Air China's Customer Relationship Management a Case Study in China's Airline Industry

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Abstract. Since the full-scale outbreak of COVID-19 in 2019, the global aviation industry has been greatly affected, and customer relationship management has become increasingly important for aviation companies. How to improve customer satisfaction and increase customer retention has become a higher priority in companies as the outbreak has been around for longer. This paper aims to examine the current relationship between customers and the Chinese airline industry during a pandemic, using China Airlines as an example. Using literature and industry reports, a simulated CRM model is developed and used to analyse the feasibility of the model and the position of CRM systems in the Chinese airline industry, and finally to list some of the challenges that are difficult to address. The results show that there is no exact relationship between CRM optimisation and profitability, but they validate the incompleteness of the model and suggest optimisation assumptions. The main contribution of this paper is to support the important role of CRM in China's aviation industry, and to explain the difficulties and challenges encountered by China's aviation industry during the epidemic.

Keywords: Customer Relationship · Customer Relationship Management · Covid-19 · Airline Industry

1 Introduction

At present, COVID-19 has become "the new normal" and has had a significant impact on people's daily lives. The advent of COVID-19 for the limitation of travel has had a significant impact on the industry, which provides air transportation services for both humans and cargo via jets (most commonly) [17]. When compared to pre-crisis levels in 2021, the airline industry has suffered a significant percentage loss of 60% of revenue passenger kilometers (RPK) [9]. Although the airline industry's KPIs are slowly improving, customer relationship management remains a challenge.

This case study will look at the customer relationship management tactics used by Air China, one of China's largest airline companies, in its domestic operations and the

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background of the airline industry in China, focusing on the current customer relationship with the airline industry in China during COVID-19. The purpose of this paper is to examine the implementation of customer relationship management strategies in Air China's domestic operations, their impact on customers, and their potential and actual obstacles in the Chinese airline business. The constraint of this case study is that there is very little literature on this topic, a small number of studies on the connection between customer relationship management and COVID-19 in the airline business, and many references are in Chinese.

This paper will be presented in six parts. Section 1 will contain the study's introduction and abstract, as well as an overview of the paper. Section 2 will examine Air China as an organization, the overview of Air China, and the impact of COVID-19 on the airline industry and Air China. Section 3 will be discussing the theoretical approach to customer relationship management in the airline industry and Air China, the effects and purpose of each strategy, and the reason for each strategy's implementation. Section 4 will be arguing the potential and current challenges that Air China faces. Section 5 brings all of the claims and arguments to a conclusion, including the findings, limitations, and future research about the case study. Section 6 will exhibit all relevant literature references that are implied in the paper.

This research is based on relevant industry reports, official website statements, and published research articles. The data used in the analysis and the statements made in this research are all up-to-date (from 2020) and relevant to the current phenomenon.

2 Overview of Airline Industry and Air China

2.1 About Air China

Air China, established in 1988, is one of the largest commercial airlines in China, taking 25% of the total airline market in China. The company operates inventory storage as well as passenger and freight air transportation to more than 300 cities in the world. By December 2020, Air China had a total asset value of $41.156 billion USD and 89373 employees [4]. It is the only Chinese civil aviation company that has been named as one of the world's 500 most influential brands. Air China is China's largest state-owned airline and the only airline in China that can fly the Chinese flag [21]. In addition, Air China has the best fleet and can provide world-class leaders with special planes.

2.2 Impacts of Covid-19 on China's Airline Industry

As a result of the rapid outbreak of COVID-19 worldwide, travel demand has been significantly lowered as more people are willing to stay at home to prevent infection of the virus. In addition, the government has imposed travel restrictions and other government regulations on transportation to prevent the widespread spread of the virus. All of these factors have significantly impacted the airline industry in China. By June 2021, the annual total revenue generated by China's airline industry will be $49.9 billion, with an average annual decrement rate of 10.4% between 2016 and 2021, and this includes a growth of 4.1% in 2021 [7]. On the other hand, total profit is $2.7 billion, which is decreasing at a

rate of 14.2% per year between 2016 and 2021. Due to the outbreak of COVID-19, total customer volume declined by 37.7% in 2020 to 417.8 million. Despite lower customer volume during the pandemic, the competition between airline companies is still fierce with high product and service concentration, leading to low industry profit margins. Other factors, such as substitution of air transportation with high-speed railways and increased jet fuel prices, to some extent further reduced demand for air travel domestically during the COVID-19 outbreak. The aviation industry has been one of the hardest-hit industries because of the spread of COVID-19.

2.3   Covid-19 Effects on Air China

As one of the major players in the Chinese airline industry, Air China's performance was crucially affected by COVID-19. The total revenue earned by Air China during 2020 was $10.702 billion USD, which was a remarkable decline of 47.26% compared to the previous year's $20.293 billion USD [19]. In addition to this, the operating profit earned in 2020 was a negative 1.76 billion USD, which is the only year in the last decade that Air China has achieved a negative profit. The total number of passengers carried by Air China has also decreased more than 40% (68.69 million) compared to the previous year (115.01 million). It is obvious that the COVID-19 outbreak has significantly impacted the performance of Air China.

3   Customer Relationship and Customer Relationship Management

3.1   What Is a Customer Relationship and Customer Relationship Management?

Customer relations is the process by which companies and organisations interact with their customers and develop long-term connections with them. Customers have always been at the heart of an enterprise's long-term growth strategies, marketing and sales efforts, product development, labour and resource allocation, and overall profitability directives [15]. Thus, for an organisation to run sustainably, developing a positive and strong customer relationship through tools and strategies is fundamental for all orga- nizations. Customer Relationship Management (CRM) is a technological solution that emerged in the 1970s as a tool for companies to automate the management of their inter- nal sales force [6]. The CRM approach is useful at both organisational levels and on the customer's end, where it is a set of specific tools that assist organisations to accomplish a variety of tasks. For instance, supporting sales, marketing, and service and support tasks, process, progress, directing, and tracking all have different tools to support [13]. Previous research findings suggest that proper use of CRM tools can benefit organisa- tions by improving internal and external performance, such as customer relationships and organisational sustainability [13].

3.2   CRM in the Airline Industry and Air China

Air China is not an exception. The main business objective for all organisations in the airline industry is to maximise their profit and profitability sustainably. The mission

Table 1. Consumption and Management in the Airline Industry

	Pro-Consumption	Period of consumption		Post-Consumption	
Management Stage	Customer acquisition	Satisfying customers	Customer retention	Customer Feedback	Customer Development
Management advice	Targeting customer groups and expanding potential customer s	Suggest higher customer loyalty, personalized customer service, convenient refund policy	Improve ratings and reviews to make your own brand's customer experience a positive one	Use appropriate ways to get feedback and build more positive customer retention relations hips	Make these customer s brand maintainers, making them repeat purchasers.
Possible hazards and challenges	It can have some negative effects on the community	Some Efforts may cause distress to customers	May compromise the privacy of the client	May cause disturbance to some people's private lives	

of Air China is to meet customers' demands and create mutual value. As a business entity, Air China's operational goal is to have economic benefits at its core and to realise the maximisation of profits [1]. Through the implementation of CRM tools, Air China can enhance customer loyalty, increase customer satisfaction, maintain a healthy, stable, and long-term relationship, retain its existing customers, and strengthen its profitability through the implementation of CRM tools. In other words, CRM tools can help Air China achieve its organization's mission and build competitive strength.

3.3 Objectives of Customer Relationship Management in the Airline Industry

The airline industry is one of the fastest growing and most competitive industries. Nowadays, due to the massive impact of the coronavirus, both company models and consumer behaviour have been forced to adapt and change. Customer relationship management is also undergoing more adjustments, especially in the airline industry. According to the International Air Transport Association [9], global revenue passenger kilometers are set to fall by 66% in 2020, with traffic at its worst, down 94% on the same period last year, so building a sustainable, positive customer relationship is now vital for airlines. Customer relations management should be customer-centric [6]. Therefore, we developed a CRM model as shown in Table 1.

3.4 Model Analysis

The model requires the company to attract as many people as possible to its products before they are purchased, and it allows the company to segment its customer base and

key target groups to achieve a filtering and sorting role in the CRM. Once people have already purchased the product, how to retain customers and improve customer satisfaction becomes more important in this section. Customer engagement has a positive impact on customer trust and satisfaction [5]. Furthermore, satisfied customers become loyal customers, resulting in long-term revenue for the company [12]. This is because the fundamental purpose of customer retention efforts is to ensure that relationships with value-added customers are maintained by reducing churn [8]. In other words, highly loyal and satisfied customers help organisations remain highly profitable and competitive. This model therefore recommends that companies keep customer engagement high at this stage. With these foundations in place, the model moves on to the final, and most difficult to achieve, post-purchase stage. The first part is the reasonable acquisition of customer feedback. The company is well placed to improve its products and services through genuine customer feedback, thus reducing marginal costs and increasing additional revenues. The last part is customer development, which can be understood as making customers into brand advocates so that they can be identified as such and, more importantly, that these "advocates" can effectively persuade other consumers to become customers of the company. However, the model posits that a company's behaviour can be challenging at each stage.

3.5   CRM Strategies in Air China

3.5.1   Customer Service

Customer service plays a decisive role in ensuring a positive customer experience with a business. Air China employs tactics such as direct mailing, application development, a global voice enquiry system, customised services, and various treatments for different consumers to achieve its goal of offering premium-quality service to all potential customers [13]. These Air China tactics can help with customer acquisition, retention, and direct customer contact, as well as focus on the unique demands of each individual customer. Because of this, the Chinese airline market is highly competitive and consumption is expanding. Therefore, expanding and retaining the customer base can help Air China gain a competitive advantage.

3.5.2   Customer Retention

Air China has launched its flyer program for their loyal customers in 1994, which was the first frequent flyer programme in China. It is called PhoenixMiles and is conceived by Air China family carriers, including Air China, Shenzhen Airlines, Shandong Airlines, Air Macau, Dalian Airlines, Inner Mongolia Airlines, and Beijing Airlines [3]. Customers can earn mileage by flying with Air China and its airline partners, where mileage can be exchanged for free flights, free upgrades, and products [3]. Moreover, CRM strategies are also viewed in various ways. Such as data collection from customers themselves, customer feedback, direct contact with customers, and many others, to improve their services and achieve higher customer loyalty and customer retention rates.

3.5.3   Customer Acquisition

The most desired outcome of CRM is that more customers come to buy the right product before they buy it. Air China has completed the data interfacing work with 360 for Optimized Cost Per Click. It also has a detailed breakdown of customers, for example, people with an interest in the travel industry. Air China uses big data to analyse and deliver ads to these users based on their travel-related information, browsing and travel app installation. This personalised ad delivery has opened up the volume of delivery and effectively reduced the cost of target conversion. On the other hand, Air China has launched a self-service business travel management product platform [3]. This system provides humanised fare reminders on the business side, supports promotions on the official website, and has organisational settings and travel analysis reports to assist in business management. It also offers a wide range of reward models and flexible payment options.

3.5.4   Data Collection

Air China will be collecting customers' personal details, including name, address, birthday, credit card details, identification (ie, passport, face recognition), contacts, including phone number and email address, and past records from its partners for security and commercial purposes [6]. According to CRM strategies, data collected from customers can bring value to the organisation as it can have a deeper understanding of its customers and therefore bring benefits such as emotional attachment (loyalty) and improved financial efficiency (cost reduction and increased profitability) [18].

3.5.5   Customer Feedback

The speed of providing solutions to an existing problem for a customer can be a competitive advantage that a firm could have for delivery reliability level along with delivery time as the two main factors that influence customers' utility and firms' market shares [2]. Customers can provide feedback through the feedback page on the official website, fax, email, phone calls, and so on, or through the sales department in a range of locations worldwide (Table 2).

3.6   Air China's CRM Approach to Covid-19

The impact of the COVID-19 outbreak on the whole airline industry and Air China is hazardous. The period needed for air passenger demand recovery is unknown as it is impossible to tell how long the pandemic will continue. Studies have shown the public's intention to travel by air has significantly decreased during the COVID-19 pandemic. Therefore, the CRM strategy is of great help to Air China in retaining its existing customer base.

Rebuilding consumers' confidence and reducing perceived threats are essential factors for the recovery of air passenger travel [14]. Passengers' willingness to travel can be restored if concerns about infections can be reduced through air travel safety awareness and vaccine distribution, as it not only helps the airline industry but also protects the public's health [20]. Air China has approached this through the implementation of

Table 2. CRM information requirements and value added

Information requirement	Examples	Typical information collection methods	Vales added by information
Personal information	Gender, age, income, size of household, etc.	Warranty card, survey	Basic segmentation and channel collection
Customer history	Purchase information; complaint information; customer satisfaction	Transaction database; customer service database; survey	Timing of marketing communication; avoiding customer defection; service recovery; future marketing
Profitability information	Current profitability for customer/customer segments; potential profitability	Transaction database; analysis and judgement from transaction and personal information databases	Optimizing marketing expenditure and efforts; predicting customer lifetime value
Customer needs	Functional needs; emotional needs	Survey, if the right questions are asked; qualitative methods	Cross-selling; up-selling; New product development; deepening and extending relationship; capturing customer lifetime value

a COVID-19 related forum section on its official website [3]. In this section, users are informed of the covid-safety facilities Air China has implemented in its airports throughout China, as well as the strict policies regarding onboard passengers' health through showing valid health codes and PCR results. In addition, findings from a survey conducted in November 2020 find that the willingness to travel by air has increased by over 70% after the development of the vaccine [11]. Air China requires its passengers to have a validated vaccination certificate in order to board the plane. These measures help to eliminate the risk of customers being infected when travelling by air, and also help to increase the confidence of passengers travelling with Air China.

Despite the hard circumstances, Air China is consistent in using its traditional CRM strategies to collect data from customers, using it along with a big data strategy to advertise to the public based on their different needs, as well as gathering and analysing feedback from customers to develop better customer experiences. To some extent, Air China was able to minimise its customer losses during the pandemic. However, it is difficult to estimate how long it will take for the aviation industry to fully recover due to a lack of knowledge of how long the virus has been circulating [10] and the inability to determine attitudes towards air travel post-pandemic.

3.7   Challenges

According to the above analysis, CRM can help companies manage their interactions with customers. Using a CRM system can help companies increase sales revenue, make their sales teams better understand customers, and provide targeted services according to each customer's unique preferences. Especially in times of epidemics, CRM can improve the automation of processes and reduce personnel turnover. However, there are some challenges in the use of CRM that can sometimes affect poor performance, user limitations, etc. For Air China. One of the biggest challenges is how to transmit the traveler's travel information to the management system so that loyal customers can get the right fare.

3.7.1   Challenges of Air China Software

Air China software also faced challenges as part of implementing a CRM tool. With the software, passengers can obtain the most accurate special air tickets, update the fastest flight times and enjoy the most comprehensive clothing. But there are some challenges in implementing CRM software. First, implementing Air China software was expensive and time-consuming. Building a CRM system requires changes in time, effort, and money, which is a lengthy process. Second, there are hidden dangers in data quality issues in the process of implementing CRM tools. Because Air China, as a large company in China's aviation industry, has a large number of passengers, the customer information is complex and scattered. As a result, it is difficult to organise all customer data, which increases the risk of data entry and the potential for entry workloads that increase the potential for errors. In addition, there are challenges in customer feedback. Air China usually collects customer information through partners, which may face data integration challenges. The goal of creating a centralised CRM is to provide consistent customer service across all touch points, which generally ends up being a separate CRM, with all the scattered data that needs to be extracted and transformed into a central CRM. And these extraction and conversion processes can take a lot of time and money.

3.7.2   Challenges Existing in Air China's Internal Management

As a large-scale enterprise, Air China's internal staff's attitude towards managers launching CRM is also a challenge. When the CRM system is launched within the enterprise, there is a possibility that the internal staff will resist it, which will make it very difficult to implement CRM to a certain extent. Especially during the epidemic period, the way of working is different from before, which affects the mood of employees. In addition, the implementation of CRM will force employees to change their original work habits and working methods, which will lead to employees' being affected mentally and physically, reducing their work enthusiasm and resisting CRM.

4   Conclusion

Based on the case study of Air China and China's airline industry, we reached three conclusions as follows. Firstly, customer relationship management plays a significant

role in achieving Air China's business objective of generating maximum and sustainable profitability. Air China has been consistent in applying their CRM strategies, such as delivering top-quality flight services, retaining their existing customers through loyalty programmes like Phoenix Miles, and effectively gathering and utilising big data for promotion and feedback purposes to acquire new customers and make further improvements. Through these strategies, Air China is able to extract the maximum profit value from its existing customers as well as keep growing its customer base through perfecting its systems and services through feedback. Secondly, it is obvious that the COVID-19 pandemic has had tremendous negative impacts on the airline industry, as shown by the huge decrease in the company's and industry's revenue and passenger numbers. However, Air China is able to minimise the losses and continue to operate functionally through their CRM system adjustments to meet customers' needs during the pandemic. Finally, Air China faces many challenges raised by their CRM system as well as the COVID-19 pandemic. The effort required to build and maintain a CRM system is enormous, especially during the difficult period of the COVID-19 pandemic. It is almost impossible to determine whether and when the system will be profitable as there are many uncertainties imposed by the pandemic, not to mention the internal stakeholders' motivation and performance are also heavily affected by the hardship. Therefore, changing the CRM system is relatively difficult and risky.

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