Research Article

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Brand image innovation design based on the era of 5G internet of things

https://doi.org/10.1515/jisys-2022-0135
received March 05, 2022; accepted October 02, 2022

Abstract: The development of the times is driving the competition in the market. In the current trend of the brand era, if a brand cannot fully display its own personality, it is difficult to be competitive. With the development of Internet of things (IoT) technology, different enterprise values produce different types of products and affect all aspects of social economy and daily life. This article mainly studies the innovative design of brand image based on 5G IoT era. This article takes the consumer group as the positioning object, is committed to shaping the core value of the brand, and applies the emotional personality psychology of consumers to the rational brand planning. Creating a perfect brand image and an accurate brand development track is an effective guarantee to promote and enhance brand development. The standard font of the logo combination is the combination of Chinese and English. The advantage of the combination of Chinese and English lies in the combination of nationality and cosmopolitanism. It is not only a new cultural phenomenon but also has strong operability, which meets the requirements of logo design internationalization. The explanatory capacity of the model increases with the entry of product image, corporate image, and self-consistency. The combined explanatory capacity of the three variables reaches 42.2%. The significance probability of the F test is $p = 0.000$, which is significantly less than 0.01, indicating that the regression of the model is significant. Except for "imaginative," girls' scores on the other seven brand personality dimensions are equal to or higher than boys'. The results show that the innovative design of brand image has far-reaching significance for the long-term development of the brand.

Keywords: 5G Internet of things, brand image, innovative design, logo design

1 Introduction

The brand image is not only the representative symbol of the external image of the enterprise but also the culture and values that reflect the internal image of the enterprise. The advent of the Internet of things (IoT) era has changed people's daily lives. People tend to have a fast-paced, high-efficiency lifestyle and a spiritual life that is compatible with it. Therefore, the corporate brand image must be able to quickly and efficiently convey corporate cultural information to people, and the traditional corporate brand image design usually appears in the form of a two-dimensional plane, which inevitably causes people to produce a certain degree of visual fatigue; if a company wants to develop for a long time, it should meet the needs of customers as the first criterion and pay attention to humanized design. The brand image design based on the IoT involves not only the logo design and packaging design of the brand but also a responsibility that is based on the supremacy of consumer emotion. This requires designers to combine brand design with consumer psychology, excavate and refine the inherent genes of the brand, and give the brand an emotional identification design.

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Through the exploration of visual communication identification design in brand image shaping, it can theoretically provide some reference and thinking for the establishment and promotion of national brand image, so as to contribute to the improvement of the competitiveness of national enterprises in the international market. At the same time, a good corporate brand image and culture can not only improve the humanistic environment of the entire company, enhance the pride and identity of the company's employees, but also attract investment, attract talents, and develop local tourism, which plays a vital role in accelerating economic development and improving the status of cities [1,2].

With the advent of the "new retail" era, brand image design is also facing new challenges. How to explore new methods of brand image design with innovative thinking, so as to better adapt to the new era, is the purpose of this study. The IoT technology has a certain positive significance for the innovative design of brand image. Jalaney and Ganesh proposed a model method to predict the real-time arrival time of buses at bus stops. The model is based on traffic information, including parameters such as distance, number of stops, traffic density, rush hour, road type, average vehicle speed, and number of passengers. He collects data from the vehicle and passes the route to the cloud server associated with the web. Therefore, it is necessary to monitor this information and transform it into useful information in order to develop an effective income forecasting system. He uses the nearest neighbor prediction method to adjust the arrival time prediction based on the bus and route parameters. Although his model predicts the results accurately, it is not efficient [3]. Li et al. believe that wireless sensor networks, as an important part of the IoT, have been widely used in the military, transportation, medical, home, and other fields. However, in the application of wireless sensor networks, adversaries can infer the location of source nodes and events through backtracking attacks and traffic analysis. In wireless sensor networks, the location privacy leakage of source nodes has become one of the urgent problems to be solved. In order to solve the problem of source location privacy leakage, he proposed a proxy source node selection mechanism by constructing candidate regions. Second, based on the remaining energy of the node, he proposed a shortest route algorithm to improve forwarding efficiency. Finally, he combined the proposed proxy source node selection mechanism with the proposed shortest route algorithm based on residual energy and further proposed a new anonymous communication scheme. Although his method performs well, it lacks a certain degree of innovation [4]. Guo et al. believe that the attribute-based keyword search (ABKS) solution is used for fine-grained search of encrypted data on the electronic health cloud on the IoT platform. Compared with the traditional public key encryption solution with keyword search, the ABKS solution provides a more powerful and flexible search operation, allowing multiple users to retrieve encrypted data that meet the attribute set. However, the existing ABKS scheme still has certain limitations and security issues. Many existing ABKS schemes only support the encryption of keywords and require a separate encryption primitive to encrypt messages. Most ABKS schemes require a secure channel to transmit trapdoors between the server and the receiver. In order to solve these problems, he proposed a secure channelless ciphertext strategy to decrypt the ABKS scheme. This scheme allows authorized users who meet the access structure to decrypt the ciphertext. This scheme not only resists internal keyword guessing attacks but also eliminates the secure channel for trapdoor transmission. Although his scheme is relatively safe, it lacks specific experimental steps [5]. Jiao et al. believe that high-throughput satellites are considered the next generation of satellite-based IoT (S-IoT) solutions. Considering that the energy and storage of the non-orthogonal multiple access S-IoT downlink are limited in vehicle communication resources, he proposed a joint network stability and resource allocation optimization problem to maximize the long-term network utilization of the system rate. First, he established two virtual queues for data queuing and power consumption. Then, he transformed a joint optimization problem into a problem of optimizing the time average of network utility, which perfectly matches the Lyapunov optimization framework. Although the scheme he designed has certain advantages, it lacks the necessary data [6].

Through the analysis and research of brand image design under the background of new retail, this article discusses the importance of brand image building to the brand under the new retail trend and the innovation of brand image design and discusses specific cases. Starting from the research of Internet companies and brand visual images, this article strives to explore the design methods and application principles of Internet companies' brand visual images and guide Internet companies to more accurately position their brand personality and brand image in brand visual image shaping. The visual image that can

express the brand concept is displayed in front of users, and the visual image is given a full character to make the brand impress in the minds of users and achieve the expected communication effect.

2 Method and experiment

2.1 IoT

Under the strong promotion of economic globalization and the development of a low-carbon economy, the IoT brings new hope to the economies of all countries in the world. In the bottom layer of the IoT, there are different types and a huge number of data groups, which require various types of sensors to process these data [7–9]. The type of sensor determines the type, content, and format of the data it processes. Moreover, the processing of the data by the sensor is very accurate and real-time. Of course, due to the variability of the underlying data, only the sensor can quickly update the data and capture the data in time. Therefore, sensors enable people to obtain the data they need in time, and data are the prerequisite for information processing. At the same time, data also play a strong role in making decisions for people [10].

The basic formula for sensor node is as follows [11]:

$$u_i = \sum_{i=1}^{n} w_{ij} x_i - \theta_j, \tag{1}$$

$$h_i = 1/(1 + e^{-ui}), \tag{2}$$

$$\delta_i = (c_i - h_i)h_i(1 - h_i), \tag{3}$$

where u_i is the input of the sensor node, w_{ij} is the connection weight of the sensor node, θ_j is the threshold set in advance, h_i is the output of the sensor node, x_i is the input value of the sensor node of the previous layer, δ_i is the error value of the neuron in the output layer, and c_i is the expected value of the sample [12,13].

In the lower levels of the IoT, such as the data layer and the feature layer, the Ulman filtering method is often used to focus on real-time fusion of signal data. In order to obtain the best target parameters under statistical standards, the modeling itself has statistical characteristics. In the real world, if the system model is constructed as a linear dynamic model arrangement, the noise risk is designed as an inherent noise risk and a controllable risk. The noise of the R&D system itself and the hardware facility noise under environmental testing are both inherent noise risks. In the statistical sense, the Kalman filter method will eliminate information redundancy and data errors to the greatest extent and achieve the optimal estimation value of the original signal [14–16].

Assuming that N sensors are used to measure the same characteristic parameter of something, each detection data is independent of each other and is an unbiased estimate of X. The estimated parameter is the final fusion result [17].

$$\hat{X} = \sum_{i=1}^{n} W_i X_i, \tag{4}$$

$$\sum_{i=1}^{n} W_i = 1, \tag{5}$$

$$\sigma^2 = E\left[\sum_{i=1}^{n} W_1^2 (X - X_i)^2\right] = \sum_{i=1}^{n} W_i^2 \sigma_i^2. \tag{6}$$

When the sum of the mean square deviation from the sample point to the cluster center in each cluster is the smallest [18]:

$$M(C) = \sum_{k=1}^{K} \sum_{x_i \in C_k} \|x_i - \mu_\kappa\|^2, \tag{7}$$

where $C = \{c_k, k = 1, ..., K\}$ represents K cluster division [19].

$$\text{sim}(D_i, D_j) = \frac{\sum_{k=1}^{n}(w_{ik} * w_{jk})}{\sqrt{\sum_{k=1}^{n} w_{ik}^2 w_{jk}^2}}, \tag{8}$$

where w_{ik} represents the feature vector of the text. In addition,

$$D_i = [w_{i1}, \ldots, w_{ik}], \tag{9}$$

$$D_j = [w_{j1}, \ldots, w_{jk}]. \tag{10}$$

In general, a neuron is a multi-input, single-output nonlinear device, and its expression is as follows:

$$\begin{cases} \tau \dfrac{\mathrm{d}u_i}{\mathrm{d}t} = -u_i t + \sum wi_j x_j(t) - \theta_i, \\ y_i t = f[u_i t], \end{cases} \tag{11}$$

where u_i is the internal state of the neuron, θ_i is the threshold, and wi_j represents the weight connected with the neuron i_j [20,21].

The output of the neuron is represented by the function f, and the S function is most commonly used to realize the nonlinear characteristics of the network [22]:

$$f(u_i) = \frac{1}{1 + \exp(-u_i/c)^2}. \tag{12}$$

2.2 Brand positioning

Taking the content of the program (movie, TV series, TV column, online video, music TV, etc.) as the carrier, injecting the main body of the brand into the content of the program, deeply combining the brand quality with the content of the program, integrating it, and supplementing it with a complete set of marketing action made an all-round three-dimensional marketing offensive. The behavior and emotional psychology of consumers will directly affect the characteristics of brands. Therefore, at the beginning of brand creation, we need to investigate the market and understand consumer psychology so as to locate the consumer group. This article takes the consumer group as the positioning object, is committed to shaping the core value of the brand, and applies the emotional personality psychology of consumers to the rational brand planning. In today's world where emotional thinking dominates people's behavior, a new brand needs to express the brand personality when designing and expressing its own characteristics in order to grasp the point of purchasing desire of consumption, so that consumers can produce a self-representative chemical reaction when they meet the brand for the first time [23,24].

Brands express their own cultural ideas and cultural values through the design of their brand image, and creating a perfect brand image and a precise brand development track are effective guarantees for promoting and enhancing brand development. For the design of brand image, we must base it on brand culture and brand concept, do a good job of product positioning, understand the preferences of the target population, and achieve the purpose of serving consumer satisfaction, in order to extend the vitality of the brand indefinitely [25]. The eight personalization characteristics of the brand are: Modern, Imaginative, Happy, Healthy, Lively, Peaceful, Charming, and Exquisite.

2.3 Brand building

The brand image is always adjusted with the market, consumers, and competitors. Therefore, building a brand image is a dynamic process with changes in the social environment and business environment. Take

new measures to maintain or enhance the status of the brand's image in the minds of the public. The brand-building process is shown in Figure 1. In the brand recognition prism model, the brand image has six facets, namely: brand personality; brand culture; specific products; own image; consumer image; and the relationship with the outside world. Deriving the brand prism can strengthen the brand image and the exploration of brand personality. In the current era where user experience is the core, adding the concept of brand prism in the process of brand image design can serve to determine the brand DNA in multiple dimensions. For consumers, the brand will be easier to fit and interact with, and consumers will more easily perceive the brand [26,27].

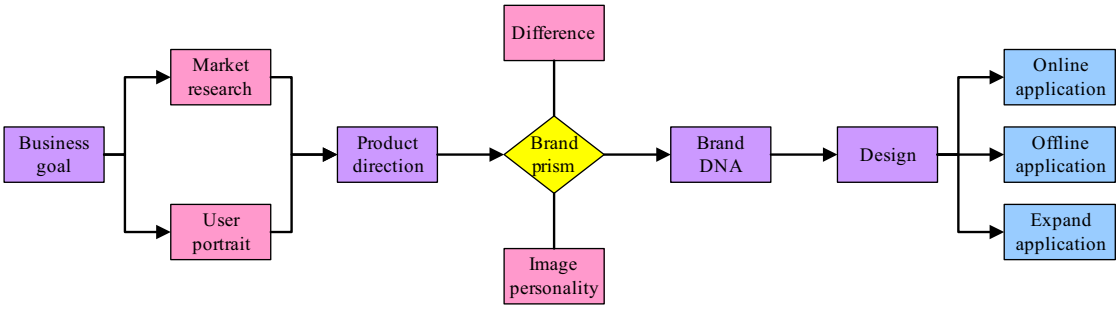

Figure 1: Brand building process.

2.4 Brand logo design

The logo symbol is derived from the original human totem, and it is one of the most important elements, as well as the breakthrough point of the brand's visual image design. On the surface, a small logo design may determine the fate of the company. He is like a silent communicator. With his unique name, bright colors, beautiful composition, and other symbols, he spreads the symbols of corporate culture concept, corporate spirit and scope, corporate scale, product characteristics, and other elements to the public. In order to attract consumers, stimulate their desire to buy, thereby effectively improving the competitiveness of enterprises [28,29]. As a symbol of Chinese culture, calligraphy can reflect the brand's sensitivity and understanding of the market. Since ancient times, food has been inseparable from cultural forms such as poetry and calligraphy. Calligraphy embodies not only the visual identity in the superficial sense but also the deep-seated national cultural foundation. Therefore, it is very important to use calligraphy as a relevant element and source of brand visual design [30]. According to the form of expression, the logo can be divided into graphic, sound, and touch.

Considering that the actual application will use a single color, it not only conforms to the simplicity and flatness of the logo but also reduces the cost of production. Due to the relatively complex shapes of the characters, the outlines are mostly outlined by lines, and the clarity of the lines after shrinking must be taken into account, so it is necessary to specify the minimum size of the logo printing [31]. The standard font of the logo combination uses Chinese at the top, English at the bottom, and a combination of Chinese and English. In the course of the investigation, it was discovered that the excessive combination of logos in colleges and universities made it impossible for users of logos to start, and the application was quite confusing [32,33]. The original intention of the design was to standardize the use of the logo. If the result of the design is counterproductive, the meaning of the design will be lost. Therefore, the font combination style only retains the combination of Chinese and English fonts, cancels the form of a single font, and avoids the confusion caused by arbitrary disassembly of the logo combination in the actual application. The advantage of the combination of Chinese and English is that it combines nationality and globality. It is not only a new cultural phenomenon but also has strong operability, which meets the requirements of internationalization of logo design [34,35].

3 Result

The color statistics of the logo are shown in Figure 2. In the foreign universities surveyed, logos using a single color accounted for 45% of the total, logos using two colors accounted for 40% of the total, and logos using more than three colors accounted for 15% of the total. The proportion of domestic universities using a single-color logo is as high as 80%. The logos using two colors account for 12.5% of the total, and the logos using more than three colors account for 7.5% of the total. From an overall point of view, the logo design of domestic and foreign universities favors a single color, mainly due to the following two reasons: on the one hand, the monochromatic logo is concise and conforms to the basic law of logo design; on the other hand, it can reduce the restrictions on materials and printing production and reduce the cost of production. Relatively speaking, the logo designs of domestic colleges and universities prefer a single color, and the colors of foreign colleges and universities are more abundant due to cultural differences.

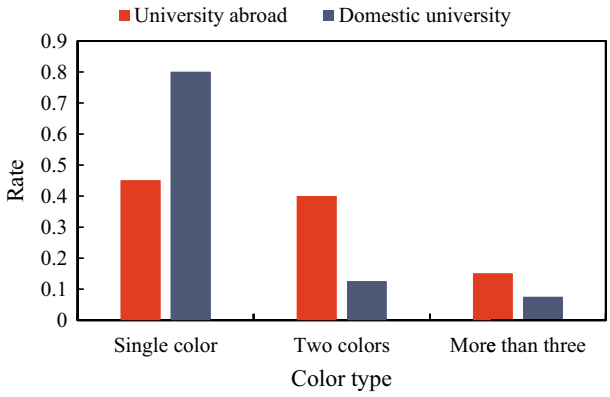

Figure 2: Color statistics of the logo.

The relationship between the color, shape, position, and visual volume of the geometric form is shown in Figure 3. Generally speaking, auxiliary graphics need to have rich flexibility, that is, they can be applied to each carrier terminal, so most of them use simple geometric shapes such as circle, square, triangle, line, and so on as the basic shape, and then according to the needs of the design theme, carry out a variety of permutations and combinations. First, it can control the balance with a small number of graphics from the left, and then slowly add graphics to the right to make the whole picture more full, and grasp the sense of balance through the control of volume. It can be seen from the figure that the picture of group 1 is more balanced than that of groups 2 and 3. In the picture, a sense of comfort and visual pleasure will be formed to avoid the overstimulation of picture graphics. At the same time, the echo of geometry and color also make the picture more attractive.

The degree of influence of brand image on consumer patronage is shown in Figure 4. The data show that 53.5% of consumers think that the degree of influence is very large, 29.3% of consumers think that it is a little influential, and only 17.2% of consumers think that brand image will not affect their consumption.

The brand image audiovisual memory comparison is shown in Table 1. The comparison of data shows that the public's ability to respond to auditory stimuli and memory effects is not much different from the effectiveness of visual stimuli. If the two methods are combined, the memory effect produced will be better. In the digital design of corporate brand image, adding music or slogans with melody can show the brand's cultural connotation and characteristics from more levels. The digital multimedia exhibition hall is combined with digital technology to enrich the display content, enhance the brand image of the enterprise, and display the strength of the enterprise in all aspects. Digital design means increased brand influence.

The descriptive statistical results of brand personality are shown in Table 2. The basic characteristics of brand personality can be summarized in the following table. This article selects 18 adjectives of brand personality, the top eight with the largest average value, to describe brand personality. In order of scoring,

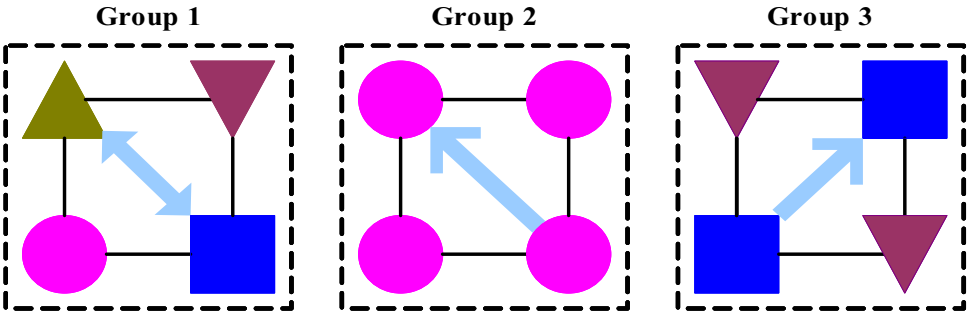

Figure 3: The relationship between color, shape, position, and visual volume of geometric forms.

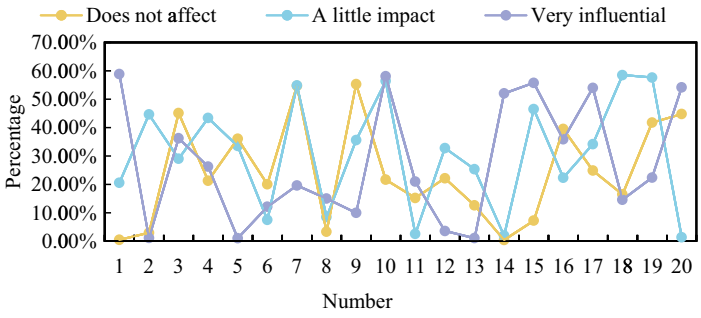

Figure 4: Degree of influence of brand image on consumer patronage.

Table 1: Comparison of audiovisual memory of brand image

	3 h later (%)	3 days later (%)
Hearing	70	10
Vision	72	20
Auditory and visual combination	85	65

they are “modern,” “imaginative,” “happy,” “healthy,” “lively,” “peaceful,” “charming,” and “exquisite.” The “standard deviation” of these eight adjectives is also the smallest, which shows that the evaluation result is more accurate.

The eight-dimensional independent sample *T* test of gender and brand personality is shown in Figure 5. From the figure, we can see more clearly that boys and girls have different perceptions of brand personality. From the trend point of view, boys and girls have a high similarity in cognition of brand personality. And except for “imaginative,” girls’ scores on the other seven brand personality dimensions are equal to or higher than boys’.

The eight-dimensional attitude index of age and brand personality is shown in Figure 6. People under the age of 20 and 21–30 years have basically the same cognitive attitudes toward brand personality; people in the two age groups 31–40 and over 40 have basically the same cognitive attitudes toward brand personality. There are only high and low scores on the attitude index. The two items “lively” and “fascinating” are negatively correlated with age. The older the age, the lower the evaluation, and the difference is significant, while the two items of “healthy” and “peaceful” are positively correlated with age. The older the age, the evaluation higher. From an overall point of view, the population can be divided into two levels: one is under 30 years old (below 20 years old and 21–30 years old), and the other is 31 years old and above (31–40 years old and over 40 years old). The cognitive attitudes toward brand personality within these two levels are almost the same, and the difference is not obvious; but between the two levels, there are “happy,” “lively,”

Table 2: Descriptive statistical results of brand personality

Rank	Brand personality dimension	Average value	Standard deviation
1	Modern	4.75	0.776
2	Imaginative	4.63	0.718
3	Happy	4.58	0.814
4	Healthy	4.51	0.883
5	Lively	4.38	1.048
6	Peaceful	4.13	1.108
7	Charming	3.88	1.192
8	Exquisite	3.57	1.202
9	Reliable	3.39	1.355
10	Honest	3.23	1.477
11	Elegant	3.17	1.510
12	Successful	3.00	1.597
13	Pragmatic	2.89	1.607
14	Bold	2.86	1.691
15	Responsible	2.79	1.741
16	Intelligent	2.75	1.797
17	Outdoor	2.13	1.899
18	Strong	2.00	1.963

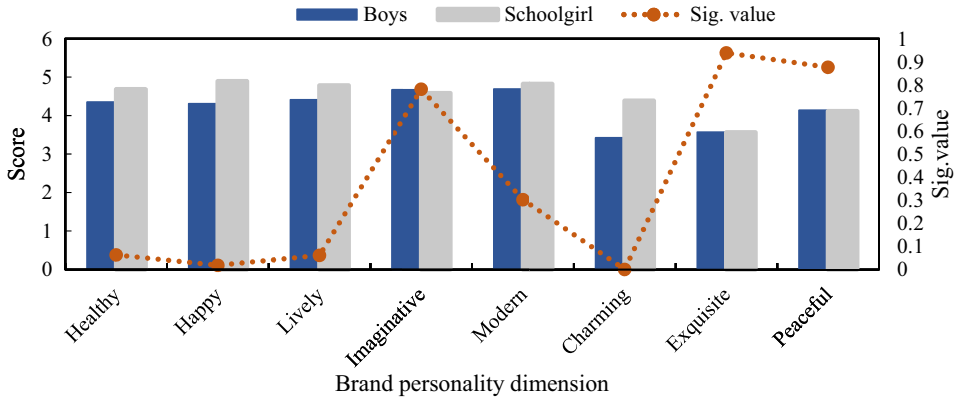

Figure 5: The eight-dimensional independent sample *T* test of gender and brand personality.

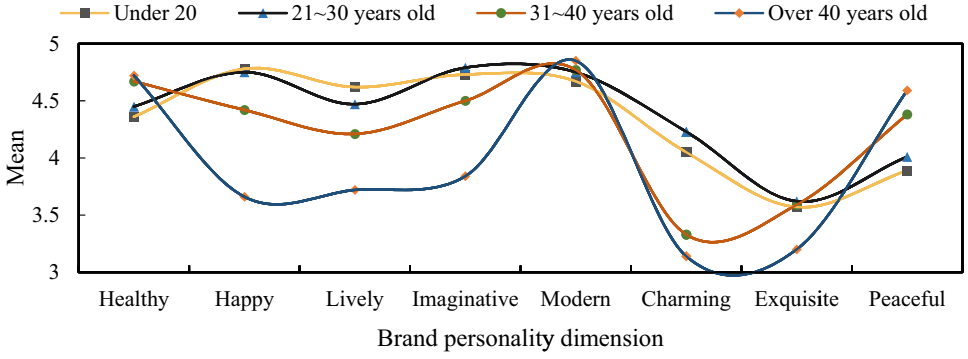

Figure 6: Age and brand personality in an eight-dimensional attitude index.

"imaginative," and "fascinating." There are significant differences between "delicate" and "peaceful." At the same time, it can also be seen that the six personality dimensions of "healthy," "happy," "lively," "imaginative," "modern," and "peaceful" are shown in the attitude index of all age groups. It can be seen that these six brand personality dimensions are representatives.

The test of goodness of fit between brand preference and brand image in each dimension is shown in Table 3. It can be seen from the table that product image, corporate image, and self-consistency have entered the model successively, and the *R*-square value in the model has been increased from 0.299 to 0.422. It is generally believed that when the independent variables are less than or equal to 4, the Durbin–Watson value is close to 2, indicating that the residuals are independent of each other. The Durbin–Watson value in the article is 2.493, indicating that the independent variables are basically independent of each other. Through the analysis of variance, the model passed the variance significance test, indicating that the regression coefficient in the model is significantly not 0. The explanatory quantity of the model increases with the successive entry of product image, corporate image, and self-consistency. The joint explanatory quantity of its three variables has reached 42.2%. The probability of significance for the *F*-test is $P = 0.000$, and a significance of less than 0.01 indicates that the model returns significantly. The standardized coefficients of product image, corporate image, and self-consistency are 0.240, 0.285, and 0.255, respectively, which are significant at the 0.05 level, indicating that the coefficients of product image, corporate image, and self-consistency are statistically significant.

Table 3: Goodness-of-fit test of brand preferences and brand image dimensions

Model	*R*	*R* square	Adjusted *R* square	Std. error of the estimate	Durbin–Watson
1	0.547	0.299	0.294	0.630	2.493
2	0.618	0.382	0.373	0.594	
3	0.650	0.422	0.409	0.576	

With the acceleration of the Internet era and the rapid development of the economy, various large and small enterprises emerge in an endless stream, and the market competitiveness is also increasing. The test of goodness of fit between brand selection and brand image in each dimension is shown in Table 4. It can be seen from the table that self-consistency, product image, and corporate image entered the model successively, and the *R*-square value in the model increased from 0.318 to 0.420. The Durbin–Watson value in the article is 2.184, which indicates that the independent variables are basically independent of each other. Through the analysis of variance, the model passed the variance significance test, indicating that the regression coefficient in the model is significantly not 0. The explanatory amount of the model increases with the successive entry of self-consistency, product image, and corporate image. The joint explanatory amount of its three variables has reached 42%. The significance probability of the *F* test is $P = 0.000$, which is significantly less than 0.01, indicating that the model The return is significant. The standardization coefficients of self-consistency, product image, and corporate image are 0.314, 0.275, and 0.182, respectively. If the standard significance level is 0.05, then it indicates that the coefficients for the self-consistent coefficient, product image, and corporate image are statistically significant.

Table 4: Goodness-of-fit test of brand selection and brand image dimensions

Model	*R*	*R* square	Adjusted *R* square	Durbin–Watson
1	0.564	0.318	0.313	2.184
2	0.618	0.398	0.390	
3	0.648	0.420	0.407	

4 Discussion

With the continuous development of economy, the global market competition is also increasing. There are a variety of goods for consumers to choose from. The tendency of homogenization and shortening of life cycle has become an inevitable trend. In this context, brand has gradually become the mainstay of operators to maintain competitive advantage. Behind the brand competition is the competition of brand image, which constitutes the main content of brand equity. Brand image has become an important concept in the field of marketing. Many marketing experts have reached a consensus on brand image, that is, the success of products or services comes from the symbolic meaning of brand image rather than the functions and characteristics of products or services. Brand image is not only the overall perception of consumers for brand formation but also an important driving factor of operators' assets. As far as people's understanding of brand image is concerned, the change from "image" to "image" also shows obvious logic and inevitability.

Today, with the rapid development of the Internet, there are many kinds of goods in the market, which makes it easy for consumers to have difficulty in choosing and alert psychology when shopping. Especially when shopping on e-commerce platforms such as Taobao, if you enter the name of the product you need, you will get all kinds of complicated information about various brands. At this time, consumers' psychology will enter the guard mode. In addition to observing the function of the product itself, consumers are more concerned about the praise and bad comments of netizens, which leads to high customer churn. Therefore, based on the analysis of the current situation, brand image design not only can do a single visual design but also needs to pay more attention to the intrinsic value of the brand so as to enrich the brand image and strengthen the brand identity of consumers. Content has become a trend. By designing self-media articles or tutorials with dry content, users can unconsciously identify with the brand in the learning state, instead of being vigilant in the shopping state. When consumers' psychology is relaxed, they will be more likely to produce consumption impulses.

In the visual image of the brand, logo graphics, advertising system, packaging system, and so on cannot be separated from the graphic design to present to users. From the basic concept of dynamic graphics, it can be concluded that as a part of graphic design, dynamic graphics can be included in the brand's visual image system. From the concept of dynamic graphics, dynamic graphic design is the extension and development of static graphic design, which belongs to a new form of graphic design. Dynamic graphic design should follow the design principles and think of general graphic design. From the composition of dynamic graphics, dynamic graphics are composed of each frame of static graphics, so the design should conform to the composition law of graphics in graphic design. The dynamic and timeliness of dynamic graphics are the creative expression and beautification of graphic design, which has more advantages in the information expression and promotion of graphic design. While dynamic graphic design in the visual performance part depends on a variety of new media, the real creativity is reflected in its basic graphic design. As a visual language, elements such as graphic design, color and typography have hidden power, and they are also the basic content that needs to be paid attention to in dynamic graphic design.

Today, with great material abundance, people are no longer worried about the basics of life, such as dressing and eating, but more about how to explore the spiritual world. While enjoying the products and convenient services brought by modern society, the distance between people is far away. In modern society, people's social ways are diversified, but their emotional delivery is more cautious. Most Internet users are born in the 1980s and 1990s. Many of them have left their hometown to work alone in other places, so they need a lot of emotional sustenance. Brands should pay attention to emotional expression, which has been a marketing topic. In today's competitive Internet era, from brand personalization to brand humanity building, the ultimate performance of personalization is to realize real communication with consumers through humanized interaction. Brands should learn to listen to consumers and strive to be their intimate friends. The same kind of goods have different meanings to different consumers. It is of great value to understand this unique meaning in modern Internet communication.

5 Conclusions

The IoT has its practical foundation and can meet the needs of world economic development. Brand image is a multidimensional concept, which includes multilevel content such as brand cultural image, brand visual image, brand products, and technology. In addition, corporate management and brand operations also need to be innovated and integrated with the update of the brand image, so as to make the overall internal system of the brand more organically unified. The problems faced by domestic brands are not just the obsolescence of the brand image but also the product marketing model and internal management of the enterprise. There are usually certain problems. If you only focus on the innovation of the brand image and do not pay attention to the coordination of the internal management of the enterprise, the brand cannot have long-term development. Regional characteristics have many influences on brand image design. On the one hand, the brand image design is influenced by the district government's plan for district brand building, including the establishment of the city's image, the cultivation of regional industries, and the creation of reputation; on the other hand, the brand influence brought by regional industrial clusters forms brand resources that enterprises in the region can share. The brand image design is affected by the public brand in the region; however, the research on the regional brand image design should pay more attention to the cognitive mode and recognition of regional brands by consumers in and outside the region. Consumer psychology, because the symbol system established based on common cognition can reduce the communication cost during communication, and it has more advantages in the promotion of corporate brand image.

Conflict of interest: Author states no conflict of interest.

Data availability statement: The data of this paper can be obtained through the email to the author.

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