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# **Exploring the Impact Factors for Developing Low Cost Carriers: Cases of Japan and China**

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## **Abstract**

With the increasing amount of personal tourists and several emerging business models such as full service airlines (FSA), low cost carriers (LCCs) and the charter flight, the market of air travel has changed dramatically in recent years. This study explores opinion leaders' opinions toward LCCs in two major countries in the Asian airline industry, Japan and China. By exploring opinion leaders' opinions toward LCCs, this study can contribute valuable insights for policy makers to develop LCCs in the Asian airline market. A total of 226 opinion leaders in Japan and 163 opinion leaders in China are invited as participants in this study. Results of this study revealed three factors for developing LCCs in Japan: (1) reservation & convenience factor; (2) entertainment factor; and (3) safety factor. Meanwhile, three factors for developing LCCs in China are also generated from the results: (1) convenience factor; (2) habituation factor; and (3) rapidity factor.

## 1. Introduction

Direct competition between full-service airlines (FSAs) and low-cost carriers (LCCs) has been intensifying across the world in recent years, with the growth of LCCs being significant in the domestic markets of Asia. In Japan and China, travel traditionally took the form of large groups such as company employees and community groups, but nowadays the trend has shifted towards individual tours. With the upsurge in personal tourism and the change in the tourism form of individual tourists, tourist destinations have become more diversified. After technical innovations, innovation in the organizational side is now the chief driver of air transport services. The representative is the appearance of a variety of business model such as FSAs, LCCs or charter flights. O'Connell and George (2005) indicate that there appears to be no difference in passengers' perceptions between LCC and FSA incumbents in the mature European market and in the rapidly developing economy of South Asia. American and European FSAs have lost a significant proportion of their passengers to LCCs, with this experience is now being replicated in the domestic markets of Asia. Kim and Lee (2011) confirm that LCCs have a competitive advantage over FSAs in several nations due to their lower fares and similar levels of service quality. Because not all customers' needs are alike, and the market characteristics found in the LCC industry may influence customers' attitudes, this study will accordingly examine the relative importance of perceived service quality and the relationship between perceived service quality, customer satisfaction and behavioral intention by using multidimensional methods. The results from this study indicate that the significant dimensions of customer satisfaction are tangibles and responsiveness. In addition, this study confirms the significant consequences of customer satisfaction. Based on these results, in the new global tourism, grasping the consciousness of the user has become a central issue for the development of the aviation industry, and especially for LCCs. Furthermore, with respect to the competitive relationship between FSAs and LCCs, most in the tourism sector deem LCCs to be perfect substitutes for network carriers (Castillo-Manzano et al., 2011). Castillo-Manzano analyzed the view of the urban tourism fabric in the hinterland of five Spanish regional airports of the LCC phenomenon and the impact that LCCs have had on the various niche tourism markets via a survey of almost 500 tourist establishment managers. The results of this survey show that most in this tourism sector consider LCCs to be perfect substitutes for network carriers and even improvements on these in many cases. The exceptions are travel agencies, especially with regard to the role LCCs play in promoting conference tourism.

There has been little discussion, however, regarding Japan and China, which have witnessed remarkable growth in LCCs in recent years, with huge tourism resources and tourism markets. Based on the foregoing, the aim of this paper is to explore the impact factors

for developing LCCs by comparing opinion leaders' opinions toward LCCs in two major countries in the Asian aviation industry, Japan and China.

## 2. Methodology

### *Foundation of theory*

The innovation adoption curve of Rogers is a model that classifies adopters of innovations into various categories based on the idea that certain individuals are inevitably more open to adaptation than others.

Early adopters are well respected by their peers and are often opinion leaders. They tend to be younger, more mobile and creative than later adopters, have fewer contacts outside their own social group or community, have the greatest contact with salespeople, and engage in word-of-mouth promotion. Of all the groups, this one tends to have the greatest contact with salespeople. Marketers should be very concerned with attracting and selling to the early adopter group. Their acceptance is crucial. The next group, the early majority, looks to the early adopters for guidance. The early adopters can help the promotion effort by spreading word-of-mouth information and advice among other consumers. In other words, the spread of the opinion leaders (early adopters) provides an important platform for new product dissemination. Figure 2.1 shows the timeframe for adoption of innovations.

On the basis of the above, in this study, opinion leaders were set as the representative sample.

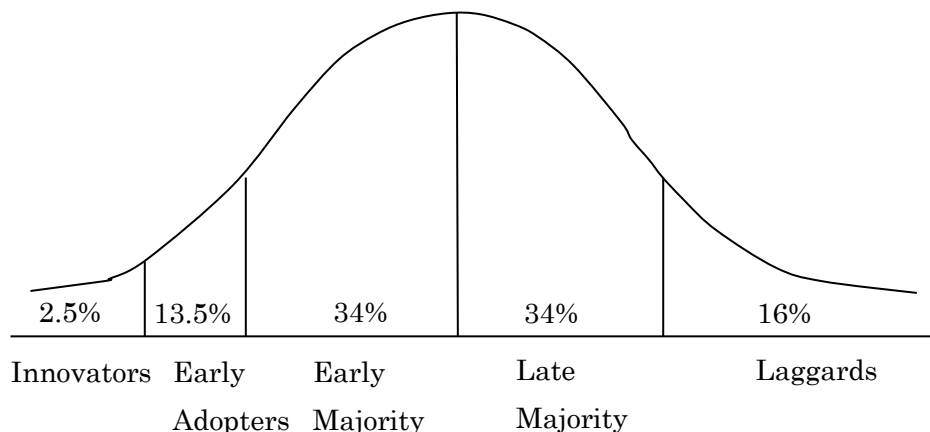


Figure 2.1 Time of adoption of innovations

Source: Kotler and Armstrong, *Principles of Marketing*, 9th ed. (New Jersey, Prentice-Hall, 2001)

Furthermore, in this study, to explore the actual situation of LCCs in Japan and China, the Product Life Cycle (PLC) model was utilized. Kotler (2001) propounded the PLC model that reveals the life-cycle of a product's sales and profits. The PLC of most products goes through four phases: Introduction, Growth, Maturity, and Decline. Based on this model,

this paper describes the life-cycle of LCCs in China and Japan.

*Sample Design and Data Collection*

This study utilized a questionnaire survey to access the opinions of participants in both Japan and China in order to measure the impact factors for developing LCCs. Via convenience sampling, this survey was conducted in September 2013 in Japan and May 2014 in China, with 400 questionnaires in Japan and 300 questionnaires in China distributed. Of these, 232 questionnaires in Japan and 168 questionnaires in China were returned, representing a response rate of 56.5% and 54.3%. Of the 226 questionnaires, 163 responses were usable.

The questionnaire survey design references the travel-needs model articulated by Pearce and coworkers (1991). In this approach, travelers concerned with developing and extending their *relationships* while traveling will also have needs in terms of *safety* and *physiological* level factors, but may not yet be particularly concerned with *self-esteem* and *self-development* needs. Accordingly, this issue has been divided into three categories of *relationships*, *safety* and *physiological*, and subdivided into the 15 items of 'Service time', 'Access', 'Procedures', 'On-time statistics', 'Reservation system', 'Transit', 'Rapidity', 'In-flight service', 'Seat', 'Entertainment', 'Habituation', 'Luggage', 'Expense', 'Discount' and 'Safety'. Subjects are presented with the 15 items and allowed to select from a four-point scale ranging from '4-Very Important', '3-Important', '4-Somewhat Important', to '1-Somewhat Unimportant'.

The research process of this study is summarized in Figure 2.2.

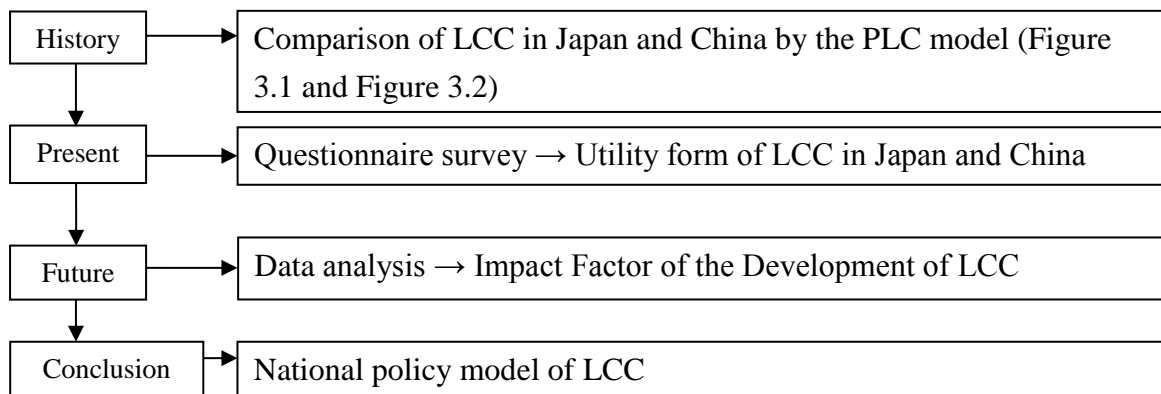


Figure 2.2. The research process

*Data Analysis*

The data collected were entered into a computer using Microsoft Excel from Microsoft Corporation for statistical analysis (MS Excel, 2000). The data were analyzed using the Statistical Package for Social Science version 21.0 (SPSS, 21.0). Data analysis techniques included standard deviation, and factor analysis was applied to extract key factors.

### 3. Results

#### 3.1 Comparison of LCCs in Japan and China via the PLC model

Table 3 shows the development of aviation in China and Japan. LCCs were established in Japan in 2012 after it had transited through an era of pre-LCCs. In China, however the development of LCCs has been quite straightforward – without a pre-LCC phase – and was achieved by Spring Airlines in 2004.

From 2012, the three companies of Peach Aviation, Air Asia Japan and Jetstar Japan have entered the market. The advent of LCCs is leading to intensification and market restructuring of competition in the aviation market, and came in response to the growing demands of consumers. In addition, the growth of LCCs is giving rise to a growth in Japanese secondary airports and contributing to tourism promotion and local revitalization.

In 2005, the monopoly market of major FSAs was crumbled in China; new competition was initiated by new entrants in the form of privatized LCC airlines. China's first LCC, Spring Airlines, with the demand for domestic air passenger transport, was founded by the Shanghai Spring International Travel Service Co., Ltd. in 2005 with reference to the LCC model overseas. As a successful case of strong corporate performance since its establishment a decade ago, Spring Airlines has disseminated a new demand of tourists and business travelers for low-priced products as its main target, and especially that of users who have been using ground transportation such as rail and bus, or those who have never previously traveled by airplane and also tourists travelling at their own expense.

Table 3.1. The development of aviation in Japan and China

Japan	FSC	Pre-LCC	LCC
Time	1952-	1996-	2012-
	<ul style="list-style-type: none"> <li>• Japan Airlines</li> <li>• All Nippon Airways</li> </ul>	<ul style="list-style-type: none"> <li>• Skymark Airlines</li> <li>• AIRDO</li> </ul>	<ul style="list-style-type: none"> <li>• Peach Aviation</li> <li>• AirAsia Japan</li> <li>• Jetstar Japan</li> <li>• Vanilla Air</li> </ul>
China	FSC	Pre-LCC	LCC
Time	1987-		2004-
	<ul style="list-style-type: none"> <li>• Air China</li> <li>• China Eastern Airlines</li> <li>• China Southern Airlines</li> <li>• Hainan Airlines</li> </ul>	None	<ul style="list-style-type: none"> <li>• Spring Airlines</li> <li>• Okay Airways</li> <li>• Juneyao Airlines</li> <li>• Yunnan Lucky Air</li> </ul>

The timing for the market entry of LCCs in Japan (2012) was seven years later than China (2005), but the share rate in Japan in the past two years has become greater than China's. As shown in Figures 3.1 and 3.2, the growth of LCCs in Japan is faster than China. In the PLC model of Japan, Japanese LCCs have moved from the introduction stage into the growth stage. On the other hand, although LCCs have evinced a greatly increased rate in China, the market share is still relatively small there. Hence, the PLC model of China is still in the introduction stage.

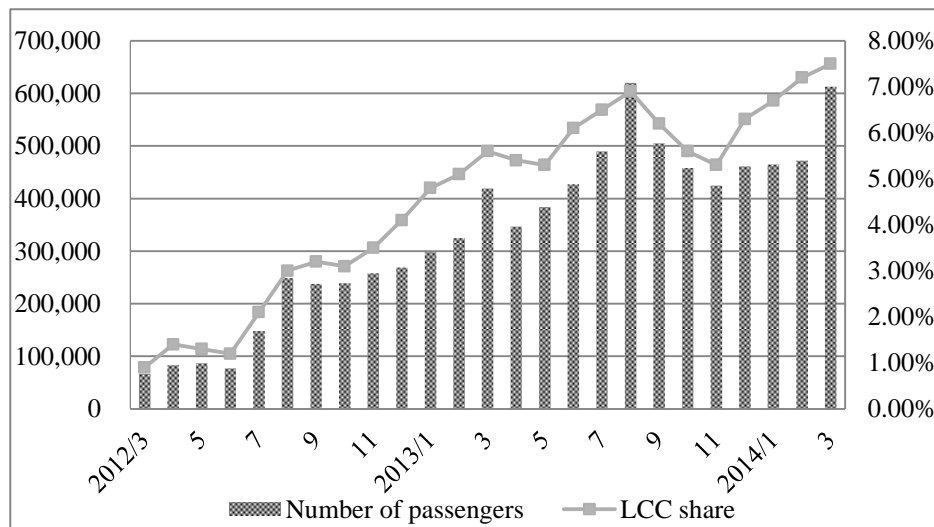


Figure 3.1. Growth and market share of Japan's domestic LCC (\*based on the number of passengers). *Source:* Created from documents released from Ministry of Land, Infrastructure, Transport and Tourism of Japan

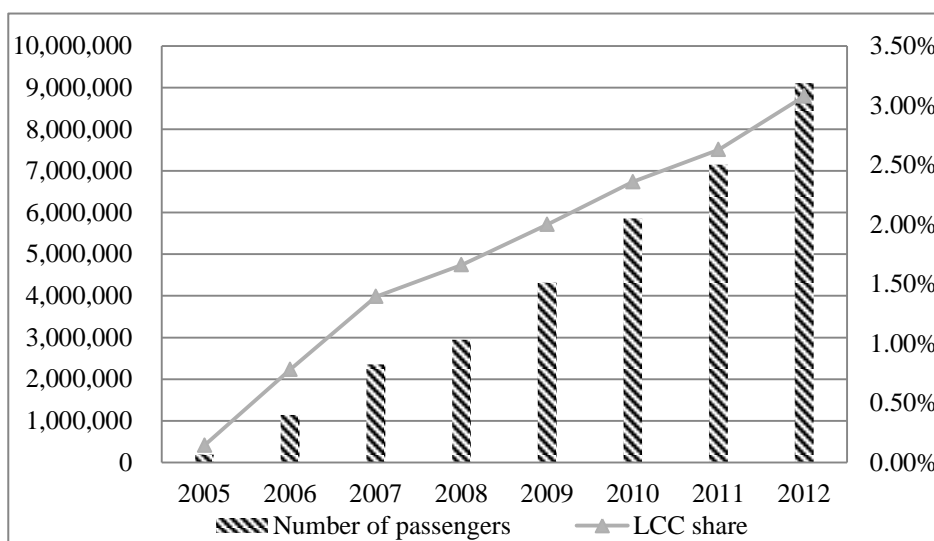


Figure 3.2. Growth and market share of China's domestic LCC. *Source:* Created from Year Book of China Transportation & Communications(2005-2012)

### 3.2 Impact Factor

The questionnaire survey consisted of the impact factors about the choice of the means of transportation with 15 items. After factor analysis, the performance of the factors is shown in Figure 3.3. Factor values, contribution ratio and cumulative ratio from the factor analyses appear in Table 3.2.

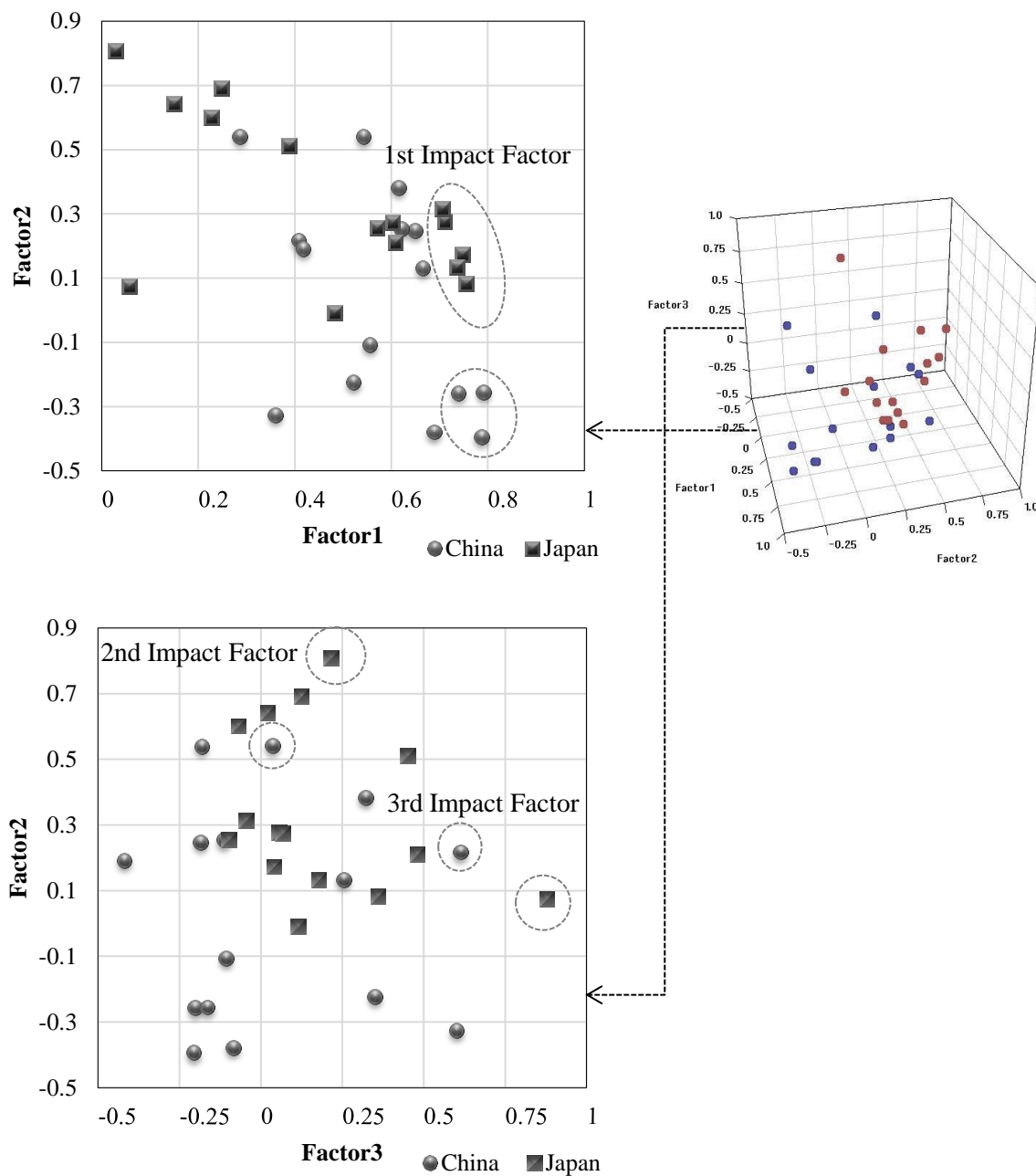


Figure 3.3. The performance of the factors.



Table3.2. Factor values, contribution ratio and cumulative ratio from factor analyses

Japan	F1	F2	F3	China	F1	F2	F3
Service time	<u>0.76</u>	0.08	0.36	Transit	<u>0.79</u>	-0.26	-0.17
Access	<u>0.75</u>	0.17	0.04	Procedures	<u>0.79</u>	-0.39	-0.21
Procedures	<u>0.74</u>	0.13	0.18	Access	<u>0.74</u>	-0.26	-0.2
On-time statistics	<u>0.71</u>	0.28	0.06	Reservation system	0.69	-0.38	-0.09
Reservation system	<u>0.71</u>	0.32	-0.05	Service time	0.67	0.13	0.25
Transit	0.61	0.21	0.48	Seat	0.65	0.25	-0.19
Rapidity	0.6	0.27	0.07	Luggage	0.62	0.25	-0.12
In-flight service	0.57	0.26	-0.1	On-time statistics	0.62	0.38	0.32
Seat	0.48	-0.01	0.11	Safety	0.56	-0.11	-0.11
Entertainment	0.03	<u>0.81</u>	0.22	In-flight service	0.54	0.54	-0.18
Habituation	0.25	0.69	0.12	Discount	0.52	-0.22	0.35
Luggage	0.15	0.64	0.02	Entertainment	0.42	0.19	-0.42
Expense	0.23	0.6	-0.07	Rapidity	0.41	0.22	<u>0.61</u>
Discount	0.39	0.51	0.45	Expense	0.36	-0.33	0.6
Safety	0.06	0.07	<u>0.88</u>	Habituation	0.29	<u>0.54</u>	0.04
Contribution ratio				Contribution ratio			
(%)	28.3	17.2	9.77	(%)	25	16.9	13.3
Cumulative ratio				Cumulative ratio			
(%)	—	45.6	55.3	(%)	—	41.9	55.2

Information collected from Japan reveals that the values of 'service time', 'access', 'procedures', 'on-time statistics', and 'reservation system' are above 0.7. As 'service time' and 'reservation system' are factors regarding reservation and the other 3 factors ('access', 'procedures' and 'on-time statistics') relate to convenience, these five items therefore were sorted as the first impact factor in Japan: *reservation and convenience factors*. The information from China also revealed that 'access', 'procedures', and 'transit' have values higher than 0.7 and all implicate convenience. These three items were sorted as the first impact factor in China: the *convenience factor*.

Following the rules, the second impact factor for Japanese is the *entertainment factor* and the third is the *safety factor*. Conversely, the second impact factor for China is the *habituation factor* and the third is the *rapidity factor*.

Understanding the first impact factor in Japan and China indicates that Japanese place more emphasis on convenience with a favorite reform reservation, which is not a view prevalent in China. This difference shows that the online reservation system is more widely used in Japan than in China. When traveling, Japanese are more inclined to choose a safe and fun means of transport, while Chinese people tend to opt for a fast and

familiar means of transport

#### **4. Conclusion**

The following conclusions can be drawn from the present study.

From the comparison of LCCs in Japan and China by the PLC model, Japanese LCCs have moved from the introduction stage into the growth stage, while China LCCs are still in the introduction stage, although LCCs have shown a greatly increased rate.

Consciousness and attitudes of customers may be influenced due to the different national aviation policies and the difference in the maturity of the aviation market as between Japan and China. Through the discussion of the impact factor analysis, this study proposes that the development of LCCs in Japan should mainly consider improvement of the reservation system, entertainment, and safety. To develop LCCs in China, attention should be paid to the improvement of convenience to new users (like the introduction of a pictogram system), and improvement in punctuality. Taken together, LCCs in Japan should emphasize more the convenience of reservation. In contrast, LCCs in China have to be more concerned with convenience itself, while reservation appears to be less important in China than in Japan.

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