Theoretical Background of LCC Operation

Yoichi Shigetani

Abstract

This paper explores the theoretical background of low cost air carriers’ operation using the theory of service management as well as service marketing. The operation strategies of low cost air carriers are examined from the point of their service operation structure as well as their strategies to achieve customer satisfaction. The purpose of this paper is to explore how low-cost air carriers can achieve customer satisfaction despite their low-cost operation and the problems they may face. This paper consists of 5 sections. Following the introduction, the customer segment of low cost air carrier is described from the market research by JTB Tourism Research and Co. in the late 2010s. Then, previous researches are reviewed from the point of the structure of the operation, response to the uncertainty caused by the diversity of customer needs, the relationship between price and quality as well as Expectation Confirmation Theory. Following the literature review, the theories and models discussed in the previous section are applied to the case of a typical LCC to verify the theories and models in the previous research as well as to explore the findings from the actual case. In this section, cost reductions by LCCs are discussed by each structure of service operation (backyard, front and service-encounter). Also, the customer satisfaction of LCC is discussed by applying the Expectation Confirmation Theory. In the last section, the findings in the previous section and further problems of the low-cost air carriers’ operation are described.

Keywords:
low cost carrier, airline management, competitive strategy, service management, low cost operation

Introduction

In every economic recession, the products that attract their customer with their low price always emerged. Especially in-service industries, demand for low price products is appreciated in the slow economy. A lot of low price services such as low-price hotel has emerged and LCCs are one of them. However, many low-price services could not get support from the market due to their poor customer satisfaction. This paper explores the theoretical background of LCC operations to find out how they can achieve customer satisfaction despite their low-cost services and further problems they may face.

Research Objective and Methodology

Products and services with “low price” as a front, such as “budget business” and “price destruction”, have appeared in the market. Low Cost Carrier (LCC) is one of them. In the manufacturing industry, where cost reduction is driven by technology, such as changes in raw materials, optimisation of production processes and the omission of functions, the level of customer satisfaction is determined by how close the quality of the product is to the conventional product. However, in the service industry, where production and consumption take place simultaneously in the presence of the customer, customer satisfaction has strongly interacted with the marketing strategy as well as the operation. In other words, the low-price service suppliers need to focus on the customers who agree with the service policy, are convinced by the process of service provision and accept the service as “Good Enough”. In this paper, we explore the theoretical background of LCCs’ service operations to find out the hints for “low cost services with tolerable customer satisfaction”.

Theoretical Background of LCC Operation. https://doi.org/10.58345/EGEC8191 | 2
So as to achieve the objective mentioned above, the outline of LCC customers in Japan in section 2 followed by literature review in section 3. In section 3, previous studies on the low-cost operations and customer satisfaction are reviewed so as to find out the general theories to reduce the cost of service operation. In section 4, theories reviewed in the literature review are applied to the LCC operations to lead the conclusion and further issues described in section 5.

Outline of LCC customers in Japan

The first LCC launched in Japan in 2012. In the early days of LCC in Japan, most of their customers are male passengers in their twenties. In recent days, their market segment has extended to female passengers in their twenties and thirties as well as male passengers in their fifties while stagnant to female passengers in their fifties, whose internet literacy is relatively low (JTB Tourism Research and Co. 2017, p. 3). This is because the business model of LCCs is not based on face-to-face sales through travel agencies but rather on direct sales via the internet or OTAs (On-line Travel Agents), which means that they have no access to people with low internet literacy. For LCCs, the ratio of sales via the internet for domestic flights is 93.2% (74.6% direct sales and 18.6% via OTA), which highlight the high ratio of internet sales for domestic flights (JTB Tourism Research and Co. 2017, p. 6). The proportion of individual ticket sales for international flights is usually low due to the nature of international travel. Despite these trends, LCCs sold 86.4% of their seats on international flights via the internet (55.0% direct sales and 31.4% via OTA). From the point of travel purpose, 85.9% of domestic LCCs passengers were leisure passengers, while only 11.7% are business passengers (JTB Tourism Research and Co. 2017, p. 4). In 2016. This is because leisure passengers are more price-sensitive than business passengers. Therefore, they tend to choose LCCs attracted by their low price. On the other hand, business passengers tend to be more interested in mileage accumulation to FFP (frequent flyer programme) and so-called “frills” such as free drinks on board rather than price. In fact, 89% (multiple answers allowed) of LCC customers choose LCC because of their low price (JTB Research Ins 2017, p. 4). Thus, the main customers for LCCs are leisure passenger who are price-
sensitive, who are willing to make their separate travel arrangements via the internet and who understand the “cost-effective” services offered by LCCs.

Literature Review

Low price is always welcomed to the market. However, so-called “cheap and bad” services may initially attract customers with their novelty but not sustainable. In this section, previous studies on structures of service operations, response to uncertainties, pricing & quality control and Expectation Confirmation Theory are reviewed so as to understand the theoretical aspect of Low Cost Air Carrier.

Structure of Service Operation

Tamura (1990) states that the service delivery system is a system that produces service quality as an output through the interaction of human input, material input and input from other customers who are present at the place where the services are delivered to the customer. The design of a service delivery systems can be categorised into two types: one is an Individualised Strategy to meet the needs of individual customers, and the other one is an Industrialised Strategy to provide standardised services like industrial products at low cost. The former requires enhanced investment to front-line staffs, who play a crucial role at service-encounter. On the other hand, the latter aims to reduce operation costs through hardware such as automation of customer service, software such as standardised services and self-service by customers or a combination of these two (Levitt, 1976, pp. 66-67).

Yamamoto (2000) categorises the structures of service operations into three structures (the backyard, the front and the service-encounter) according to the distance from customers, and points out the methods of cost reduction in each structure. In the backyard, activities that do not come into direct contact with customers, such as preparation activities for providing services, are carried out. If the activities carried out in the backyard are not the company’s core competence, the cost that occurred in the
backyard can be reduced by outsourcing. The front is the facilities or spaces where the contact occurs but no human interaction occurs with customers. As the front is the structure where direct contact with the customers occurs, it needs to be present to serve the customer beside at all times. Therefore, cost reduction can be made if the supply can be adjusted flexibly to meet customer demand. The service-encounter is a structure where the service staffs serve and have direct contact with the customer. The service-encounter is the very place where interactions between the service staffs and customer occur. The service-encounter is required to have flexibilities to meet the varieties of customer needs. However, the flexibility in the service-encounter costs remarkably. In other words, the flexibility and the cost of service-encounter is the trade-off.

Diversity of Customer Needs and Response to Uncertainty of Operation

Larsson & Bowen (1989) states that the diversity of customer needs and the customer involvement in the service cause the uncertainty of service operation. For services with low diversity of customer needs and low customer involvement such as fast food, the backyard is the centre of interaction. On the other hand, for services with a high diversity of customer needs and customer involvement such as health care, the front and the service-encounter are the centres of interaction. For services with a high diversity of customer needs but low customer involvement such as a garage, the front and backyard are the centres of interaction between service staffs and customer. For services that the diversity of customer needs is low but customer involvement is high such as rental car, the service-encounter is the centre of interaction. The diversity of customer needs and the degree of customer involvement increase the uncertainty of operation. Exceptionally, customer involvement contributes to cost-saving if the service provider can achieve self-service operation. In this case, they are required to manage customer behaviour to ensure that the customer inputs remain within predictable limits. Focusing on particular customer needs is one of the options to reduce the uncertainty of
operation, by which the opportunity of market expansion may be compromised. Ritzer (1996) states that the standardisation of the products and operation procedure plays an important role to improve the efficiency of service operation by using the example of American famous fast-food chain store, McDonald’s. This is because the standardisation of products and operation procedures reduces the uncertainty of customer behaviour, the service staffs behaviour and the customer inputs caused by self-service.

Yamamoto (2000) presented the industrialisation strategy, the low-cost customer development strategy, and the modularisation/outsourcing strategy to achieve the low-cost operation. The industrialisation strategy was proposed by Levitt (1972) and is a strategy to achieve low cost operation by applying standardised and automatised service operations in the backyard to service-encounters. This strategy is characterised by the standardisation and automatization applied to service-encounters, where interaction between service staffs and customers occurs. Therefore, less-skilled workers can be employed as service staffs to reduce labour costs. Additionally, by reducing the uncertainty of human services, the stability of service quality can be easily secured. Also, the service provider does not need to accumulate individual know-how, which makes it easier to expand their business. On the other hand, the variety and flexibility of customer services are compromised. The low-cost customer development strategy, proposed by Heskett (1986), is to design the service operation focusing on the customer needs for which low-cost operation can be easily achieved. These customer needs are those that customers are willing to substitute a part of service operation such as buffet restaurants or that are relatively simple such as shuttle flights between Osaka and Tokyo (Yamamoto, 2000, p. 26). This strategy can achieve low cost as well as satisfy customer needs. However, the customer needs applicable to this strategy is quite limited. The strategy of modularisation/outsourcing is to standardise each module of operation and outsource the modules that are not core-competence of their service operation with lower cost. Although modularisation/outsourcing limits the flexibility of the service operation, it can be expected to reduce costs by economies of scale.
Price and Quality

The customers welcome the low price but they do not appreciate if the quality of products or services declines lower than customers’ tolerant level. The customers purchase the product or service that they perceive as the optimal point of their benefit and cost since the perceived value of the customer is determined by the trade-off between perceived benefits (quality) and perceived costs (Monroe, 1990, p. 104). This section explores the previous research about the relationship between price and quality to understand the product strategies of low-priced services produced by low-cost operations.

Price

Monroe (1990) proposed Pricing Formula that the perceived value of a product or service is the quotient obtained by dividing perceived benefit by perceived sacrifice (perceived value = perceived benefit/perceived sacrifice). Perceived benefit is the benefit that the customer perceives to receive by purchasing the product or service and is strongly related to the customer’s perception of the product or service quality (perceived quality). Perceived sacrifice is the costs that the customer perceives to be sacrificed for purchasing the products or services including not only the direct cost but also the costs associated with obtaining the products or services such as transport costs. These costs are not only direct monetary costs but also non-monetary costs such as the time and effort spent for obtaining the products or services.

Ueda (2004) developed Monroe’s Pricing Formula (1990) and stated that perceived value is the quotient of the perceived benefits divided by the perceived life cycle costs. Perceived benefit is the perceived utility of products or services, which includes not only the attributes of the products or services but also the values that customers enjoy, such as technical support, quality image and even price prestige. Perceived life-cycle cost is the cost perceived by the customer for purchasing the products or services, from the pre-purchase behaviours such as choosing products or service to the post-purchase behaviours such as maintenance and disposal. Also, it includes not only the direct cost

Theoretical Background of LCC Operation. https://doi.org/10.58345/EGEC8191 | 7
(price) as in Monroe’s Pricing Formula (1990) but also indirect costs such as acquisition costs, maintenance costs and even the risk of disappointment. If subtitles are needed, the authors should refer to the examples, as shown in Table 1.

Quality

There have been many attempts to evaluate service quality, which is the greatest element of perceived benefit. However, the objective framework to evaluate the service quality has not been established. The evaluation of service quality is generally more difficult than the evaluation of product quality because of the characteristics of services, such as their intangible nature and the simultaneity of production and consumption (Kondo, 2000, p.1). As the service products have great diversities, quality standards are diversified among industries (Baker, 2013 p.69). Though the effort to evaluate the quality of services has been made for a long time, there have emerged no objective and universal standard to evaluate the service quality. ISO, which is a quality standard for industrial products, and SERVEQUAL, which is a dedicated quality standard for services, were proposed as a standard of service quality. However, they are not recognised as a universal standard of service quality.

Kondo (2000) categorised service quality into four quality elements: outcome quality, process quality, instrumental quality and cost. The outcome quality is defined as a degree of achievement that the core functions of the service performed. It can be easily assessed objectively to a certain extent, even with little variation depending on customer preferences. The process quality is the degree of comfortableness that the customer experience in the process of service, which includes quality factors such as the politeness and friendliness of the service staffs. Process quality is very difficult to assess objectively due to the high diversity of customer needs that influence the criteria of evaluations. In some services that the outcome quality is not always immediately known, such as medical services, customers often judge the overall quality of the service by the process quality (Kondo, 2000, p. 13). The instrumental quality refers to the hardware used for providing the service, such as machinery, buildings, computer systems and so on. This quality factor is relatively easy to assess objectively like the
output quality despite the little variation due to customer preferences. The Costs include not only the price of the service but also the cost of obtaining the service. Also, it includes not only monetary costs but also non-monetary costs such as time and effort. None of these four quality factors is always particularly important, but they are all important in different proportions depending on the type of service and the customer group. Therefore, not all four factors need to be superior to the competitors’ service. The service provider should find out the optimum point of each quality factor and cost according to the type of the individual service and the target customer group from the point of cost management (Kondo, 2000, p.15).

Customer Satisfaction

Oliver (1980) proposed the Expectation Confirmation Theory, which states that customer satisfaction is the difference between the pre-purchase expectations and the post-purchase perceived quality. In case the post-purchase perceived quality exceeds the pre-purchase expectation, the customer feels satisfied with the product or service and has the intention to repurchase. Also, customer loyalty becomes higher to recommends the product or service to others. When the post-purchase perceived quality is almost as same as the pre-purchase expectation, the customer is satisfied with the product or service for a while, but the customer will easily switch if there emerges a newer product or service. If the post-purchase perceived quality is less than the pre-purchase expectation, the customer disappoints and their bland images are damaged.

Rust et al. (1999) proposed the Expectation Distribution Model that customers have repurchase intentions in case the post-purchase perceived quality is within their tolerable level, in contrast to Oliver’s Expectation Confirmation Theory that customers have repurchase intentions only in case the post-purchase perceived quality exceeds their pre-purchase expectations. In the Expectation Distribution Model, the customers tend to choose the service that they have purchased as long as the post-purchase perceived quality is within their tolerable level even though the post-purchase perceived quality is lower than their pre-purchase expectation. For customers, the
experience of the service reduces their risk of disappointment upon repurchasing. Morito (2009) examines the role of expectation to achieve customer satisfaction based on Oliver’s (1980) expectation confirmation theory using the case of medical services in Japan. She pointed out the importance of expectation control in service marketing. As the difference between expectation and perceived quality directly affects customer satisfaction, service providers need to understand and control customer expectations in order to achieve a high level of customer satisfaction.

Oliver (1997) states that expectations are influenced by the customer’s own experience to purchase the same or similar products or services. In other words, customer satisfaction with a new product or service is often influenced by comparisons with similar products or services that the customer has purchased before. Therefore, new entrants to the market with low-cost products and services often fail to achieve customer satisfaction because customers expect the same level of quality as existing products or services. From this point, it is very important for new entrants with low-price strategy to make sure that customers understand the differences between their products or services from existing providers and to manage their customer expectations.

Although there is a lot of arguments about customer satisfaction, it is agreed that reducing the gap between the pre-purchase customer expectations and the post-purchase perceived quality and increasing the reproducibility of quality leads to customers repurchase intentions. In other words, the management of service quality, as well as customer expectation, is important to keep their deviations within acceptable limits, which leads to customer satisfaction and repurchase intentions.

**Application to LCCs**

The essence of the LCC business model is to attract the price-sensitive demand by low prices supported by their low operating costs and achieve a high load factor to maximise the revenue per flight. This section explores the operation strategies of typical LCCs to provide “Good Enough” services to their customers while achieving low operating costs by applying theories reviewed in the previous section. Although many
airlines are called LCCs or call themselves LCCs, there is no clear definition of LCCs in the Japan Civil Aviation Act, US FAA regulations or EU Commission regulations (Yamaji, 2017, p. 103). In addition, prior studies have many definitions of LCCs, which can be categorised into production perspective and sales perspective. The former is defined as “providing low-fare services on short-haul routes through a low-cost production activity based on a simplification of services (Endo et al. 2011, p. 31)”. And, the latter is defined as “entering the market with a clear strategy to offer low fares (Oshima, 2015, p. 33)”. As the purpose of this paper is to discuss service operations, the former one has been adopted in this paper.

Product Strategy of LCCs

It is necessary to focus on the needs of the particular customers and reduce the uncertainty of operation to achieve a certain level of quality despite a low-cost operation. This section examines how LCCs focus on customer needs to reduce operational uncertainty based on Kondo’s four elements (2000); the outcome quality, the process quality, the instrumental quality and the cost.

Outcome Quality

In terms of the outcome quality, safety and punctuality are included in this element. As far as safety concerns, there is no difference between FSCs (Full Service Carriers) and LCCs as the same minimum safety standards are applied worldwide. Concerning punctuality, LCCs have difficulties recovering from the series of delay as FSCs can do due to their high aircraft utilisation. However, the majority of LCC customers are leisure-use and price-sensitive customer as mentioned in the previous section, the impact on the perceived quality of their customers is limited compare to FSCs.

Process Quality

In terms of the process quality, the quality of human services such as the attitude of
cabin attendants or ground staff are included in this element. FSCs focus on improving process quality by enhancing in-flight services or dedicated service for frequent customers, while LCCs reduce human services as much as possible (Shigetani, 2018, p. 62). As the perceived quality of process quality highly depends on the preference of each customer, human services increase the uncertainty for the perceived quality. Particularly on short-haul routes, the benefits of process quality for the customer are relatively low and the contribution to the perceived quality is quite limited. Moreover, the quality of human services depends on the skills of the service staffs and it is not easy to ensure the reproducibility of the service quality.

Instrumental Quality

In terms of instrumental quality, aircraft are included in this item. LCCs use a single typed small size fleet (Shigetani, 2018, p. 60) that limit their routes only within short-haul routes. Also, the seat pitch of their aircraft is denser than that of FSC, which makes their seats less comfortable. However, the benefits of seat comfortability for customers are relatively small in the short-haul routes in which LCCs are in service.

Cost

There are two types of costs for customers as mentioned in the previous section. One is monetary costs such as fares, and another one is non-monetary costs such as time and effort for going to the airport, checking in by a kiosk in the airport, booking and purchasing only through the internet. It is no need to say that the monetary cost of LCCs such as airfare is lower than FSCs. However, LCCs often deploy their service to airports that are less convenient than FSCs. Therefore, the non-monetary costs are the same or higher than FSCs for the majority of their customers. Also, customers are required to check-in by themselves, booking and purchasing a ticket only through the internet, which increases the non-monetary cost for customers.
Customer Segment

Customers purchase services at the optimal point of the perceived benefit (quality) and the perceived cost in order to maximise their perceived value. The perceived quality of LCCs is inferior to FSCs in terms of comfortability and human services though there is no significant difference in terms of outcome quality, such as getting to the destination safely and quickly. Therefore, the perceived quality of LCCs is not significantly lower than that of FSCs for customers who do not value comfortability and human services, such as those who travel short-haul routes. On the other hand, in terms of costs, the monetary costs of LCCs are lower than that of FSCs. And, the non-monetary costs of LCCs do not increase significantly for passengers who do not perceive the time and effort required to go to less convenient airports or check-in by a kiosk in the airport, book and purchase ticket only through the internet as a high cost. Thus, LCCs specialise their target to the customers who are focusing on their outcome quality and monetary cost and less concerned about process quality and non-monetary costs.

Cost Reduction per Each Structure of Operation

For LCCs, it is very important to have a cost advantage against FSCs to survive in the market. As LCC’s business model is based on the strategy to take the price-sensitive customer from the FSCs as well as other transportation modes such as highway coaches and sleeper trains or develop new customer who used not to fly. This part explores the cost reduction of LCCs per each operation structure (backyard, front and service-encounter) according to the literature review discussed in the previous section.

Cost Reduction at Backyard

In the airline business, the backyard includes seat inventory control, flight operation, aircraft maintenance, ground handling, catering and training of crews and engineers. In terms of seat inventory control, most of FSCs introduce a complex fare structure using yield management techniques. As a result, many different fares and ticket rules
are applied to the same route, dates and cabin classes. On the other hand, LCCs apply one fare to the same route, dates and cabin classes though the fare varies depending on the time of purchase (Shew 2011, p. 108). By adopting such a simple fare structure, LCCs can sell their ticket directly via the internet without relying on travel agents with GDS (Global Distribution System) thus reducing the sales commission to travel agents and the surcharges of the GDS. As tickets sold by LCCs are usually non-endurable and non-refundable, LCCs do not have to overbook their flights to fill up their seats with considering the revenue loss caused by no-show passengers. Therefore, LCCs’ seat inventory management systems require little customisation of “off-the-shelf” products, which means that they can save system investment relatively low (Shigetani, 2018, p. 62).

All airlines follow international standards for flight operation and there are essentially no notable differences among airlines. Therefore, flight operation is easy to modularise and outsource to third parties. In particular, off-shoring of “weight and balance” operations to countries with lower labour costs is becoming quite common. For airlines, aircraft maintenance is not only the most essential factor for their safety but also one of the most significant operational costs. ICAO (International Civil Aviation Organisation) stated that the maintenance costs account for more than 10% of all operational costs. Therefore, LCCs need to save maintenance costs as long as it does not affect their safety. The barriers to outsourcing aircraft maintenance are relatively low as it is globally standardised like flight operations. As the periodic heavy overhauls above “category-C” require large facilities such as hangers, which LCCs often outsource including offshoring. In addition, most LCCs have a single-type fleet, by which they can reduce the inventory of spare parts. Using aircraft types requiring no pre-flight inspection in the MRBR/MPD (Maintenance Review Board Report/Maintenance Planning Document), so-called “ER Zero” aircraft, also helps to reduce maintenance costs. Normally, aircraft must be inspected by a qualified engineer before each flight, but ER Zero aircraft do not require a pre-flight inspection by a qualified engineer. Thanks to ER Zero aircraft, LCCs do not have to assign qualified engineers at all airports other than their hub airports, which allows LCCs to increase the number of destinations as well as to reduce their cost by outsourcing on-call maintenance to local maintenance providers.
Ground handling is also easy to outsource as the procedures are common among most airlines. Not only FSC affiliates but also local ground handling companies provide these services at each destination nowadays. Shorter turn-around time of LCCs than that of FSCs let them enjoy their higher aircraft utilisation, which reduces their operation cost (Shew 2011, p. 106). LCCs’ non-frills in-flight services also contribute to their cost reduction by reducing the time to clean galleys and serve meals, which enables flight attendants to clean the cabin between flights (Shew 2011, p. 106). LCCs’ turn-around time is 40-60 minutes for international flight and 20-25 minutes for a domestic flight, which is about 50% shorter than FSCs. Also, LCCs eliminates or reduce the number of free baggage allowance to save the baggage handling cost. Charging for checked baggage also helps to improve their punctuality. If a passenger does not arrive at the gate on time and is to be offloaded, it is necessary to offload their baggage for aviation security. It is possible to apply the strict boarding deadline by discouraging passengers from check-in their baggage as much as possible. For most customers who travel short-haul flights, the free baggage allowance is not so important and does not affect their perceived quality.

The cost benefits of a single type fleet are significant for training their crews and engineers. The qualifications of the flight crew are different by aircraft types and one flight crew cannot fly with more than one type of aircraft for safety reason. Single aircraft type fleet increases the efficiency of flight crew utilisation and reduced training costs of their flight crews. Similarly, as the qualifications of their engineers are different per each aircraft, a single type of aircraft can significantly reduce the cost of training.

**Cost Reduction at Front**

In the airline business, the front includes the aircraft, the aircraft engine and the airport. Except for small aircraft like a regional jet or regional turboprop, the commercial aircraft market is in a complete oligopoly by Boeing and Airbus. Therefore, the options for the most LCCs are the Boeing 737 series or Airbus A320 series due to their suitable capacity for LCC operation. For aircraft engines, Rolls-Royce, General Electric, Pratt & Whitney and their affiliates also have an oligopoly in the market. As the choice of
engines is almost limited once the aircraft type is selected. Since the performance of these engines is very similar, the choice is often based on the price and the relationship between the airline and the engine manufacturer. FSCs usually deploy many types of aircraft depending on the size of the market, while LCCs deploy single type small aircraft to all markets as small aircraft is easy to be filled up. It is essential to balance the production and demand of the service to save the cost occurred at the front (Yamamoto, 2000, p. 22). LCCs deploys small size aircraft that are very modest to the market size, by which they can avoid surplus production against demand. In addition, LCCs tend to use newer aircraft rather than older ones to save their maintenance costs and reduce the uncertainty caused by mechanical trouble.

FSCs tend to serve the primary airport in each city, whereas LCCs tend to serve secondary airports. For example, Peach Aviation serves at Kansai Airport in Osaka. The advantages of flying to secondary airports are lower landing fees and availability of landing slot (Shew, 2011, p. 105). Other than these direct benefits, LCCs can enjoy high punctuality and high in-service rate by serving at secondary airports (Shigetani, 2018, p. 59). Also, in Japan, the utilisation of aircraft during midnight is a significant issue for the efficiency of aircraft utilisation as the midnight domestic flights are generally not operated due to the airport access and curfew of the airports. These aircraft can be deployed to international routes to improve aircraft utilisation.

**Cost Reduction at Service-Encounter**

In the airline business, service-encounter include check-in counters and in-flight services.

FSCs open their check-in counters in their hub airport from a few hours before the departure of their first flight to the cut-off time of their last flight on the day. Therefore, their customers can check in their flight anytime on the departure date at their base airport if they fly with FSCs. On the other hand, LCCs generally accept their customers for check-in from a few hours before their departure time to the cut-off time of their flight even at their base airport (Shigetani, 2018, p.60). If the services provided at service-encounter are human services, it is very important to control the customer flow...
to the service-encounter to achieve the low-cost operation (Yamamoto 2000, p. 24). Therefore, controlling the number of customers coming to the check-in counter is important for low-cost operations. In addition, most LCCs require their customers to check-in by themselves at their kiosks. As described above, the services at service-encounters are quite simplified. Since it is essential to focus on the particular customer needs at service-encounters to achieve the low-cost operation (Yamamoto 2000, p. 23), these simplified operation procedures may contribute to their cost reduction. Also, the simplicity of operations enables the outsourcing of their service-encounter. Most LCC outsource their airport handling to their third party (Shigetani, 2018, p. 60).

In terms of in-flight services, LCCs offer a simplified service called “non-frills” (Endo et al. 2011, p. 32). Non-frills services mean the in-flight services without free in-flight meals, beverages, amenities, entertainment and so on. As most LCCs operate on short-haul routes, the benefits of these services for customers are not very high. The direct cost for in-flight services account for only 2-3% of direct costs (Doganis, 2001, p. 172) and that the direct cost savings from non-frills services are very limited (Yamaji, 2017, p. 105). However, as the variety and uncertainty of service-encounter may increase operational complexity and make cost-saving more difficult (Yamamoto, 2000, p. 23), it can be said that the indirect cost saving from non-frill services should not be underestimated.

Customer Satisfaction of LCCs

As discussed in the previous section, it can be said that reducing the gap between customer expectations & perceived quality and increasing the producibility of quality leads to higher customer satisfaction and repurchase intention. As LCCs’ offer lower price to the customer than FSCs, the cost they can use for improving the service quality is quite limited. Therefore, LCCs have two strategies to assure customer satisfaction. The first strategy is that they focus on the particular quality element that has the greatest impact on their customers’ perceived quality. And the second strategy is that they save their customers’ expectations to their quality. As LCCs have quite limited resources available for service improvement due to their cost structure, customers’
high expectations of quality can lead to disappointment.

**Focusing on Particular Quality Element**

As mentioned in the previous section (4.1.1), LCC is focusing on their outcome quality and cost rather than other quality elements advocated by Kondo (2000). As outcome quality and cost are easily assessed objectively (Kondo, 2000 pp.11-14), the correlation between investment and customer satisfaction is predictable compared to other quality elements. For example, Southwest Airlines achieved 80.2% “on-time arrival” record, which was ranked 4\textsuperscript{th} out of 10 major airlines in the US, in 2019 (2020, United States Ministry of Transportation). Also, they achieved 0.00033% customer complaint ratio, which is ranked 1\textsuperscript{st} out of 10 major airlines in the US, in 2019 (2020, United States Ministry of Transportation). The former is due to their “point-to-point” network structure, which has the advantage to prevent the chain to delay compared to the “hub and spoke” network structure adopted by FSCs. Also, their simplified service policy reduces the risk of service failure and saves the customer complaint ratio. Their advantages of simplified service policy may break the assumption that wide variation of services increases the perceived quality (Zapata, 2012 p.213), they focusing on improving the quality element objectively assessed with managing the customer expectation mentioned below.

**Management of Customer Expectation**

The management of customer expectation is very important for LCCs because customer satisfaction correlates to the discrepancy between customer expectations and perceived quality. As mentioned before, LCCs are focusing on the very specified customer needs. They can’t meet the customer expectations with their unanticipated needs. So, a lot of LCCs try to manage customer expectations to ensure that customers do not have expectations beyond their anticipation. For example, Southwest Airlines has a policy not to commit the services that they can’t provide to their customers (Shew, 2011, p. 116). By offering the promotion price ticket in their low season, LCCs
can let their expected customers understand their services so as not to disappoint the gap between their expectations and perceived quality.

Conclusion and Further Issues

Since the launch of Southwest Airlines, the airline industry has undergone many challenges, including deregulation, the expansion of sales channels through the internet and the reduction of operating costs through technological innovation. LCCs have been benefited from these challenges and are now become major players in the airline industry.

To conclude, LCCs achieved low costs by providing services dedicated to the specific needs among the variety of customer needs and by adopting their strategy of industrialisation and modularisation/outsourcing in the backyard, the front and the service-encounters. In terms of marketing, the company adopted the strategy to focus on price-sensitive customer needs. Also, they provide services that are low-priced but does not disappoint particular customers. In other words, they pay attention to the diversity of perceived benefits (quality) and perceived costs per customer groups, provide the services that are at the optimum point of the perceived benefit and perceived costs of customer needs that are compatible with cost reduction.

In 2017, 25.5% of domestic travellers in Japan have the experience to fly with LCCs (JTB Tourism Research and Co., 2017, p. 3). Customers’ understanding of LCC services has also improved during this period, which is a tailwind for LCCs. However, it should not be forgotten that the LCC business model is very easy to imitate. Therefore, each LCC needs to have its competence that the new entrants can’t imitate or environment that obstruct the new entrants to the market. In Japan, the landing slot of the major airports may become a barrier to the new entrants.

This paper examines the theoretical background of LCC operation from the point of service management and marketing. However, there are a lot of industries that low cost operators play important role in the market such as the hotel industry. There remains a lot of further research issues in the low-cost operation.
Acknowledgments

I wish to thank Professor Yamamoto and members of his seminar in Institute of Business and Accounting, Kwansei Gakuin University for valuable advices on this paper.

Notes

No notes.

References


Cite this article

Author
Yoichi Shigetani
Institute of Business and Accounting, Kwansei Gakuin University, (Japan)
Corresponding author shigetanijp@icloud.com
https://orcid.org/0000-0002-8284-4420

Received: | Accepted: | Published online: 28 November 2021
Volume: 2 | Issue: November 2021 | DOI: https://doi.org/10.58345/EGEC8191 |

Theoretical Background of LCC Operation by Yoichi Shigetani is licensed under CC BY-SA 4.0. To view a copy of this license, visit http://creativecommons.org/licenses/by-sa/4.0/