

Overview of Member Asset Management Research

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Abstract: The core member asset management of the new retail is mainly to depict the user's portrait through big data, and implement precise front (precise marketing), medium (selection, distribution, transportation), back (after-sales service) management mode, thereby improving user stickiness, satisfaction, increase the unit price and frequency of consumption, and ultimately provide the value of the company. Under the new retail model, enterprises are more reliant on the establishment and maintenance of the customer relationship system. By integrating the online and offline member management systems, it not only can use big data with high-efficiency to accurately market customers, but also can achieve rapid growth in corporate value with the increase in customer stickiness. After entering the new retail model, enterprises can improve their profitability through the increase of member assets, reduce the business risk of the company through scientific and effective development and management of customers, and analyze and excavate the information of members through applying big data so as to enhance the company's advantage of obtaining customer information, and ultimately, it will improve the transaction efficiency of the company because of the effective integration of online and offline customer data.

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1. Impact of Member Assets on the Company

1) Improve the profitability of the company
First, the membership fee can bring a certain income to the enterprise. Secondly, the member plan gradually increases the value of individual members by fully excavating and intensively cultivating the members. Thirdly, the membership plan focuses on improving the loyalty and trust of customers. And the high loyalty can raise customer repurchase rate, enhance corporate image and reputation, and increase recommendation rate.

2) Reduce the business risk of the company

At present, the business environment of enterprises is in an extremely uncertain and unstable period. The scientific and effective development and management of customers can help enterprises accurately grasp the changes in market demand and timely adjust their product structure, thus effectively buffering market shocks and reducing Business risk of the enterprise.

3) Enhance the advantages of enterprises in obtaining information

Members are the source of the company's first-hand information. The company uses the big data technology to

analyze and mine the basic information, purchase behavior and consumption habits of the members, so as to find out the new characteristics of consumers' needs. This will help increase the market sensitivity of the company, and thus provide data support for the company to make targeted marketing strategies.

4) Promote communication between enterprises and customers

Reduce the disadvantage of information asymmetry. Member feedback accelerates the pace at which companies improve their products and services, thereby enhancing customer satisfaction and trust in the business.

2. Relevant Theory of Member Asset and Member Management

2.1 Customer Value Theory

Customer value theory is one of the basic theories of modern marketing. The core of marketing is to help exchange parties to perceive the value of a product or service. It regards the entire marketing process as a process of value sensing, value creation and value transfer. The value sensing process aims to discover new value opportunities; the value creation process studies how to effectively shape and shape more promising and new value

market supplies; the value transfer process involves how to use the enterprise or marketing organization resource base and capabilities to deliver value to end customers more effectively. The core of customer perceived value is the trade-off between the perceived benefit of the customer and the perceived cost of obtaining and enjoying the product or service, namely the trade-off between profit and loss.

Scholars still have not reached a consensus on the meaning, definition, domain and scope of the customer value, the influencing factors and the definition of each dimension^[1]. Many scholars study customer value from different theories: exchange theory, means-scenario, transaction theory, resource-based view, relationship theory, utility theory, cognitive theory, and fairness theory. Similar terms for customer value include: “consumer value”, “customer value”, “customer value”, “perceived value”, “service value”, “acquisition and transaction value”, and “value of money”. This article elaborates on four aspects: perception and trade-off, quality and price, relationship marketing and expectations.

The Embodiment of 4C Theory

The 4C theory is proposed by Lauteborn. It includes four parts: customer, cost, convenience, and communication. Each part contains a discussion of customer value:

1) Customers. Lauteborn pointed out that companies must fully understand the needs of customers before producing products.

2) Cost. Lauteborn believes that the cost here is not the production cost of the production of the product, but the cost that the customer is willing to pay for the product. On this basis, the pricing behavior can be carried out.

3) Convenience. Lauteborn believes that companies should provide convenience to customers before, during and after sales. Before the sale, we should provide customers with sufficient information about the product. The sales will provide the convenience to the customers to the greatest extent. After the sale, the information returned by the customers will be processed in time, and the use of the customers will be guaranteed.

4) Communication. Lauteborn believes that communication should be two-way. It helps to establish a good relationship between the company and the customer, so that the products produced by the company adapt to the customer's emotions. But Lauteborn only discussed the idea of customer value in 4C theory and did not formally define customer value.

2.2 Perceptible Value Theory

The theory was proposed by Zeithaml and a re-

search model was established. The model believes that the customer forms the perceived quality through the product attributes, and then judges the full value, and proposes four conclusions:

1) Perceived value gains consist of internal attributes, external features, perceived quality, and related abstractions.

2) Perceived value pay includes monetary pay and non-monetary pay.

3) The “value signal” issued by the product can reduce the customer's revenue cost trade-off behavior to some extent.

4) Customer perceived value varies from place to place, time to time.

Philip Kotler uses the value of the customer's transfer to explain the value of the customer. The total value of the customer minus the total cost of the customer is the value of the customer's transfer. This surplus can be positive or negative. If it is positive, the value obtained by the customer is greater than the cost of the payment; if the remaining is negative, the cost paid by the customer is greater than the value obtained. The total customer value is a series of interests or combinations that the customer expects to obtain from a product or a service. It can be formed by one or a combination of the four values of products, services, personnel and image; the total cost of the customer is expenditure incurred by a customer for activities such as information collection, value assessment, and price payment for a product or a service, including currency, time, energy, and physical strength.

2.3 Value Comparison Theory

The theory of value comparison is proposed by Monroe. He believes that customers will compare the prices of all the different prices in the process of purchasing goods to form a perceived value, which forms a guiding price in the customer's heart. Monroe uses two concepts in value comparison theory to measure perceived value: transaction value and value^[2]. The value of the transaction is formed by the customer comparing the price of the inner guide with the actual price, and the value obtained is formed by comparing the interest perception of the highest price that the customer is willing to pay for the commodity with the actual purchase price. The perceived value of the customer is the combination of both.

2.4 Perceived Value Analytic Theory

Woodruff proposed the theory of customer perceived value analytic hierarchy and established an analytic model for analysis. This model is divided into three

levels: the lowest layer is the attribute layer; the middle layer is the result layer; the top layer is the target layer. From the bottom up, the customer first comes into contact with the basic attributes of the product and the performance of these attributes. When purchasing and using the product, the customer will predict the results about the ability of the attributes achieving desired results. Finally, the customer will compare these results with the goals and then adjust the goals appropriately. Looking from the top down, in different situations, the customer's goals will produce different results, and the important results for the customer will guide the customer to find.

3. User Portrait

The user portrait, also known as the persona, is an effective tool for sketching target users, contacting users' appeals and design directions. And user portraits have been widely used in various fields. Its definition is mainly based on practical use, reflecting the practical use of user portraits, and its definition has abstract features. The UserProfile can perfectly abstract a user's information and display it in one sentence, that is, the user information is tagged. This definition can better explain the definition of the user's portrait^[3].

Today's user portraits have been widely used in various fields, such as news, e-commerce, travel, consumption and so on. In the field of academic research, many researchers use various technical methods to study how to make user portraits are more able to meet user needs. In the medical field, through the large number of patient information in the hospital, the portrait is provided, and the patient is provided with semi-automatic triage to achieve accurate delivery of medical information. In the field of e-commerce, abroad Amazon, domestic Taobao, Jingdong and other e-commerce giants, through the user's extensive behavioral habits and demographic attributes, make portraits for users and personalize them, giving users a friendly and comfortable buying experience. It also improves the user's purchase conversion rate and the repurchase rate extent. At the same time, it played a significant role in increasing customer loyalty and user viscosity offerings.

The traditional user image data only come from business systems, event systems, relationship information, etc., and many types of information are missing or incomplete, so it is difficult to form accurate and comprehensive images. In the context of big data, we can get more data dimensions, more information. And the rapid development of the Internet and the Internet of Things

make it possible that data information from different channels can also be traded. In this context, a 360-degree user portrait can be constructed for the user, from the user's basic information, user product information, user social information, user event information and so on. Not only can people become users, but also a company or an object can be a thing that people portray. Therefore, by characterization of user information for different things, we can correlate and match them well through statistical indicators. Therefore, based on the user's portrait, a series of recommended systems, IoT system, precision marketing system, and advertising push system, are developed according to customer needs to conduct perfect service system. Moreover, the user portrait and the derived series of systems can complement each other. They can further improve and enrich the user's information based on the user feedback of the recommended content. It can be said that the user portrait is not only a potential research on the user, but a continuous study on the user, a real-time study on the user. The user is the lifeline of the enterprise, then the study of the user portrait is an indispensable part of the whole operation of the enterprise. The dimensions that user information can be characterized will be continuously improved and revised as the needs of the business and the acquisition and mining of data. The dimensions that can be described are also constantly increasing and accurate.

Building a user portrait requires going through the following stages^[4].

1) Accurately identify users

The purpose of user identification is to distinguish between users and single point positioning. There are many ways to identify users, such as cookies, registration IDs, emails, third-party logins such as WeChat/Weibo/QQ, mobile phone numbers, etc. These are the unique identifiers of Internet users compared to traditional offline channels. Mobile phone number is the most accurate user identification on the mobile end, but as the user's willingness to register is getting lower and lower, third-party logins such as Weibo/WeChat/QQ become a compromise choice for more and more enterprises.

2) Dynamic tracking user behavior track: three dimensions: scene + media + path

Dynamic behavior data can confirm different access trajectories of users in different scenarios, and help advertisers cross- end frequency control marketing.

User network behavior dynamic tracking mainly includes three dimensions: scene + media + path, which when applied to the Internet, the scene mainly includes

access devices and access time periods. The media refer to media that the user specifically accesses during a certain period of time, such as information and video game class, social class, etc. Path refers to the path that the user enters and leaves a certain media.

It can be simply understood as the user's in-site and off-site behavior. If the user enters or navigates directly through the search navigation, the site jumps to other pages when leaving. Or directly shut down, on the one hand helps the media to optimize traffic operations, on the other hand helps advertisers effectively control the frequency of different pages, to avoid user burnout.

3) Combine static data to evaluate user value: five dimensions: population attribute + business attribute + consumption characteristics + life form + CRM

After the static data is acquired, the population needs to be factored and clustered. Different purposes are classified differently. For product design, it is the most common way to divide according to the motivation or user behavior. For marketing media, differentiating people according to consumption patterns is the most direct classification.

Static data mainly include the user's demographic attribute, business attribute, consumption characteristics, life form, and CRM. There are many ways to obtain it. Data mining is the most common and accurate method. If the data is limited, it needs to be supplemented by qualitative and quantitative combination. Qualitative methods, such as group symposium, user in-depth interview, log method, laddering method, transmission method, etc., mainly use the open question to immerse in the user's real psychological needs and figurate user characteristics. Quantitative methods are conducted more through quantitative questionnaire. The key is the modeling and analysis of the quantitative data in the later stage^[5]. The purpose is to verify the qualitative hypothesis on the one hand and the distribution law of the users on the other hand.

4) User label definition and weight: extract common eigenvalues from the cumbersome data

Defining a group based on eigenvalues helps advertisers to grasp the characteristics of the group at a glance, such as "fashion cast for a few people", which can be quickly associated with the sense of fashion for such people, that is, the design and appearance of the product are really matters. And the word "cast for a few people" indicates that the people do not blindly pursue the trend. They have their own aesthetics, and can influence the people around them.

At the same time, a group will have multiple labels,

and different groups will also have labels overlapping. At this time, the weight of the labels reflects the core characteristics of different groups. For example, "fashion cast for a few people" and "technical pioneer" have female labels in both groups. At this time, it is necessary to compare the weight of women in different groups of people to decide which group to interpret. Usually, the portion that label overlap between different people is small in a good user portrait, and there will be some overlap on those labels with smaller weights.

4. Member Life Cycle Analysis

As an important resource of a company, membership has a life cycle. The member life cycle theory also means that the membership life cycle theory refers to the whole process from the establishment of business relationship between the enterprise and the member to the complete termination of the relationship. It is the development track of the membership relationship level with time. It dynamically describes the overall characteristics of membership relationship at different stages. The membership life cycle theory is the evolution of the enterprise product life cycle, but for business enterprises, the life cycle theory of membership is much more important than the life cycle of a certain product^[6]. There are four stages: investigation period, formation period, stabilization period and degeneration period. The investigation period is the gestation period of the membership relationship. The formation period is the rapid development stage of the membership relationship. The stability period is the maturity and ideal stage of the membership relationship. The degeneration period is the stage in which the membership relationship level is reversed.

1) Investigation period

The investigation period: the exploration and experimental phase of the relationship. At this stage, both parties examine and test the compatibility of the objectives, the sincerity of the other party, and the performance of the other party, and consider the potential responsibilities, rights, and obligations of both parties if they establish long-term relationships. The lack of mutual understanding and uncertainty is the basic feature of the investigation period. It is the central goal of this stage to assess each other's potential value and reduce uncertainty. At this stage, the members will make some tentative orders, and the company will start to communicate and establish contacts with the members. Because members understand the business of the company, the company should answer it accordingly. All members in a particular area are potential

members. The company invests in all members to determine the target members that can be developed. At this time, the company has a member relationship input cost, but the member has not made a big contribution to the company.

2) Formation period

The formation period: the rapid development stage of the relationship. The relationship between the two parties can enter this stage, indicating that both parties are satisfied with each other during the inspection period and have established certain mutual trust and interaction dependence. At this stage, the returns from the relationship are increasing, and the scope and depth of the interaction are increasing. It is gradually recognized that the other party has the ability to provide the value (or benefit) that satisfies itself and fulfill its duties in the relationship. And therefore each party is willing to commit to a long-term relationship^[7]. At this stage, as the mutual understanding and trust continue to deepen, and the relationship matures, the willingness to accept risks increases, and the transactions between the two sides continue to increase. After the company successfully develops the target member, the member has already had business dealings with the company, and the business is gradually expanding. At this time, the member has entered the growth period. The investment of the enterprise is much smaller than that of the development period, mainly for development investment. The purpose is to further harmonize the relationship with the members, improve the satisfaction and loyalty of the members, and further expand the transaction volume. At this point, the members have begun to contribute to the company. The income from the member transactions has been greater than the investment and began to make profits.

3) Stable period

The stable period: the highest stage of relationship development. At this stage, the parties either implicitly or explicitly guarantee a sustained long-term relationship. This stage has the following distinct features:

(1) Both parties are highly satisfied with the value provided by the other party;

(2) In order to maintain a stable relationship for a long time, both parties have made a large number of tangible and intangible inputs;

(3) A large number of transactions. Therefore, during this period, the level of interaction between the two sides reached the highest point in the development of the entire relationship, and the relationship between the two parties was in a relatively stable state. At this time, the company's investment is less, the members make a

greater contribution to the enterprise, and the transaction volume between the company and the member is at a relatively high profit period.

4) Degradation period

Degradation period: the stage of reversal of the relationship level in the process of relationship development. The degradation of the relationship does not always occur in the fourth stage after the stabilization period. In fact, the relationship may be degraded at any stage. There are many possible reasons for the relationship degradation, such as one or both sides experienced some dissatisfaction and changes in demand.

The main features of the degraded period are:

The volume of transactions has decreased; one or both parties are considering ending the relationship and even identifying candidate partners (suppliers or members); starting to communicate the intention to end the relationship. When the business transaction volume of members and enterprises gradually declines or drops sharply, and the total business volume of the members themselves has not decreased, it indicates that the members have entered a recession period^[8].

At this time, enterprises have two choices, one is to increase investment in members, re-establish relationship with members, and carry out secondary development of membership relations; the other way is to stop making too much investment and gradually give up these members. Two different approaches to the enterprise will naturally have different input-output benefits. When the members of the enterprise no longer have business relations with the enterprise, and the creditor-debtor relationship between the enterprise and the members has been clarified, it means the complete termination of the member life cycle. At this point, the company has a small amount of cost and no income.

5. RFM Model

The key driving force for building trust between customers and companies and ultimately achieving a "win-win" relationship is value. It is unacceptable for the customer relationship management of the enterprise not to realize its own value-added, but the relationship management activity cannot be started without considering the value-added of the customer value. Relationship value plays a vital role in customer relationship management. The ultimate goal of customer relationship management is to maximize the value of both parties. This determines that the focus of management should not be the relationship but should be the relationship value that can cover

the value of both parties.

In the theoretical evolution of customer value analysis, Kotler believes that different customers have different values for the company, and the most valuable customers among them are companies that should focus on maintaining relationships. Based on the Pareto's principle, Wyner also pointed out the important role of important customers in relationship marketing. Therefore, before conducting customer relationship management, the most important thing is to identify the most valuable customers of the company.

Currently, the most recognized form of customer value analysis model is the RFM model. Regarding the research of RFM model, different scholars have different research methods, including Hughes and Stone. The so-called RFM model is the loss of time (Recency), the frequency of purchase (Frequency), the purchase amount (Money). Stone used this model to analyze the value of credit customers in his research. Regarding the definition of the model, Bultand Wansbeek (1995) explains as follows:

The recency represents the customer's last purchase time and the number of days between the analysis time points. In theory, the shorter the interval means that the customer has recently come to the store to consume^[9]. By observing his recent purchase time in recent times, you can see his purchase frequency. The smaller the recent purchase time interval, the more likely the customer is to come to the store again. Such customers are rare for the company. The cost of maintaining a loyal customer is much lower than the cost of getting a new customer. Conversely, if the customer has not come to the store for a long time, then the customer will likely become a potential lost customer, and such customers must also attract the attention of the company.

Frequency (Frequency) indicates the number of times a customer purchases a product or service within a unit of time. The purchase frequency is a value within a time range, and the most recent purchase time is a value at a point in time. These two variables are important indicators to measure the possibility of customers coming to the store again, and cannot be separated. A customer who frequently visits the store, he is likely to be a loyal customer of the company; a customer with a low frequency of purchase must not be a loyal customer of the company.

Of course, if a purchase frequency is very high, but the interval between the last visits to the store is very long, then he will likely become an important customer to be lost, and the company must attach great importance to customers with such characteristics. However, if a customer who purchases less frequently has a short interval between recent purchases, he will likely develop into a new loyal customer, and the company can consider targeted attraction measures.

The purchase amount (Money) represents the total purchase amount of the customer within a certain time range. In the research on member management, it can be seen that the customers with higher consumption amount tend to become more loyal customers, and the value of such customers is greater. However, there are different opinions on the calculation method of the purchase amount. Marcus suggested using the average amount instead of the total amount. He pointed out that using the average amount can reduce the collinearity between the amount variable and the recent purchase time and purchase times.

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