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Application Analysis of Big Data in Customer Acquisition Scenario of Banking Business

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Abstract: Driven by Internet technology, users' financial and consumption habits have changed dramatically. As the basis for banks' survival, the previous customer acquisition model has been unable to adapt to the current consumption demand. How to use Big data technology to create new customer acquisition scenarios and provide personalized services for users is a problem that needs to be considered by major banks to achieve digital transformation. This paper analyzes the application in the customer acquisition scenario of banking business, hoping to provide a reference for the digital transformation of banks.

Keywords: Big data; Banking business; Customer acquisition scenario

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1. Introduction

Acquiring a basic customer base is one of the important aspects of bank operations, and the cost of acquiring customers is an important indicator for measuring the quality of bank operations. Therefore, the competition among banks regarding customer resources is becoming increasingly fierce. In the past, banks mainly relied on manual collection of information and media promotion of products to acquire customers. Under this model, customers had a relatively shallow impression of the product, and the obtained customer information was not comprehensive enough to effectively analyze the potential value of customers, which means that banks cannot achieve precise marketing. The application of big data in the customer acquisition scenario of banking business can not only quickly and comprehensively obtain and collect effective customer data, formulate targeted marketing strategies, and achieve customer depth and breadth mining, but also provide personalized services based on the actual needs of different customers through tag profiling.

2. The necessity analysis of applying big data in customer acquisition scenarios of banking business

2.1. Make up for the lack of customer acquisition ability of banks in the past

With the continuous popularization and widespread application of big data, banks can quickly and accurately capture

customer needs through the application of big data in customer acquisition, improve their financial service capabilities, and make up for the previous single customer acquisition model. Based on big data technology, banks can accurately obtain customer transaction activities, investment behavior, credit status, and other information, effectively identifying customer identities and providing personalized services. With the support of big data technology, the threshold for bank financial services has gradually decreased, improving the experience for small and micro customers. At the same time, the situation of information asymmetry between banks and customers has been broken. Banks can use big data to obtain customers' tax and credit information, as well as the operating status, credit records, and transaction behavior of small and micro enterprises, to decide whether to issue loans to them [1]. In addition, relying on big data technology, the interaction touchpoints between banks and customers have been extended, and customer acquisition channels have been expanded to online, breaking the spatial limitations of offline customer acquisition.

2.2. The competition between the same and different industries has intensified the difficulty of acquiring customers

Under big data, major banks are transforming towards digitalization and adopting a precise marketing model that combines "online + offline" based on actual customer needs. This means that competition between industries is becoming increasingly fierce and the difficulty of acquiring customers is increasing. The homogenization of products and services is highly competitive. For example, some Internet institutions use their resource advantages to compete with banks in core businesses. The competition between banks is intense, and they use subsidies, benefits, etc. to attract customers, which not only causes poor customer stability, but also increases the difficulty of customer maintenance and customer acquisition costs; At the same time, the construction of scene ecology makes customers more difficult. Based on the bank scene ecology promoted by the Internet, the personalized scene channel created by the bank will form a new customer acquisition barrier [2]. Therefore, in the face of competition from different industries, banks need to use big data to acquire customers.

3. The specific application of big data in customer acquisition scenarios of banking business

3.1. Credit card business

In the continuous integration of "finance + technology," many banks adopt online models to develop credit card business, guiding customers to use mobile terminals to enjoy the services provided by the bank. However, different customers have different actual needs for credit card business, with characteristics such as diversification and differentiation. In order to obtain more effective customers, banks need to use big data technology to explore potential customer needs and use big data to create customer profiles; It is necessary to continuously expand the functions of credit cards, so that they are no longer limited to consumer payments, but extend to consumer credit and other aspects, that is, to continuously innovate credit card products, meet the actual needs of customers at different levels, attract more customers, and enhance the stickiness of cardholders.

3.1.1. Accurate customer profiling

The process of banks using big data technology to acquire customers is essentially a reflection on customer profile traffic. By analyzing customer wealth management, deposit and other data, banks can roughly outline their business orientation, analyze user consumption data, facilitate banks to determine user profiles, and further profile their details. By stacking multiple similar profiles, bank cards can perform pattern recognition to determine whether the customer is a bank customer group, and further push differentiated credit card services to different customer groups in a targeted manner.

3.1.2. Explore existing customer resources

When expanding new customer resources, banks should recognize the limited customer base, coupled with the competitive

pressure of various banks in seizing customer resources. To achieve sustainable development of the credit card business, it is necessary to analyze existing customers with customer profiles while expanding to new customers, and explore the value of existing customers. For example, using big data to comprehensively analyze the gender, age structure, consumption location classification, consumption frequency, and amount of customers holding credit cards in banks [3]. It is understood that the current stock customers of bank credit cards are mainly middle-aged and young male customers, and most of them are online consumers. The bank classifies the stock customers according to their customer profiles, and classifies young and active customers into Class A, with tags for customers under 30 years old. Credit card bill installment services can be recommended to them. Label middle-aged customers with high consumption and net asset value as Class B customers and recommend credit card loan services to enhance customer stickiness.

3.1.3. Utilize intelligent marketing to expand channels

With the continuous development of mobile terminals and the Internet, the credit card payment business is gradually moving towards card-free payment, real card virtualization and scenario consumption. Banks can use big data to obtain customer information, predict the needs of credit card customers based on their consumption habits, interests, and professions, and develop targeted marketing strategies. At the same time, corresponding products are integrated into specific service scenarios and cooperation channels. By analyzing customer browsing, search, and transaction behavior data, the demand for financial products from credit card customers is understood. Subsequently, targeted recommendations of relevant financial products are made to them to expand the reach channels and improve the conversion rate of credit card users.

3.2. Bank credit business

3.2.1. Form tagged internal data assets

Compared with other basic customer groups of banks, the credit business has higher requirements for customer credit, income, and repayment ability. These customers have already reserved complete information in the bank. Banks can use big data technology to obtain information on customer assets, liabilities, co-borrowers, and related relationships, and integrate it with external personal credit, social security, and other data to facilitate the systematic identification of previously relatively scattered customer information and convert it into labeled internal data assets.

3.2.2. Customer marketing process

In customer marketing activities, big data analysis thinking is applied, based on cross-selling of internal and external bank data under big data, such as the POS loan and tax-easy loan developed by China Construction Bank. The former mainly uses big data to analyze the transaction flow data of POS merchants, and combines merchant credit information, basic information, etc., to screen out merchants with high and stable transaction volume, and push unsecured credit loan products to them. The latter is a financial product developed based on external data. The bank cooperates with the tax bureau to obtain customer tax flow data, selects customers with high and stable cashier tax amounts, and, after a comprehensive evaluation of their information, pushes tax-easy loan products to them [4]. Under the above cross-selling model, banks can extend their model to other fields, such as through big data analysis of customer deposit information, fund activity patterns, etc., to push corresponding wealth management products for them. At the same time, personalized marketing based on big data involves recording customers' consumption habits, selection habits, and other data at the online banking entrance, analyzing their product and risk preferences, placing customers' favorite products and services at the entrance that is easily accessible to them, and pushing personalized products and services to them in a targeted manner, or based on the correlation of customers' product preferences.

3.2.3. Customer admission process

Customer access is a part of the bank credit business. In the current situation of updated modeling technology and

expanded data collection scope in banks, banks have begun to apply big data technology to improve the previous customer rating sharing model, making the automatic approval strategy more scientific. In the past, customer rating and scoring models involved basic customer information, income, assets, credit information, transaction records, etc. Big data technology is applied in the customer admission process, that is, using big data technology to obtain customer preferences, online consumption, and other preference data, supplementing the variables of previous models, and facilitating banks to effectively judge whether the documents provided by customers are true, that is, to control information risks from the source.

3.2.4. Post-loan warning and monitoring

At present, the efficiency of post-loan management in bank credit business is relatively low, and banks are mostly in a passive state in loan disposal. Big data technology is applied in post-loan risk warning, for example, banks use big data methods to analyze the flow patterns of customer funds and issue warnings for abnormal payments that have not been made as agreed, with the coverage of bank risk warning systems and post-loan management systems. In addition, the application of big data technology in post-loan monitoring can reduce bank losses, such as monitoring the post-loan payment ability and tax information of mortgage customers. If this information changes frequently, it is convenient for banks to understand and predict the expected occurrence rate of loans in advance, and minimize their losses as much as possible.

3.3. Salary agency business

3.3.1. Build an online platform

As an important channel for acquiring customers in bulk, the payroll service is crucial for major banks to develop their retail business. Therefore, all major banks are laying out their payroll services. Compared with bank credit cards and credit customer groups, the payroll service has the characteristics of batch acquisition of user information and incomplete bank-reserved information. This requires the establishment of an online platform in the customer acquisition scenario of bank payroll service, guiding customers to log in to mobile terminals to improve personal information, using big data technology to obtain complete customer information, and conducting in-depth analysis of their behavior. At the same time, for users who pay on behalf of others, the use of mobile banking apps is limited to transferring funds. To increase the usage rate of mobile banking for these customers, banks can integrate exclusive preferential benefits, special products, etc., into digital scenarios, build an online ecosystem from various aspects of user life, and establish an online business service model. Among them, the Agricultural Bank of China has laid out customer groups, channels, and scenarios for wage payment, with migrant workers as the key customer group. It has launched the “Salary Treasure” product, applied the supervision direct connection mode, and achieved seamless integration between banks, migrant workers’ mobile banking apps, enterprise online banking, and government monitoring. While serving customers, it has also achieved the integration of business and channels, making it convenient for customers in personal mobile banking, enterprise online banking channels, and other areas to use. In terms of scenarios, the Agricultural Bank of China integrates daily life scenarios with payroll services to provide users with batch-based, one-stop financial services.

3.3.2. Accurately understand user needs

The application of big data technology in the customer acquisition scenario of payroll services, with a focus on daily consumption needs, utilizes online platforms to build user service processes. On the one hand, banks can cooperate with external institutions to connect internal and external, offline and online entrances, achieve resource sharing, and information network interoperability. On the other hand, by utilizing big data technology to collect the behavior of different types of customer groups, we can understand the information of wage payment users in terms of fund transactions, consumption habits, investment preferences, etc. We can effectively integrate government services, life payment, and other life services with financial scenarios, providing users with one-stop online services. In the process of maintaining

customers and mining customer needs, we can achieve customer conversion, so that wage payment users are no longer limited to mobile banking transfers, but become a part of life services.

3.3.3. Expand service scenarios

After obtaining customers through precision marketing, banks need to further retain new customers by combining user interests, hobbies, and focus points, fully utilizing the bank's own resource advantages, creating a unique virtual community, forming an interactive and mutually beneficial ecosystem, and better attracting customers. For example, in the group of payroll clients, refer to **Table 1**, and expand payroll services to elderly financial services by combining the financial and non-financial needs of elderly customers, creating more convenient service entrances for them, reaching services in various scenarios, and actively seeking opportunities for in-depth communication with such customers to expand the scope of bank business services.

Table 1. Analysis of characteristics, financial and non-financial needs of proxy customer groups

Proxy customer group name	Customer group characteristics	Financial Needs Analysis	Non-financial demand analysis
On the job, the customer service group	Stable and single income, with certain risk tolerance, requiring large expenditures in education, housing, healthcare, and other areas, often using subsidized equipment, and having less contact with physical bank branches	Strong consumer desire, preference for value-added and high-quality services, mainly engaged in online transactions	Affordable living (door-to-door delivery, car wash services); Gift exchange; Parent-child activities, children's education, etc.
Elderly care agency customer group	Stable income, high daily rigid demand, older customer age, pay attention to the time of receiving funds on behalf of others, focus on the safety of funds, adopt more current and fixed deposit methods for picking up goods, and visit offline branches more frequently	Daily business, convenient cash withdrawal, and focus on financial products with low risk preservation	Affordable living (discounted purchases, information platforms); Gift exchange, health preservation, group activities

4. Conclusion

In summary, driven by big data technology, the application of this technology in customer acquisition in the banking business is an inevitable trend for industry transformation and enhancing its strength. Banks need to transform their traditional customer acquisition thinking and methods, possess data thinking, and explore the value of data from multiple dimensions.

Disclosure statement

The author declares no conflict of interest.

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