A Case Study of the Application of Digital Technology in the Fast-Food-Breakfast Industry to Optimize Consumer Demand

Chia-Yu Jih
Department of Management Information Systems, National Chengchi University, Taiwan, 107356503@nccu.edu.tw

Wei-Hsi Hung
Department of Management Information Systems, National Chengchi University, Taiwan, fhung@nccu.edu.tw

Follow this and additional works at: https://aisel.aisnet.org/iceb2021

A Case Study of the Application of Digital Technology in the Fast-Food-Breakfast Industry to Optimize Consumer Demand

(Work in Progress)

Chia-Yu Jih[1,2]*
Wei-Hsi Hung[1,3]

*Corresponding author
[1] Department of Management Information Systems, National Chengchi University, Taiwan
[2] Doctoral student, 107356503@nccu.edu.tw
[3] Professor, fhung@nccu.edu.tw

ABSTRACT

According to research in many medical journals, breakfast is extremely important to human health. A nutritious breakfast can make people energetic and improve the efficiency of study and work. People in different countries and regions have a unique breakfast culture. In Taiwan, the breakfast/brunch-based industry is one of the franchise channels that has always been the fastest and easiest way for Taiwanese self-employed people to start a business. Some brands even have gone international and started to expand their business. This research study used G.C. Group as the research object and investigated the use of digital tools by franchisees through case combing and in-depth interviews with key stakeholders. The research analysis the digital implementation to assist the franchise headquarters on how to use digital technology to optimize franchisees, consumer services, and brand value enhancement. The research results find possible business models at the emergence stage, and maximizing value exchange and business opportunities through the interaction of all important stakeholders will be the direction of future research.

Keywords: Fast-food breakfast industry, franchise headquarters, franchisee, IM Chatbots

INTRODUCTION

An Overview of the Chinese Fast Food Breakfast Industry and Research

Omelet, radish cake, baked egg toast, milk tea, which are commonly found in Chinese breakfast, are sold in many small chain stores that people are familiar with. Most of these store operations exist in the form of participating in franchising. The franchise headquarters assists franchisees in site selection, store management, education, and training, customized the cooking menu and other counseling measures to provide entrepreneurs with low entry barriers and brand-sharing market competitive strategy advantages, becoming a unique business type in Taiwan. According to statistics from the Taiwan Franchise Promotion Association, Taiwan currently has more than 2,000 chain brands with the highest density in the world. The main reason is that more than 90% of the domestic industrial structure is SMEs, and the people are brave to innovate and start businesses and are keen on themselves. Therefore, becoming a boss is the fastest and easiest way to start a business through a franchise alliance.

The subject of this research is the G. C. Group. Chairman opened the first breakfast restaurant in 1988 and started franchising in 1990. There are now more than 300 restaurants. The second-generation successor, the CEO, had studied abroad and received an IT degree. After returning to China to study business management, he began to actively promote the internal transformation of the group, hoping to use digital technology and artificial intelligence technology to optimize customer service experience and operational management performance.

Research case background description

The G.C. Group was established in 1998, and the food is served delicious in many people's memories. When the CEO took over the headquarters business in 2016, he first adjusted the brand positioning and menu and then introduced free franchise funds, deposits, and store upgrade plans for franchisees. On the other hand, in order to create a new experience in the breakfast culture, the CEO began to develop a new brand, "MOLU TOAST," that combines local ingredients to attract international tourists to Taiwan's must-eat breakfast and popular Internet celebrity stores. The main purpose is to provide franchisees with options to maintain the traditional taste of the G.C. Brand or choose to switch to the "MOLU TOAST" brand and formulate a new market management strategy on the original location.

This case study takes the G.C. Group as an example. The important evolution of the company is as follows—
- 2004 The franchise chain headquarters established a factory that complies with CAS standard operations.
- 2005 Leading the industry to launch all-material health-preserving vegetable and fruit materials.
- 2006 Set up a logistics center for freezing point dessert materials.
- 2012 Established the first in Taiwan to use heat-resistant, non-precipitating plasticizer for PP coating packaging materials.

● 2014 Exported technology transfer training and shop opening counseling overseas.
● 2016 Introduced the fourth generation of new store design.
● 2017 Evaluate the development of new brands.

In the past, the G. C. Group focused on improving product development and hygiene quality as its main business mission. In recent years, it has shifted to making strategic corrections based on consumers' health orientation and consumer experience. The CEO believes that a bolder transformation is needed at this time, including the use of digital technology and artificial intelligence technology to improve operation management, product optimization, franchise customization services, consumer experience, and the provision of multiple payment tools.

PROBLEM STATEMENT
Demand interview and survey of franchise headquarters
At present, the management of the G. C. Group's brand only provides franchise strategies. According to the results of the interview with the CEO, the research found that if you want to introduce the layout of digital technology and AI applications, you should give priority to solving the pain points of "fraction owners" and "consumers." Digitization is the starting point to enter the field of AI. Therefore, the research found that franchise headquarters, in collaboration to conduct related telephone interviews with the franchisees. The results show that more than 20% of the stores use "Line" (instant messenger, IM software) to provide breakfast menus, 10% use Facebook fan pages to operate the community, and more than 60% of them apply for business registration with the local government.

Franchisees use digital tools to investigate and summarize
After continuing to interview the supervisors in each district, summarize the behaviors and cognitions of the following franchisees using digital tools, including:
(1) Almost all franchisees use Line for their daily contact with their families or work (posting photos).
(2) More than 80% of the franchisees are local mothers. They don't know how to use technology to increase business, but they also say that they will not reject them. If you want them to use a mobile phone or a tablet device, the operation interface must not be too complicated, and the point where you need to click must not be too small.
(3) There are a small number of young couples or first-time entrepreneurs in the franchise, which have a relatively high degree of digital acceptance, and a high proportion of interaction with consumers using social marketing tools such as Line, Facebook, and IG.

RESEARCH DESIGN AND PLANNING
Use touchpoints in the customer journey to build a good impression of the company or product
Most consumer behaviors are not carried out directly. They will use a lot of information to repeatedly confirm their needs, research alternative products, and finally find the expected solution or product. This is a decision-making process of continuous thinking and evaluation. In other words, the customer journey refers to the process by which consumers interact with a brand or company's products or services. This perspective essentially considers the integrity of the customer experience, combining the customer's cognitive, emotional, sensory, social, and spiritual responses to all interactions with the company (Bolton et al., 2014). In business practice, the customer experience is also broadly defined in all aspects of the company's products, such as the quality of customer service, as well as advertising, packaging, product and service functions, ease of use, and reliability. The development of all interactions can be seen from the overall perspective of pre-purchase, in-purchase, and post-purchase. These places that may be in contact with the brand are called "touchpoints" (Homburg et al., 2015). The consumer's perception of the brand actually depends on his mood changes and flow in this customer journey, through the touchpoints collected by consumers in multiple stages of the decision-making process or purchase journey, the so-called "building experience" (Pucinelli et al., 2009).

Paying attention to the consumer experience is essential for companies
Creating a good consumer experience is an important goal of modern managers, and all companies must create unforgettable activities for consumers. "Future economic growth lies in the value of experiences and transformations--good and services are no longer enough." (Pine and Gilmore, 1999). Due to the adoption of technology, consumers can easily interact with the company's multiple touchpoints through various channels and media. With the continuous increase in the number and complexity of touchpoints, the customer journey has become more and more complex; in addition to having to pay attention to the consumer experience at all times, managers have also become the new normal in the face of omni-channel management (Brynjolfsson, Hu & Rahman 2013).

Given the relatively nascent state of the customer experience literature, empirical work directly related to customer experience and customer journey is limited. Therefore, this research will conduct a case study through the fast breakfast industry-observe the franchise headquarters introducing digital tools to improve the effectiveness and key insights of customer experience, customer journey, and customer experience management practices, and compare the historical perspective of customer experience in related marketing, as a reference and research topic for follow-up development of the industry.

Use the customer journey map for this case study

In order to solve the problem of G.C. Group, the research made suggestions to the chairman and CEO and assisted the franchise headquarters, franchisees, and consumers to provide service optimization suggestions according to each touchpoint of the customer journey. Next, this survey began to interview representatives of stakeholders in the business ecosystem, inspected the existing information system of the franchise headquarters, and summarized the digital ecological development needs of consumers, franchisees, and franchise headquarters, as shown in the figure.

Source: This study.
Figure 1: Key points of interviews with key stakeholders

Aiming at the strategic layout of G.C. Group's digital development, the research proposes two application scenarios, B2B (franchise headquarters to franchisees) and B2B2C (franchise headquarters to franchisees to consumers), and separately develops suitable digital technology and artificial intelligence technology service plans.

RESULTS OBSERVATION AND DISCUSSION

Using IM Chatbots should be easy to use for franchisees

After determining the dual-brand positioning of GC Group, the author and the franchise headquarters jointly investigated the franchisees' behavior and perception of using digital tools. The results show that almost all franchisees have the basic operating capabilities of digital communication software (such as LINE, Facebook, etc.), and they have a positive and open attitude towards applying digital technology to increase income and improve consumer services. They were faced with the needs of consumers with high repetitive query content, multiple marketing activities, and the creation of interactive scenes. The AI-based Chatbots program that simulates real human conversations through Chatbots should be the most suitable tool at present. Regarding whether users will resist the use of new tools, the research found that most of the franchisees of GC Group have used Line in the past, so it should be easy to import IM Chatbots API interface such as Line or Facebook through simple linearization process settings and provide franchisees an easy use start.

IM Chatbots can improve the management of franchise headquarters

In addition, IM Chatbots can automatically reply at any time, collect basic customer information, and establish automated marketing and sales processes. The franchise headquarters should find personnel management costs reduced partially, the frequency of marketing activities can be increased, common product shopping guides are provided that cascade multiple payments to attract consumer participation and improve satisfaction. If the IM Chatbots can be combined with CRM analysis, it will be able to further precision marketing and open up diversified sales opportunities. For the service purposes of the B2B and B2B2C business models, the research recommends the development of two IM Chatbots, one of which is the information delivery and two-way communication between the franchise headquarters and the franchisee, the notification reminder of raw material inventory replenishment, remote service and support assistance; the other Chatbots is mainly used as direct and indirect business potential consumers and members. Before adopting digital tools, the research suggests that the franchise headquarters must digitally integrate or return existing consumer data (i.e., establish a membership database), which will help launch G.C. Group brand joint activities, single-brand or regional marketing activities. Use the membership database list to guide consumers to franchisees for consumption and introduce new consumer groups; franchisees also promote preferential information in stores, encourage consumers to join the brand community, and then provide continuous bonus rewards through marketing incentives to increase membership conversion rate and stickiness.

CONCLUSION

The fast-food breakfast industry belongs to the catering service industry, and it is also one of the service formats that people's livelihood has the most daily exposure to. The introduction of artificial intelligence technology sounds like a long way off. In fact, now that data is widely used, artificial intelligence technology and perceptual environment have been connected to various digital devices in our lives. Once consumers feel the distinctive service, the brand will be valuable. In other words, if artificial intelligence can be used to understand consumer behaviors, grasp service trends, and complete online and offline

omni-channel integration, it will help to enhance franchise headquarters, franchisees, and consumers' recognition of brand value. Next, how to use digital technology and artificial intelligence to become a profit-maximizing and co-creation business model, and to maximize value exchange and business opportunities through the interaction of all important stakeholders, will be a future research direction.

REFERENCES

Bolton, R. N., Gustafsson, A., McColl-Kennedy, J., Sirianni, N. J., & David, K. T. (2014). Small details that make big differences: A radical approach to consumption experience as a firm's differentiating strategy. *Journal of Service Management. 25*(2), 253–274. doi: 10.1108/JOSM-01-2014-0034

Brynjolfsson, E., Hu, Y. J., & Rahman, M. S. (2013). Competing in the age of omnichannel retailing. *MIT Sloan Management Review, 54*(4), 23–29.

Chen X. (2019). How to survive in the small and medium-sized catering service industry in the AI era (in Chinese). Taiwan China Productivity Center (CPC) . Retrieved from https://mymkc.com/article/content/24213 (accessed 1 October 2021).

Cheng Y. (2020). Not only carrot cakes, omelets and milk tea! From meal to experience, Mai Wei Deng uses technology to flip the traditional breakfast shop (in Chinese). Taiwan Business Next. Retrieved from https://www.bnext.com.tw/article/56705/restaurant-tech-my-warm-day (accessed 1 October 2021).

Feng, W.S., Huang, W. Z. & Yu, X. X. (2010). Advanced artificial intelligence technologies and industry applications (3/4). Ministry of Economic Affairs, R.O.C. Retrieved from https://www.grb.gov.tw/search/planDetail?id=13393425 (accessed 1 October 2021).

Homburg, C., Jozić, D., & Kuehnl, C. (2017). Customer experience management: toward implementing an evolving marketing concept. *Journal of the Academy of Marketing Science, 45*(3), 377-401. doi: 10.1007/S11747-015-0460-7

Industrial Technology Research Institute (ITRI), Institute for Information Industry (III) (2021). Enhance Taiwan's industrial competitiveness with the application of artificial intelligence technology industry (in Chinese). Ministry of Economic Affairs, R.O.C.. Retrieved from https://www.moea.gov.tw/MNS/doit/achievement/Achievements2.aspx?menu_id=5391&ac_id=1589 (accessed 1 October 2021).

Lemon, K. N., & Verhoef, P. C. (2016). Understanding customer experience throughout the customer journey. *Journal of Marketing, 80*(6), 69-96. doi: 10.1509/jm.15.0420

Liang-Tien Lin (2016). A Study of selection criteria on Franchisee Selects Franchisor - Wan Jai Shiang Breakfast Chain Store for Example (in Chinese) *(Master's Thesis, National Taipei University, Taiwan)*. Retrieved from https://www.airitilibrary.com/Publication/alDetailedMesh1?DocID=U0023-1303201714255216

Liu, Y. (2020). Find out the "real power" of AI, the commercial value is infinite. Taiwan Business Next (in Chinese). Retrieved from https://www.bnext.com.tw/article/59913/find-the-true-power-of-ai (accessed 1 October 2021).

Pine Jr., B. J. & Gilmore, J. H. (1999). *The Experience Economy: Work Is Theatre & Every Business a Stage.* Harvard Business Press.

Puccinelli, N. M., Goodstein, R. C., Grewal, D., Price, R., Raghubir, P., & Stewart, D. (2009). Customer experience management in retailing: understanding the buying process. *Journal of Retailing, 85*(1), 15-30. doi: 10.1016/J.JRETAI.2008.11.003

Wavenet (2019). The starting point for companies to enter the AI field: How important is digitization? (in Chinese). Wavenet technology. Retrieved from https://www.wavenet.com.tw/2019/04/ (accessed 1 October 2021).

Zhang, M.Z. (2007). Evaluation Criteria to Select a Franchiser. (in Chinese) (*Master's Thesis, National Taipei University, Taiwan)*. Retrieved from https://www.airitilibrary.com/Publication/alDetailedMesh1?DocID=U0001-0507200715445800 (accessed 1 October 2021).

Zheng, Z. (2021). Many gold stores in business districts are released. Taiwan Economic Daily, Sep, 17. Retrieved from https://money.udn.com/money/story/5635/5754333 (accessed 1 October 2021).