Internet Economy and Chinese Airline Industry

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Abstract
The world has come to the verge of a revolution that is just as profound as the change in the economy that came with the industrial revolution. Soon electronic networks will allow people to transcend the barriers of time and distance and take advantage of global markets and business opportunities not even imaginable today, opening up a new world of economic possibility and progress. With Internet’s booming, airline’s business has been greatly changed. Basically, it is not a long time since the Internet came to China and IT is not well developed. In recent years, Internet booking, e-ticket, e-check in and e-cargo have emerged. Southern Airlines of China, one of the biggest airlines in China, put its

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business in the Internet firstly in 1997; however, most of Chinese airlines just sell tickets through Internet now.

China is a socialist country in which the government owned almost all enterprises 20 years ago. After China carried out reform and an open economy policy, the ownership of state-owned enterprises has changed gradually and competition has been introduced into business. However, such changes hadn’t taken place until 1990s in airline industry. People get used to planned-economy, and they produce product according to product plan given by the government and were not motivated by sales volumes. To some extent, in Chinese airlines, people don’t have perceptions of market and marketing. It is not until the Asian finance crisis occurred that Chinese airlines were aware or recognized threats coming from market forces. With emergence of high technology and very high competition of world air travel market, Chinese airlines must use of Internet to achieve competitive advantage especially 11th September, Iraq War and SARS.

The main objective of this paper is to demonstrate the impact of Internet Economy and its present application to Chinese airline industry. Based on SWOT (strength, weakness, opportunity and threat) analysis to draw a conclusion that it is urgent for Chinese airlines to do business through Internet.
Introduction

Survival in the new E-economy seems to be the key priority for business today. It is estimated that over 498 million people around the world have Internet access from their homes (Nielsen, 2002). The Internet penetration in many European and Asia-Pacific countries has crossed the 50% mark. Gartner (2002) predicts that the value of online purchasing will grow to 3.17 trillion by 2003.

Airlines in today’s global marketplace are faced with increased competition and shirking profit margins. The challenge is sustaining and creating profits in the face of heavier competition and product homogenisation (NCR, 1999). The opportunities are in managing customer relationships, controlling costs and applying new technology such as Internet to the entire business. The impact of the Internet on airlines’ competitive advantage has been phenomenal. At the same time and reflecting its importance, the phrase “business model” has also found its way into the vocabulary of just about everyone who must manage or work in airline industry with an Internet content.

Most Airlines are in business to win, to outperform their competitors. They are in business to make money. They adopt new technologies to fend off new competitors, reinforce an existing competitive advantage, leapfrog competitors, or to just make money in new markets.

This paper begins at review the history of Chinese airline industry, and then defines the problem for Chinese airlines lost money recent years. An online survey was conducted to collect data, and SPSS 10.0 was used to analyse data; followed by needs analysis and STOW analysis, and then drawn a conclusion.
Chinese Airline Industry Overview

Airline Industry in China began at 1950 after the establishment of PRC in 1949. China had just 12 routes from 9 cities in 5 countries, and 10,400 passengers in 1950. In 2001, China has owned 1165 routes from 64 cities in 34 countries and 75.24 million passengers. Total volume of transportation reached to 141.1 billion ton-kilometres in 2001 comparing 15.7 million ton-kilometres in 1950. Chinese airline industry developed very fast after the reformation. China was ranked number 37 in 1978; to the end of 2001, it was ranked number 6 in the world after U.S, Japan, UK, German, and France (ICAO, 2001).

Market Shares

There were 20 scheduled commercial airlines, which operate domestic routes in China in 2001. Table I shows their domestic market share.

Table I. Chinese Domestic Market Shares
(Source: CAAC Statistical Almanac, 2002)

<table>
<thead>
<tr>
<th>Airlines</th>
<th>Air China</th>
<th>CS Airlines</th>
<th>CE Airlines</th>
<th>Northern Airlines</th>
<th>Hainan Airlines</th>
<th>SW Airlines</th>
<th>Shanghai Airlines</th>
<th>NW Airlines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market Shares (%)</td>
<td>23.71</td>
<td>21.96</td>
<td>16.68</td>
<td>6.55</td>
<td>5.81</td>
<td>5.49</td>
<td>3.76</td>
<td>3.41</td>
</tr>
<tr>
<td>Airlines</td>
<td>Yunan Airlines</td>
<td>Xinjiang Airlines</td>
<td>Shenzhen Airlines</td>
<td>Sichu Airlines</td>
<td>Shandong Airlines</td>
<td>Wuhan Airlines</td>
<td>CUA Airlines</td>
<td>Others</td>
</tr>
<tr>
<td>Market Shares (%)</td>
<td>2.78</td>
<td>2.16</td>
<td>2.09</td>
<td>1.92</td>
<td>1.50</td>
<td>0.81</td>
<td>0.08</td>
<td>0.59</td>
</tr>
</tbody>
</table>
CS: China Southern Airlines  
CE: China Eastern Airlines  
SW: China SouthWest Airlines  
NW: China NorthWest Airlines  
CUA: China United Airlines

**Merge**

In November 2002, Chinese Airlines undertook the biggest merges in Chinese Civil Aviation History, Air China merged with China SouthWest Airlines; China Eastern Airlines merged with China NorthWest Airlines and Yunnan Airlines; China Southern Airlines merged with China Northern Airlines, and Xinjiang Airlines.

After the merge, Air China’ assets is 57.3 billion Yuan (119 aircrafts); China Eastern Airlines’ assets is 47.3 billion Yuan (142 aircrafts); and China Southern Airlines’ assets is 50.1 billion Yuan (180 aircrafts).

**Definition of the problem**

Although Chinese Airline Industry has developed very fast, the biggest problem is most of airlines in China lost money since 1997. Financial situation of Chinese airlines has just a little bit change to positive in 2001, then September 11th American attack happened, followed by Iraq War and SARS, Chinese airlines become lost again. It is contradictive with the strong economic growth. The economic growth rate is approximately 8% annually from 1978 to present in China. According to civil aviation economics, the air traffic increase rate is usually 2 times more than the GDP growth rate.

The main reason for Chinese Airlines lost money is low load factors. In 1999, the average global load factors is 69%, United Airline’s load is 71%, Cathay Pacific is 71.4%, China Eastern Airlines is 58.9%, all airlines in China average for 55.6%. Table II lists the load factor for Chinese airlines from 1986 to 2001.
Table II: Load Factors for Chinese Airlines from 1986 to 2001

<table>
<thead>
<tr>
<th>Year</th>
<th>Load Factors</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Domestic</td>
<td>Hong Kong &amp; Macau</td>
<td>International</td>
<td>Average</td>
</tr>
<tr>
<td>1986</td>
<td>0.723</td>
<td>0.593</td>
<td>0.554</td>
<td>0.645</td>
</tr>
<tr>
<td>1987</td>
<td>0.747</td>
<td>0.597</td>
<td>0.565</td>
<td>0.661</td>
</tr>
<tr>
<td>1988</td>
<td>0.757</td>
<td>0.605</td>
<td>0.583</td>
<td>0.672</td>
</tr>
<tr>
<td>1989</td>
<td>0.674</td>
<td>0.568</td>
<td>0.507</td>
<td>0.595</td>
</tr>
<tr>
<td>1990</td>
<td>0.631</td>
<td>0.568</td>
<td>0.524</td>
<td>0.593</td>
</tr>
<tr>
<td>1991</td>
<td>0.706</td>
<td>0.613</td>
<td>0.569</td>
<td>0.645</td>
</tr>
<tr>
<td>1992</td>
<td>0.696</td>
<td>0.604</td>
<td>0.579</td>
<td>0.646</td>
</tr>
<tr>
<td>1993</td>
<td>0.599</td>
<td>0.524</td>
<td>0.568</td>
<td>0.584</td>
</tr>
<tr>
<td>1994</td>
<td>0.584</td>
<td>0.449</td>
<td>0.559</td>
<td>0.568</td>
</tr>
<tr>
<td>1995</td>
<td>0.599</td>
<td>0.456</td>
<td>0.592</td>
<td>0.588</td>
</tr>
<tr>
<td>1996</td>
<td>0.601</td>
<td>0.452</td>
<td>0.597</td>
<td>0.592</td>
</tr>
<tr>
<td>1997</td>
<td>0.555</td>
<td>0.344</td>
<td>0.610</td>
<td>0.571</td>
</tr>
<tr>
<td>1998</td>
<td>0.514</td>
<td>0.480</td>
<td>0.575</td>
<td>0.533</td>
</tr>
<tr>
<td>1999</td>
<td>0.513</td>
<td>0.496</td>
<td>0.646</td>
<td>0.556</td>
</tr>
<tr>
<td>2000</td>
<td>0.540</td>
<td>0.523</td>
<td>0.635</td>
<td>0.573</td>
</tr>
<tr>
<td>2001</td>
<td>0.585</td>
<td>0.521</td>
<td>0.584</td>
<td>0.585</td>
</tr>
</tbody>
</table>

(Source: CAAC Statistical Almanac, 2002)

There are three reasons behind low factors of airlines in China: one is the fewer application of Information Technology; the other is outdated marketing strategy; still another is low passenger loyalty. For example: there are advanced aircrafts in China Eastern Airlines such as A-340, the flight size is same as Cathay Pacific in 1999. Passenger transport quantity is approximately the same, but the revenue per year, revenue per employee is just a fraction of Cathay Pacific’s. Comparing IT employees between China Eastern Airlines and Cathay Pacific, there are 450 employees in Cathay Pacific, only 80 in China Eastern Airlines (Table III) (Liu, 2001).
Table III: Comparisons between China Eastern Airlines, Cathay Pacific, and United Airlines

<table>
<thead>
<tr>
<th>Comparison Items</th>
<th>China Eastern Airlines</th>
<th>Cathay Pacific</th>
<th>USA United Airlines</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT Employee Number</td>
<td>80</td>
<td>450</td>
<td>1200</td>
</tr>
<tr>
<td>IT Employee Percent</td>
<td>0.59%</td>
<td>3.20%</td>
<td>1.20%</td>
</tr>
<tr>
<td>Booking System</td>
<td>Fair</td>
<td>Good</td>
<td>Good</td>
</tr>
<tr>
<td>Departure System</td>
<td>Poor</td>
<td>Good</td>
<td>Good</td>
</tr>
<tr>
<td>Cargo System</td>
<td>Fair</td>
<td>Good</td>
<td>Good</td>
</tr>
<tr>
<td>Accounting System</td>
<td>Poor</td>
<td>Good</td>
<td>Good</td>
</tr>
<tr>
<td>Global Distribution System</td>
<td>Does not have</td>
<td>Good</td>
<td>Good</td>
</tr>
<tr>
<td>Customer Service Centre</td>
<td>Does not have</td>
<td>Good</td>
<td>Good</td>
</tr>
<tr>
<td>FFP Member</td>
<td>8,000</td>
<td>850,000</td>
<td>38,000,000</td>
</tr>
<tr>
<td>E-Tickets</td>
<td>Does not have</td>
<td>Fair</td>
<td>58% is E-tickets</td>
</tr>
<tr>
<td>Internet Booking</td>
<td>Poor</td>
<td>Good</td>
<td>Good</td>
</tr>
<tr>
<td>Yield Management System</td>
<td>Does not have</td>
<td>Good</td>
<td>Good</td>
</tr>
</tbody>
</table>

(Source: Liu, 2001)

Research question
Can Internet technology and it’s application help Chinese airline increase customer satisfaction and load factors?

Literature Review
Today, more and more airlines are using the Internet to implement e-business applications. These applications can be very resource intensive. In general, application of Internet for airline industry can be categorized into B2B and B2C. There is little difference between airline industry and other business of application of Internet Technology. B2B for airline industry is that airlines do business to other business such as aircraft manufactures, fuel company, components suppliers, etc; B2C is that airlines do business with customers such as passengers.
In recent years, many researches have been done some research in B2C. Ellsworth and Ellsworth (1997) studied how to get business on the Internet, techniques of Websites design and information and resource sites in the Internet. Turban (Turban et al, 2001) studied Internet consumers and market, Internet advertisement and legal issues and security from a managerial perspective. Issues concerning B2C marketing such as the nature of e-marketing, how to design a good Website, advertising in the Internet and marketing strategies as well as security and privacy have been discussed.

B2C has got its worldwide application in western airlines. Many airlines begin to operate in the Internet, using Internet for ticket booking or travel package booking. Several airlines such as Southern Airlines of America, United Airlines, and British Airway are the first airlines in B2C application. According to Forrester (1999), the UK online travel market is set to grow in value to GBP 3.7 billion (USD5.4 billion) by 2005, up from GBP592 million (USD869 million) last year. Online flight booking will account for 45 percent of those revenues in 2005, as the number of British people booking flights over the Internet is expected to increase from 1.6 million last year to 5.7 million in four years. In total, the online leisure travel market will account for 14 percent of total leisure travel sales in the UK by 2005. Forrester divided online leisure travel buyers into three groups: Hardshells (mainly business man), Backpacks (traveler), and Softshells (leisure passenger). Only 3 percent of online travel buyers are Hardshells but they represent 20 percent of online travel spending. Airlines will have to target this group by offering them exclusive Internet deals and other special services. Backpacks are a much bigger group but they search for the cheapest fares possible, while Softshells represent most of the market but spend the least on travel. Figure 1 illustrates the development of B2C for airline industry.

Massive investment in both business-to-business (B2B) information systems is expected to translate into important cost savings in procurement, sales, billing and other support activities. The airline’s fully automatic ordering system, for example, should reduce order processing costs by 90%, according to Chairman/CEO Juergen Weber of Lufthansa Aviation Group. (Source: Aviation Week & Space Technology/May 15, 2000, p40).

Some researchers focused on airline Computer Reservation System (CRS) and GDS (Global Distribution System), over booking and yield management; Others focused on
Passenger Service Center, which provide some services such as lost baggage service (Liu, 2001). SAS (Scandinavian Airlines System) developed a model aimed to understand how to fulfil its customer’s basic needs (Gustafsson, 1999).

In Chinese Airlines cases, China Southern Airlines (CZ) is the first airline put business online in 1997, it includes:

- **E-booking**: CZ is the first airline who conducts e-booking. It enables passengers to choose flights and examine fares as easily as telephone reservation. Passenger can pay the ticket both by cash or online credit card. Passengers also have options on e-ticket or paper ticket.

- **E-ticket**: CZ issued its first e-ticket on March 28, 1999. Passengers who use e-ticket can get many advantages over others that don’t use, including extra 20 kilograms no charge baggage, special privilege in check-in, boarding and security check. But e-ticket is not available in all routes, nor is online payment.

- **E-cargo**: There is such click on its homepage, but not available up to now (Tang, 2001).

In 1999, China Eastern Airline set up B2B system to procure aircraft parts online. Most other Chinese Airlines just sell air tickets using Internet; some of them have no WebPages at all. Only a few airlines have e-tickets, and e-ticket is only around 1% of total tickets sale. To the July of 2003, there are 6.8 million Internet users in China (CNNIC survey, July 2003), the online marketplace is very big, but the application of Internet for Chinese airlines is still at the stage of beginning now.

**Research Methodology**

**On line survey (E-Survey)**

The Internet has become a popular survey medium among marketing researchers. Researchers have employed probability surveys over the Internet with reasonable success (Dillman et al., 2001; Couper, 2000; Jones & Pitt, 1999). For this research, an online
survey was conducted regard the effect if airline apply e-Business strategy. 500 airline passengers were chosen randomly as a sample both in Australia and China. The questionnaires were sent to them by email in February and March 2003. The total number of response was 66 (13.2%). A recent study (Stanton & Rogelberg, 2001) compared email and Web based survey methods versus mail information collection methods and proposed that email surveys compared favourably with the postal methods in the areas of cost, speed, quality and response rate. Some questions are as following:

1. **Do you think Airline Website increase your satisfaction with airline?** [ ]
   - A. Yes
   - B. No

2. **Web based chat room will increase your satisfaction with airline?** [ ]
   - A. Yes
   - B. No

3. **Web based FAQs will increase your satisfaction with airline?** [ ]
   - A. Yes
   - B. No

4. **E-mail newsletters will increase your satisfaction with airline?** [ ]
   - A. Yes
   - B. No

5. **Web based one-to-one services will increase your satisfaction with airline?** [ ]
   - A. Yes
   - B. No

6. **Web based ticket auction will increase your satisfaction with airline?** [ ]
   - A. Yes
   - B. No

7. **Personalized Website will increase your satisfaction with airline?** [ ]
   - A. Yes
   - B. No

8. **Have you used the E ticketing option?** [ ]
   - A. Yes
   - B. No
9. How do you think E-ticket? [   ]
   A. Excellent
   B. Good
   C. Fair
   D. Poor
   E. Very Poor

10. How do you think E-check in? [   ]
    A. Excellent
    B. Good
    C. Fair
    D. Poor
    E. Very Poor

11. Where did you book your ticket? [   ]
    A. Airline booking office
    B. Sales agents
    C. Travel agency
    D. Telephone booking
    E. Internet booking
    F. E-ticket

12. When choosing air carriers, the factors affecting your choices (tick in order of preference) [   ]
    A. Airline image
    B. Service quality
    C. Type of aircraft
    D. Fare price
    E. Flight schedule
    F. FFPs (Frequent Flier Programs)
Results
The following table (Table IV) shows the result of question 1-7, and Table V illustrates result.

<table>
<thead>
<tr>
<th>Questions (1-7)</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Do you think Airline Website increase your satisfaction with airline?</td>
<td>50</td>
<td>13</td>
<td>63</td>
</tr>
<tr>
<td>2. Web based chat room will increase your satisfaction with airline?</td>
<td>41</td>
<td>25</td>
<td>66</td>
</tr>
<tr>
<td>3. Web based FAQs will increase your satisfaction with airline?</td>
<td>50</td>
<td>12</td>
<td>62</td>
</tr>
<tr>
<td>4. E-mail newsletters will increase your satisfaction with airline?</td>
<td>52</td>
<td>11</td>
<td>63</td>
</tr>
<tr>
<td>5. Web based one-to-one services will increase your satisfaction with airline?</td>
<td>60</td>
<td>6</td>
<td>66</td>
</tr>
<tr>
<td>6. Web based ticket auction will increase your satisfaction with airline?</td>
<td>55</td>
<td>11</td>
<td>66</td>
</tr>
<tr>
<td>7. Personalized Website will increase your satisfaction with airline?</td>
<td>51</td>
<td>15</td>
<td>66</td>
</tr>
<tr>
<td>Total</td>
<td>359</td>
<td>93</td>
<td>452</td>
</tr>
</tbody>
</table>
ANOVA (Analysis of Variance) Tests of Between-Subjects Effects (Table V)

Dependent Variable: Airline e-Business

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>12.739</td>
<td>1</td>
<td>12.739</td>
<td>3.178</td>
<td>.075</td>
</tr>
<tr>
<td>Intercept</td>
<td>4509.093</td>
<td>1</td>
<td>4509.093</td>
<td>1124.844</td>
<td>.000</td>
</tr>
<tr>
<td>CUSTOMER</td>
<td>12.739</td>
<td>1</td>
<td>12.739</td>
<td>3.178</td>
<td>.075</td>
</tr>
<tr>
<td>Error</td>
<td>1803.887</td>
<td>450</td>
<td>4.009</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>9153.000</td>
<td>452</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>1816.626</td>
<td>451</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a R Squared = .007 (Adjusted R Squared = .005)

It can been seen that there was a significant effect of the airline e-business ($F_{(1,450)} = 3.178$, $p < 0.0005$).

Figure 2 shows the result for question 8, 44% passengers have used e-Ticket and 56% passengers haven’t.
Figure 2: Percentage of passengers of e-Ticket option

![Pie chart showing 44% have used and 56% have not used e-Tickets.]

Figure 3 illustrates passenger’s altitude of e-Ticket (Question 9), and Figure 4 shows passenger’s altitude about e-Check in (Question 10)

Figure 3: Passenger’s altitude of e-Ticket

![Pie chart showing altitude distribution: 19% excellent, 21% good, 12% fair, 2% poor, and 46% very poor.]

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Figure 4: Passenger’s attitude of e-Check in

Figure 5 illustrate the data of passenger’s booking ticket, it can been seen that most of the passenger book ticket using airline booking office, sales agents, and travel agency (all these three together is 77%); only 3% passengers use internet booking and only 3% passengers use e-Tickets. From this, a conclusion can be drawn that e-Business is not widely been adapted by Chinese airlines.
Figure 5: Survey Result of Question 11

Figure 6 shows factors that influence passenger’s choice of airlines, fare price and flight schedule become the most important factors, and followed by service quality and type of aircraft; airline image is less than 10% and FFPs is only 5%.

Figure 6: Factors that influence passenger’s choice of airlines
Needs for Chinese airlines to apply Internet technology

To understand the needs for Chinese airlines to apply Internet technology, one must understand some key characteristics of Internet Technology and its applications for airline industry (Timmers, 2000; Jiang, 2003).

Online/immediate/24-hour availability, directly connect buyers and sellers
A Web server is usually online 24 hours per day, and virtually immediately accessible (depending on line speed and network traffic, of course). This creates time independence and enables customer service to be decoupled from supplier availability. Such 24-hour availability is a strong facilitator of a global presence, overcoming time differences. As the customer is in the first instance interacting with an automated system, there is a set of service requests that can become ‘self-service’.

Global
It is often claimed that one of the largest changes brought about by the Internet is that it is global: airlines get access to customers globally; customers get access to suppliers globally.

Digitisation
The Internet and the communication and computer systems connected to it are all processing digital and digitised information. Digital information can be easily stored, transmitted, processed, mixed, transformed, in short manipulated in many ways, independent of its source or carrier.

One-to-one
The Internet makes customer profiling fairly easy, by capturing and analysing customer characteristics. Technically, this can consist of storing some information about the customer on the customer's computer (e.g. a ‘cookie’), which is retrieved when the customer returns to the site. This can be combined with more detailed information, partially solicited from the customer and partially collected by the merchant, e.g. the
pattern of purchases. Many sites encourage potential customers to provide an e-mail address, personal data etc. Customer profiling technology can be complemented by ‘intelligent agents’ that assist in the sales process.

**Increase productivity**
Airline can gain significant productivity improvements by using business-to-business e-commerce to streamline and improve its supply chain processes. Airline can save time and money by purchasing supplies via the Web. Similarly, Airline can use e-commerce to communicate and transact with distributors and customers in a more cost-effective and timely manner than through traditional channels.

**Improve level of customer service**
Airline can improve it’s level of customer service by allowing customers to access "help" information, complete application forms, pay invoices, or change their account details via it’s Web site, at their own convenience.

**Strengthen customer relationships**
Airline can strengthen relationships with existing customers by allowing them to access - via it’s Web site - previously inaccessible decision-support information, such as detailed research reports, product specifications and price comparisons.

**Enhance business intelligence**
Airline can use its Web site to collect valuable intelligence about customer needs, buying habits and preferences. This intelligence can be a valuable input to the development of new, profit-enhancing processes, products and services. Similarly, Airline can use the Web to research new markets and to gather valuable intelligence about its competitors.

**Increase direct sales of products or services**
The Web enables businesses to reach customers all over the world, 24-hours per day, 7-days per week. Airline can use the Web to create a “self-service” environment that
allows Airline to offer lower prices and provide more detailed product information than that which Airline can offer in the real world.

**Cost Saving**

Airlines could reduce sales cost. American Southwest Airlines CEO, Gary Kelly said the Web site is playing a major role in mitigating the rise in unit costs affected by high fuel prices. It’s 10 times cheaper to deliver to customers through the online service than through a travel agent, Kelly said, and costs 5 times less than using Southwest’s own reservation staff. The booking cost per passenger online is “well under $1,” said Kelly, and is scaling down even further. He said Internet use by passengers was helping the carrier keep fares at low discount levels (Aviation Week & Space Technology/March 6, 2000, p38). It can be seen that Internet technology and e-Business can bring a lot of benefits to Chinese Airlines. It has needs for Chinese Airlines to go to business online.

**STOW for Chinese airline industry to apply Internet**

STOW analysis is a common tool for most business including Chinese airline industry. Figure 7 lists the key points of STOW for Chinese airline industry to apply Internet.

**Figure 7: Key points of STOW for Chinese airline industry to apply Internet**

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct marketing; Decrease marketing cost/sale cost; Increase efficiency and effectiveness; Decrease manpower; Globalization; Individualized product; One-to-one</td>
<td>Lack of system security, reliability, standards, and some communication protocols; Lack of qualified staff both in technology and management; Difficulties in integrate e-Business with some existing applications and databases; Lack of user’s trust; Weak in IT infrastructure of Chinese airlines; Chinese airlines’ lack of operation and management autonomy;</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>The number of Internet users in China; Competitive advantage over airlines without Internet application; Opportunity to go to international air transport competition; Low operation cost; Technology innovation; Chinese airlines’ internalization; Revolution in ticket sales; Increase passenger’s loyalty; Increase load factors</td>
<td>Insufficient telecommunication bandwidth; Heavy competitive pressure both in capital and experience; Channel conflicts; Risk of investment</td>
</tr>
</tbody>
</table>
Conclusion

From the above analysis, Internet technology and e-Business have potential and overall influence on airlines’ business; it can increase passenger’s satisfaction and airline load factors. It is urgent for Chinese airlines to introduce them to achieve competitive advantages in the future.
References


[Accessed 18 October, 2002]


