The influence of Retail business Services and Technological innovation on Financial performance: an empirical study of China's urban commercial banks

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Abstract:

This paper divides the service innovation of urban commercial banks into four dimensions: service product innovation, customer interface innovation, service delivery innovation and service concept innovation. Technological innovation is divided into two dimensions: process support technological innovation and channel interaction technological innovation. Perceived service quality is divided into four dimensions: supportability, responsiveness, ease of use and care. The return on total assets, return on net assets, provision coverage and deposit growth rate are selected as alternative variables of bank financial performance. The service product innovation dimension and service delivery innovation dimension also have a significant positive impact on financial performance, but the customer interface innovation dimension and service concept innovation dimension have no significant impact on financial performance; Perceived service quality has a significant positive impact on financial performance. The supportability dimension and responsiveness dimension can positively affect financial performance, while the usability dimension and caring dimension have no significant impact on financial performance; The technological innovation of city commercial banks has a significant positive impact on perceived service quality, and the four dimensions have a positive impact on perceived service quality; The perceived service quality of urban commercial banks plays a partial intermediary role between service innovation and financial performance. The research of this paper extends the accounting theory to the field of strategic management, which can provide a theoretical basis for the formulation and management of service innovation strategy of urban commercial banks in China, make urban commercial banks develop new products and services more targeted, and improve financial performance.

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INTRODUCTION

At present, the technological innovation ability of China's commercial banks is gradually improving, and the service level is gradually synchronized with the international advanced standards. Relying on advanced information platform and system security technology, the product business launched covers eight areas, including deposit and loan, cash management, consulting and trusteeship, payment and settlement, bank card and electronic channel. Taking personal finance business as an example, industrial and Commercial Bank of China launched the core competitiveness development and management project of personal finance center to provide comprehensive and high-quality financial services for our customers in accordance with the international financial center service process; Each branch actively explored to build a three-dimensional service platform and set up "VIP service window", financial counter and financial room(Qi et al. 2019) . In the development history of financial service industry, service innovation has always been the core force to promote the development of financial service industry. Enhancing the ability of financial service enterprises to organize and grasp service innovation and vigorously promoting the service innovation activities of financial enterprises are of great significance for China to meet the challenge of economic globalization. At present, as an important representative of China's financial service industry, the banking industry still has many problems in service innovation, including the lack of in-depth understanding of service innovation, the lack of overall cultivation, internal model and mechanism analysis of service innovation. These problems not only hinder the implementation of service innovation, but also are not conducive to the healthy development of the banking industry. Therefore, in-depth study of banking service innovation and providing support for enterprises to better carry out service innovation has become an important research topic. Service innovation plays an important role in the development of banking industry. This importance is not only reflected in promoting the development and improvement of financial system, enriching financial products and their supply methods. It is also reflected in the great destructive effect of poorly managed banking service innovation on the world financial system and even all industrial economies. As a typical representative of knowledge intensive service industry, banking industry is an important part of financial service industry. It has played an important role in the development of China's national economy and social stability. It is in a leading position in the modern national economic system. Today, with the all-round development of economic internationalization, China's financial industry has been fully opened to foreign capital. China's banks are facing unprecedented challenges in innovation mechanism, profit model, technical regulation, industry supervision and market competition, and service innovation plays a key role in promoting the development of the banking industry and enhancing its ability to deal with international competition (Li 2019). The source power of banking development is service innovation. From the initial stage of industry development, only providing simple lending services to the U.S. subprime mortgage crisis that caused the global financial tsunami in 2007, service innovation has played the role of angel and devil for countless times in the hundred-year history of banking development.

Problem Statement

Service innovation strategy is conducive to the integration of various resources, improve the way of value creation from the supply side, and provide a way for enterprises to increase profit growth. Service innovation is an open service development behavior, which cannot be completed only by the enterprise itself, but also needs the support of suppliers, technical support parties and even customers. According to the theory of value co creation,

this open behavior can promote the interaction between enterprises and suppliers and help to find new ways of value creation. With the increase of ways to generate value, it will often bring excess profits. The process of service innovation is the result of the interaction between customers and enterprises. Taking customers as common participants can significantly improve the financial performance of banks. In addition, the implementation of service innovation strategy can not only promote enterprises to actively search various resources externally and internally, but also cooperate with competitors in the same industry, which will not only improve innovation efficiency, but also improve market competitiveness(Qi et al. 2019) . The transformation of the service concept of urban commercial banks into customer demand-centered will help banks deeply tap the real needs of customers. According to the existing research, it can be found that incorporating social responsibility into the service concept can improve the rate of return on investment. As a return, major shareholders will invest more capital, which will help to expand the market scale. From the perspective of the government, urban commercial banks pay attention to employment and green economy, and can well assume part of the responsibility for the government. In this way, some government policies will be inclined to urban commercial banks, and urban commercial banks, as local banks, will obtain many benefits; From a strategic perspective, the performance of social responsibility by urban commercial banks is like advertising their own quality, which can not only increase the business volume of urban commercial banks, but also bring social reputation benefits to urban commercial banks, which is a more lasting return. Although urban commercial banks will reduce all kinds of costs when they fail to fulfill their social responsibilities, they also lose all kinds of opportunities to obtain benefits, and will inevitably affect the reputation of urban commercial banks. According to the theory of social contract and transaction cost, failure to fulfill social responsibility will often increase the cost of stakeholders' invisible claim and transaction cost. In the value co creation mechanism of service innovation, the perceived service quality as an intermediate link can not be underestimated. It is the direct experience generated by the interaction between consumers and enterprises after the implementation of innovation strategy. This perception can reflect whether value co creation is smooth, but consumers will not take experience as the ultimate destination. They will use perceived service quality as a means to decide whether to buy again; In other words, after consumers perceive the new service, they evaluate the effect of the service. This effect is an important condition dominated by consumers in the process of value co creation, and can directly affect financial performance (Gu 2019). Therefore, taking perceived service quality as an intermediate link can more comprehensively describe the process of value co creation under the background of service innovation. Technological innovation is the key factor affecting innovation performance. Technological capability is evolving from a lower level to a higher level, mainly including the integration of technology identification, selection, monitoring, absorption, application, improvement and innovation. Technological innovation is one of the important aspects to improve the operating performance of urban commercial banks. Technological innovation capability and service innovation promote each other. The operation of the new service mode is inseparable from the support of basic technology and supporting hardware facilities. For example, the retail direct sales business is based on the Internet platform.

Research Questions
China city commercial bank is a small and medium-sized local bank that provides financial services for local residents and enterprises. After nearly three decades of development, it has gradually become a strong support for the capital market. However, urban commercial banks have many problems in their development, such as unclear positioning, slow

product renewal, incomplete business structure and so on. At the same time, they are also facing the pressure of capital competition at home and abroad. Under the development opportunity of financial innovation, urban commercial banks gradually realize that service innovation is the key to enhance competitiveness, and continue to explore the formulation and management of service innovation strategy. At present, scholars at home and abroad have different views on the relationship between service innovation and financial performance. For China's urban commercial banks, it still needs to be studied whether the service innovation strategy will erode the current profits or bring better financial performance, and whether there is an "insensitive area" in perceived service quality. According to the development status of China's urban commercial banks, from the perspective of strategic management accounting, this paper studies the impact of service innovation and technological innovation on bank financial performance by introducing perceived service quality as an intermediary variable. And use quality management and performance evaluation tools to comprehensively analyze the influencing factors, so as to provide decision support for the service innovation strategic management of China's urban commercial banks. The problems studied in this paper are as follows:

(1) The impact mechanism of service innovation on financial performance of urban commercial banks;

(2) The impact of technological innovation on financial performance of urban commercial banks;

Research Objectives

1) Service innovation has a positive impact on bank financial performance: The service innovation of urban commercial banks has a positive impact on the financial performance of banks, which shows that although the resource investment of urban commercial banks in service innovation will burden the operating costs of banks. However, on the whole, service innovation can improve the brand, market and social performance of enterprises, help banks better transform, but also improve the value creation mode at the supply side, so as to enable banks to achieve a better level of financial performance.

2) Service innovation has a positive impact on perceived service quality: The service innovation of urban commercial banks has a positive impact on perceived service quality, which shows that the input of innovative resources can bring quality output, and the service quality of urban commercial banks can be internalized into perceived performance by customers; At the same time, it also shows that urban commercial banks no longer carry out innovation blindly in the initial stage, resulting in a waste of a lot of innovation resources. Through the empirical test, we can see that in the past three years, the service innovation of China's urban commercial banks has stepped on the right track and formed an innovation model aiming at the improvement of service quality. Not only that, through the improvement of service quality, we can also judge that the resource investment of urban commercial banks in service innovation in the past three years is effective.

Research Significance

Momparler et al. (2013) uses SBM (an effective frontier DEA model) and MPI index to analyze the relative efficiency of Internet banks and entity banks in fund-raising and investment and risk management service business model respectively. The study found that Internet banks are more efficient than most entity banks in fund-raising, but there is no significant difference between entity banks and Internet banks in investment and risk management. Zhang (2020) by analyzing the innovation cases of H bank actor network model, C Bank double-layer model and P bank iterative cycle model, and making cross case

horizontal and vertical comparison, it is concluded that the financial innovation process has the following commonalities: conception, concept, development, evaluation, development, testing and promotion, and the characteristics lie in the different systems and organizational structures of each bank.The article believes that the ultimate role of supervision as a catalyst or obstacle to financial innovation depends on the relevance of the bank's innovation strategy and policy. At the same time, it believes that allowing customers to participate in the process of financial innovation plays a role in promoting and optimizing the innovation results. Firstly, using strategic management accounting tools to measure the strategic effect of service innovation and bank financial performance is not only an expansion of accounting theory in the field of management, but also provides an empirical basis for the research on the relationship between resource input and quality output; Secondly, using the method of quantitative research, this paper establishes a four-dimensional integration model of service innovation of urban commercial banks, and deeply analyzes the relationship between each component dimension of service innovation and financial performance with perceived service quality as the intermediary variable; Finally, most of the research on the performance of Bank of China focuses on state-owned commercial banks or joint-stock banks.

LITERATURE REVIEW
Profit Mode
Liu and Wen (2020): financial performance refers to that an enterprise takes a series of business strategies to win the final benefits for the enterprise, which can reflect the enterprise's operating results, the enterprise's financial performance can fully reflect the enterprise's capital use and the effectiveness of cost control, and the financial performance can quantify various financial indicators, so as to comprehensively reflect the enterprise's operating conditions. Ge and Wang (2021): financial performance is the contribution of enterprise strategy and its implementation and execution to the final operating performance. Financial performance can fully express the effect of cost control, the effect of asset application and management, the effect of capital source allocation and the composition of return on shareholders' equity. As an enterprise, there is little literature at home and abroad to measure its performance alone. This paper mainly uses the traditional methods to measure the performance of banks. It can be divided into two categories: one is the narrow definition, which refers to the business performance of an enterprise in a period of time. Baumray (1998) believes that enterprise performance is the final behavior and result of an enterprise. The other is the broad connotation, which includes both the overall business performance of an enterprise and the performance of individuals. Spanos (2001) believes that due to the different research contents and purposes, the methods of measuring enterprise performance are also different. Enterprise performance includes financial performance and non-financial performance. This paper mainly measures the performance of urban commercial banks from the financial performance of urban commercial banks. Ye , Qiu & Zhang (2021) took 13310 observations of 2176 Chinese A-share listed companies from 2017 to 2020 as samples. The research results showed that there was a positive correlation between corporate governance structure, internal control quality, enterprise innovation and enterprise performance.

Service Innovation
Liu et al. (2021) innovation is the core advantage of the United States in global competition. Based on this, the United States occupies a high-end position in the international division of labor system. In order to explore the source and driving force of American innovation,

the Ministry of science and technology once organized a training course on American scientific, technological and financial innovation. On this basis, this paper combs the practices and experience of American financial service innovation and Entrepreneurship from two aspects of direct financing and indirect financing, and introduces the new trend and situation of American innovation and the innovation and entrepreneurship culture of Silicon Valley. It also puts forward some suggestions on giving full play to the market function, promoting the full integration of the real economy, technological progress, talents and modern finance, promoting mutual development, supplemented by the government's guiding role, and building a road of innovation, entrepreneurship and venture capital with Chinese characteristics. Liu et al. (2020) explored the specific mechanism and management connotation of enterprises promoting the upgrading of service innovation capability through dynamic service supply chain integration strategy through vertical case analysis of Frans from the perspective of dynamic evolution. The results show that driven by the dynamic environmental factors, namely market pressure and internal power, the evolution of the enterprise's service supply chain integration strategy has gone through three stages: from the initial internal integration-oriented strategy to the external resource acquisition-oriented strategy, and finally to the collaborative reconstruction-oriented service supply chain integration strategy focusing on multiple networks. This leads to the transition from progressive service innovation capability to renewal service innovation capability and then to regenerative service innovation capability. The research reveals the basic logic of service innovation capability upgrading, and develops the Enlightenment on the relationship between service supply chain integration strategy and service innovation capability, which has important reference value for the sustainable innovation development of Chinese enterprises.

Technological Innovation
Technological innovation refers to the innovation of production technology, including the development of new technologies or the application and innovation of existing technologies. Science is the source of technology and technology is the source of industry. Technological innovation is based on the discovery of scientific truth, while industrial innovation is mainly based on technological innovation. Technological innovation and product innovation are closely related and different. Technological innovation may but may not bring product innovation, and product innovation may but may not need technological innovation. Generally speaking, different products can be produced by using the same technology, and different technologies can be used to produce the same product. Product innovation focuses on business and design behavior, which has the characteristics of achievement, so it has more external performance; Technological innovation has the characteristics of process, which is often more internal. Product innovation may include technological innovation, commercial innovation and design innovation. Technological innovation may not bring changes to products, but only reduce costs and improve efficiency, such as improving production processes and optimizing operation processes, so as to reduce resource consumption, energy consumption, labor consumption or improve operation speed. On the other hand, the birth of new technology can often bring new products, and technology R&D often corresponds to products or focuses on product innovation; New product ideas often need new technology to realize. Chen and Tao (2019) believe that the deep integration of "Internet +" and Inclusive Finance has an important impact on technological innovation. By systematically expounding the impact mechanism of "Internet +" and Inclusive Finance on technological innovation, an empirical study is carried out based on the panel data of 30 provinces in mainland China from 2006 to 2016. The results show that "Internet +" promotes technological innovation through scale effect

and competition effect; Inclusive finance promotes technological innovation by stimulating the underlying power and internal vitality of society. Due to the huge differences in Internet development in the eastern, central and western regions, "Internet +" has an obvious regional bifurcation in its impact on technological innovation in the eastern, central and western regions. Further research shows that "Internet +" and Inclusive Finance do have strong linkage characteristics, and their cross effects strengthen the role of "Internet +" in promoting technological innovation. Dong (2020): the outbreak of New Coronavirus pneumonia in January 2020 will affect China's economic and social development, or will profoundly change public thinking and behavior patterns, and then accelerate the transformation of banking business structure and service mode. A service mode based on Internet, mobile phone application, customer service telephone and physical contact with banks is not known. A new model of "non-contact service" or "zero contact bank" came into being. With the deepening of financial services for epidemic prevention and control, the factors affecting and restricting the development of "non-contact bank" services such as technology, business, system, risk and culture are revealed one by one. Technically, some banks lack digital capabilities, especially the lack of remote collaborative office capacity, which is difficult to continuously support "non-contact" services. In terms of business, "non-contact banking" services are mainly concentrated in retail business, wholesale business and other fields. Although more measures are taken, the proportion is still small. From the perspective of system, credit wechat approval and remote video authentication, as emergency measures, are not only in conflict with the bank's system, but also do not fully meet the compliance requirements. From the perspective of risk, with the expansion of "non-contact" service scope the operational risk, network risk and security risk of banks are accelerating alienation. Culturally, the marketing service habits dominated by offline outlets and entity visits are difficult to change in a short time, and "non-contact" services are facing challenges in channel integration and department coordination.

METHODOLOGY

Research Design

The content of this questionnaire is divided into three parts: service innovation, technological innovation, perceived service quality and basic situation. The measurement project of perceived service quality is based on the current situation and characteristics of China's urban commercial banks, draws lessons from the mature research results of foreign scholars, and makes necessary modifications. The service innovation scale is produced after small-scale interviews with retail customers of China's urban commercial banks on the basis of foreign mature scales. Most social science scholars at home and abroad believe that the five-level scale is relatively reliable. When the questionnaire has more than five options, most ordinary people lack enough ability to distinguish the options. Therefore, this paper adopts Likert seven scales.

Population/Sampling/Unit of Analysis

There are two kinds of research data in this paper: one is the evaluation data of service innovation, technological innovation and perceived service quality of urban commercial banks; The other is the financial data of urban commercial banks (return on total assets, return on net assets, provision coverage and deposit growth rate). Therefore, the first step of this study is to use quantitative methods. Firstly, 80 urban commercial banks are selected as research samples. Conduct a questionnaire survey through the questionnaire, make the retail customers of the sample banks evaluate the service innovation and perceived service quality in recent three years, and obtain the evaluation data; Then

manually sort out the index data of return on total assets, return on net assets, provision coverage and deposit growth rate of 80 urban commercial banks from 2019 to 2021, and calculate the average value of three years to measure the financial performance of banks; Finally, sort out and analyze the effective information obtained from the questionnaire and the data collected on the network to verify the conclusion of this paper; In addition, the geographical distribution of the target area of this survey is also very wide, so the research results are less likely to be affected by the region, and the conclusion is more reliable.

Instrumentation
According to the content of the questionnaire, we had many discussions with our tutors and classmates, conducted a pre survey on the questionnaire, and deleted the items that did not meet the requirements according to the pre survey reliability. At the same time, the wording of the questionnaire is also adjusted according to the feedback. Generation process of service innovation measurement project of urban commercial banks: The service innovation questionnaire is generated by combining the survey results of existing mature questionnaires and small-scale interviews. Due to the unique characteristics of urban commercial banks, this paper takes the four-dimensional integration model of service innovation proposed by Hertog as the prototype, and combined with cases, puts forward the four dimensions of service innovation of urban commercial banks: service product innovation, customer interface innovation, service delivery innovation and service concept innovation. Based on the 12 measurement scales proposed by Zhao (2012) and the 15 measurement scales proposed by Tao (2013), due to the large gap in industry characteristics, it is necessary to conduct small-scale interviews with retail customers of China's urban commercial banks and adjust the contents of the existing scales to adapt to the service innovation of China's urban commercial banks. Taking the scales of Zhao and Tao (2013) the outline of the small-scale interview (see Appendix II), this paper interviewed 32 retail customers using urban commercial bank business and asked customers "which service innovation of urban commercial bank is most satisfactory to you?" ; At the same time, let retail customers choose service innovation projects that they think are not important. The interview found that: (a) The 32 customers surveyed mentioned that "launching new financial services and products", "rich interactive platforms", "product diversity" and "personalized services" are very important for a satisfactory bank. (b) A considerable number of customers think that some service innovation items in Zhao 's scale are not important to them. Table 3-1 lists the service innovation items that are considered unimportant by more than half of customers. These customers believe that "short waiting time" is not a particularly necessary service innovation. They generally reflected that "even if the bank staff are very efficient, it is difficult to avoid queuing when there are too many customers handling business, so there is no requirement for 'waiting time', indicating that this content has little impact. They questioned the index of "internal and external decoration", believing that the quality of bank decoration will not affect their evaluation of services, and they value products.

Table 3-1 Service innovation items considered unimportant by customers and their proportion

Measurement items considered unimportant	Corresponding percentage (%)
Short waiting time	78.13%
Interior and exterior decoration	62.50%
The theme of marketing activities is unique and attractive	53.13%

After the interview, some items not in the existing scales are summarized. After excluding the items with a frequency of less than 40%, see table 3-2. The new project shows that the retail customers of city bank hope that the bank can provide personalized services and hope that the bank staff can provide guidance in time.

FINDINGS AND DISCUSSION

Research objective 1 (R.O.1): The relationship between service innovation and financial performance of commercial banks. By combing the relevant literature, this paper believes that the service innovation strategy is conducive to the integration of various resources, improve the way of value creation from the supply side, and provide a way for enterprises to increase profit growth. Service innovation is an open service development behavior, which cannot be completed only by the enterprise itself, but also needs the support of suppliers, technical support parties and even customers. According to the value co creation theory, this open behavior can promote the interaction between enterprises and suppliers and help to seek new ways of value creation. With the increase of ways to generate value, it often brings excess profits. Oliveira (2011) takes the service innovation of the banking industry as an example, and believes that the service innovation process is the result of the interaction between the customer and the enterprise. Taking the customer as a common participant can significantly improve the financial performance of the bank. In addition, the implementation of service innovation strategy can not only promote enterprises to actively search various resources externally and internally, but also cooperate with competitors in the same industry, which will not only improve innovation efficiency, but also improve market competitiveness. Based on the above analysis, the following assumptions are put forward: H1: Service Innovation of urban commercial banks has a positive impact on the improvement of financial performance. First, to test the first hypothesis proposed in this paper: service innovation has a positive effect on the financial performance of urban commercial banks. Therefore, this section uses Amos 22.0 software to build the structural equation model of service innovation and bank financial performance, that is, take service innovation as the independent variable and bank financial performance as the dependent variable to verify whether hypothesis 1 is true that service innovation has a positive impact on bank financial performance. The model constructed in this section includes an exogenous variable: Service Innovation and an endogenous variable: bank financial performance. Service innovation has four observation variables cx1-cx4, representing four dimensions. Bank financial performance includes four observation variables: return on total assets, return on net assets, provision coverage and deposit growth rate. The fitting parameters of the model are obtained by maximum likelihood estimation, as shown in table 5.17. It can be seen that the CMIN / DF value is less than 3; RMSEA value is less than 0.08, NFI, IFI, TLI and CFI are greater than 0.9, pnfi and pcfi are greater than 0.5, indicating that the model fits well and does not need to be corrected.

Table 4-2 Fitting results of service innovation and bank financial performance structure model

Type	Absolute fit index		Value added adaptation index			Simple adaptation index		
Fitting index	RMSEA	NFI	IFI	TLI	CFI	PNFI	PCFI	CMIN/DF
Actual value	.058	.986	.974	.959	0.973	.601	.660	1.263
Adaptation judgment	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

After judging that the model fits well, then judge whether the path coefficient parameter results of the model are significant. It is necessary to observe the CR value and P value. The test results are shown in table 4-3. It can be seen from the table that the standardized path coefficient of service innovation and bank financial performance model is 0.796, and the CR value is 4.871, which is greater than the minimum standard of 1.96, and it is significant at the level of P < 0.001, indicating that service innovation has a positive impact on bank financial performance. Therefore, hypothesis H1 is verified. Most scholars believe that there is a positive relationship between service innovation and financial performance, but their understanding of the impact mechanism is different. Some scholars measure the impact of service innovation on financial performance from accounting indicators. Wu (2014), a scholar, takes the digital service market as the research object, and draws a conclusion by establishing a structural equation model: service innovation can improve the sales revenue and asset turnover of enterprises; Yeh (2016) took supermarket retail customers as the research object and pointed out that the interaction between service innovation strategy and market orientation can improve the financial performance of supermarkets; in addition, some scholars use market indicators to measure the financial performance of enterprises and believe that service innovation can improve the market share; Grawe (2009) believed that the goal of implementing the service innovation strategy is to expand the market and increase competitive advantage, and achieving the strategic goal will improve the market performance of the enterprise; Bello took the service enterprises in India as the object in an article in 2016, pointing out that the entrepreneur orientation will promote the implementation of the service innovation strategy, and under this orientation, the service innovation strategy can effectively improve the Tobin Q value of the enterprise.

Research objective 2 (R.O.2): The relationship between perceived service quality and financial performance of commercial banks: Ibrahim (2018) and other scholars also agree that high quality can bring high profit return, and point out that the improvement of enterprise service quality means reducing the rework rate of service products, reducing production costs, and then improving profits. Research on quality return (Rust & Keiningham, 1995) pointed out that the improvement of service quality can not only obtain customer satisfaction, but also reduce service cost. Service marketing theory also has the same view: defensive marketing can make profits by reducing cost, word-of-mouth benefit, increasing repeated purchase intention and premium income (Fornell & Wernerfelt, 1987), that is, good perceived service quality can improve financial performance; according to PIMS research, ensuring service quality will lead to excessive growth of market share, and high-quality products can improve price elasticity. At this time, customers are insensitive to price, which will improve the profit margin and return on investment of enterprises. Moreover, the increase of repeated purchase frequency can increase the bank's asset turnover and total profit through the learning curve effect. The word-of-mouth effect will also reduce the cost of attracting new customers, expand the inflow of cash flow and increase the shareholder value (Anderson et al. 1994). The service cost of urban commercial banks includes the input resources and the consumption of unqualified products, of course, it also includes the input human resource cost. The perceived improvement of service quality can reasonably allocate resources, save service costs, and then contribute to the improvement of financial performance. Moreover, we believe that most businesses of urban commercial banks need to interact directly with customers through service personnel, which can effectively make customers jump out of the "quality insensitive area". According to the above analysis, this paper puts forward the

second hypothesis: H2: the perceived service quality of urban commercial banks has a positive impact on the improvement of financial performance.

After verifying hypothesis 1, then verify hypothesis 2: perceived service quality has a positive impact on bank financial performance. In this section, Amos 22.0 software is used to build the structural equation model of perceived service quality and bank financial performance, including an exogenous variable: perceived service quality and an endogenous variable: bank financial performance. Among them, perceived service quality has four observation variables zl1-zl4, representing four dimensions; Bank financial performance includes four observation variables: return on total assets, return on net assets, provision coverage and deposit growth rate. The maximum likelihood method is used to estimate the fitting parameters, as shown in table 4-6. It can be seen that CMIN / DF value is less than 3, RMSEA value is less than 0.08, NFI, IFI, TLI and CFI are greater than 0.9, PNFI and PCFI are greater than 0.5, indicating that the model fits well and does not need to be corrected.

Table 4-6 Fitting results of perceived service quality and bank financial performance model

Type	Absolute fit index				Value added adaptation index		Simple adaptation index	type
Fitting index	RMSEA	NFI	IFI	TLI	CFI	PNFI	PCFI	CMIN/DF
Actual value	.062	.958	.939	.905	.936	.582	.635	1.656
Adaptation judgment	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

After judging that the model fits well, then judge whether the path coefficient parameter results of the model are significant, and the CR value and P value output from the observation results are required. The test results are shown in table 4-7. It can be seen that the standardized path coefficient of perceived service quality and bank financial performance model is 0.514, the CR value is also significantly greater than 1.96, and P = 0.000, indicating that perceived service quality has a positive impact on bank financial performance. Hypothesis H2 is verified. Scholars hold two views on the relationship between perceived service quality and financial performance. Some scholars believe that there is a positive correlation between them, while others believe that there is an "insensitive area" in perceived service quality, and it is difficult to convert perceived value into actual performance, which has no significant impact on financial performance. Theoharakis and Hooley (2003) found that service quality has a significant positive impact on customer performance through the research on B2B enterprises, in which the standardized path coefficient of structural equation model is 0.64. Babakus and other scholars (2003) from the perspective of employee management believe that incentives, salary increases, training, criticism and other means for employees can help to improve the service quality of employees. Especially for enterprises where service personnel have direct contact with customers, good service quality of employees can significantly improve customers' evaluation of services, improve repeat purchase intention and satisfaction, not only improve employee performance, but also bring market performance to enterprises; Alleyne and other scholars (2006) believe that service quality can improve the financial performance of enterprises, but it needs the close cooperation between service management and enterprise strategy; Dai (2015) and other scholars have proved that the

more the service quality of service suppliers is recognized by customers, the better the financial performance of service suppliers can be improved.

CONCLUSION

The essence of scholars' attention to innovation and performance is to help enterprises find the best balance between innovation investment and financial performance improvement. Based on the existing research, taking urban commercial banks as the research object, this paper discusses the relationship between service and technological innovation strategy and bank financial performance through empirical research, and draws the following conclusions (Qi et al. 2019): Generally speaking, the service and technological innovation of urban commercial banks can directly and positively affect financial performance: the service and innovation strategy does not fall into the "service innovation trap", but helps to improve financial performance; Service and technological innovation can also indirectly affect financial performance through perceived service quality: it can help customers jump out of the "quality insensitive area" and transform innovation into actual behavior intention through quality return (Li 2019).

Firstly, through literature research and small-scale interviews, this chapter designs a questionnaire on service innovation and perceived service quality, selects alternative variables of financial performance of urban commercial banks, manually arranges and collects the annual report data of China's urban commercial banks from 2018 to 2020, and determines 80 urban commercial banks as research samples and data sources. Then we conduct pre-investigation and modify the items to form a formal questionnaire. Finally, we put forward the data processing method of this paper. The service innovation of urban commercial banks has a positive impact on the financial performance of banks, which shows that although the resource investment of urban commercial banks in service innovation will burden the operating costs of banks. However, on the whole, service innovation can improve the brand, market and social performance of enterprises, help banks better transform, but also improve the value creation mode at the supply side, so as to enable banks to achieve a better level of financial performance (Qiu et al. 2021). The four dimensions of service innovation of urban commercial banks have different effects on financial performance. Among them, service product innovation and service delivery innovation have a positive role in promoting financial performance, while customer interface innovation and service concept innovation have no significant impact on financial performance. ① Service product innovation has the most significant positive impact on financial performance. Product innovation is the way of profit growth, and in the value co creation theoretical mechanism of service innovation, the development of new products can not only improve the ability of banks to integrate resources, but also effectively reduce the cost of inefficient products. Moreover, the conclusion also reflects that the new products launched by China's urban commercial banks are moderate and not too "ahead of innovation". ② Service delivery innovation has a significant positive impact on financial performance. It shows that the way bank employees receive customers is constantly improving, and their service ability can be improved in customer feedback. Service delivery innovation can improve external service value and profitability under the function of service profit chain mechanism. ③ Customer interface innovation and service concept innovation have no significant positive impact on financial performance. On the one hand, the customer interface is not simple and convenient enough, which leads to the increase of the cost of decision-making and supervision. On the other hand, the bank does not maintain the stability and data integration function of the platform, and loses a large number of useful information. The service concept of urban commercial banks has not really changed,

but only stays in the slogan stage. At the same time, it also shows that the social responsibility of urban commercial banks is not enough (Huang 2019). On the other hand, technological innovation is one of the important aspects to improve the operating performance of urban commercial banks. The technological innovation of commercial banks is divided into two dimensions: process support technological innovation and channel interaction technological innovation. Process support technology innovation means that banks realize process automation by introducing new background processing process, establishing information technology processing platform, improving bank software and hardware conditions and upgrading payment and settlement system, so as to improve work efficiency (Gu 2019). These belong to the category of process support technology innovation relying on science and technology; Channel interactive technology innovation is that banks realize the informatization of transaction payment behavior and electronic transaction channels through electronic networks, provide convenience for customers to obtain financial products and services, and then improve the bank's market competitiveness and realize market value. These belong to the category of channel interactive technology innovation relying on science and technology.

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