{\mathrm{C}} = 59.13\%$$

$$M_{\mathrm{D}} = 45.71\%$$

The favorite of the four major airlines exceeds 40%. This shows that the four major airlines will spontaneously appear a strong brand self-communication phenomenon, meeting the collective preference of target consumers in repeating purchases. In short, the spillover effect of brand word-of-mouth is obvious.

3.4 Brand loyalty results and analysis

This article first divides the hierarchy based on gender, and then calculates according to formulas (7) and (8). The results are as follows:

$$L_{\mathrm{A}} = 65.42\%$$

$$L_{\mathrm{B}} = 40.23\%$$

$$L_{\mathrm{C}} = 33.02\%$$

$$L_{\mathrm{D}} = 26.91\%$$

According to the favorite and loyalty calculation results, it can be seen that the loyalty of the four major airlines are above 26%, and some consumers have already taken the airline's aircraft twice or more. Among them, A brand loyalty is higher than favorite, which indicates that favorite has been effectively transformed; But the loyalty of B, C and D airlines are relatively low in terms of favorite, indicating that the favorite transformation of the three airlines needs further improvement.

4. Conclusions

This paper conducted a survey on four typical airline companies, A, B, C and D, and finally obtained a total of 468 samples. This article analyzes all survey samples using PSM and finds that all four airlines have high brand awareness, recognition, and favorite. However, except for A, the loyalty of B, C, and D airlines are relatively low, indicating that the brand favorite transformation of the three airlines is not ideal. According to the analysis results, this paper suggests that B, C and D should be good at digging out potential loyal customers in order to improve passenger loyalty in the future business process. Specifically, the airline should be good at finding passengers who have high interaction frequency or take the initiative to recommend the company to other relatives or friends, because these passengers often have a high sense identification with service quality and philosophy of enterprises. Airlines mainly provide displacement services for passengers and have high homogeneity. So in order to retain passengers, this paper suggests that airlines should summarize the travel rules according to passenger portraits and provide customized services according to passenger characteristics.

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