



# L'identification et l'étude d'évaluation sur le risque de stratégie des compagnies aériennes chinoises.

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Yong Wang. L'identification et l'étude d'évaluation sur le risque de stratégie des compagnies aériennes chinoises.. Gestion et management. Université de Grenoble, 2012. Français. NNT : 2012GRENG015 . tel-01071572

**HAL Id: tel-01071572**

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## THÈSE

Pour obtenir le grade de

## DOCTEUR DE L'UNIVERSITÉ DE GRENOBLE

Spécialité : **Science de Gestion**

Arrêté ministériel : 7 août 2006

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dans l'**École Doctorale Science Gestion**

## L'identification et l'étude d'évaluation sur le risque de stratégie des compagnies aériennes chinoises

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## ABSTRACT

Nowadays, enterprises are facing more changes , uncertainties but airlines companies are facing the greatest challenges. There is no systemic and comprehensive researches on the strategy risk in airline industry. Thus this article mainly studies strategy management from the risk perspective.

There are three main parts. Firstly, this article proposed one strategy risk factors identification system for Chinese airlines companies based on the strategy position, strategy choice and strategy implementation. Work-risk analysis and expert interview were used to extract 16 strategy risks, and then the transformation conditions from strategy risk factors to strategy risks were analyzed.

In the second part, ANP was used to get the weights for 16 strategy risks, and then the airline industry strategy risk levels were evaluated in three layers, strict control layer, control layer and watching layer. Combined with fuzzy evaluation method, this article evaluated the strategy risks of 12 Chinese airlines companies and analyzed their differences. Based on the identification and evaluation, one decision model was proposed.

In the third part, the study implemented the empirical research in the case study; i.e. on Chinese Eastern Airline. The strategy risk level evaluated and the strategy risks were analyzed.

-This article innovated in the following aspects. This research applied the strategy risk theory into airline industry and the case study.

-Secondly it combined the qualitative method with quantitative method, using ANP and fuzzy evaluation methods.

-Thirdly, two core identification dimensions (strategy risk factors identification and transformation condition analysis) were proposed. According to the evaluation results, the Chinese airline strategy risks were categorized into three layers, and strategy risks of different airlines analyzed.

**Keywords: Strategy- Strategic Risk , Strategic risk identification and evaluation, Airline companies.**

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# Chapter 1 Introduction

## 1.1 Background and Significance

The economic crisis triggered by a financial crisis in the United States spread all over the world in 2007. Influenced by global economy, Chinese enterprises also experienced a severe test during 2008. Foreign market disruption, lack of domestic consumption, and a serious wave of corporate failure spread all over the Pearl River Delta, Yangtze River Delta, particularly in the manufacturing enterprises<sup>[1]</sup>.

Economic crisis, globalization, development and application of new technologies represented by IT, update of governmental policies, increasingly degeneration of weather and outbreak of H1N1 brought a great deal of uncertainty and complexities. Forcing the unprecedented changes, the prior job of global entrepreneurs is strategic management and profit design. Strategic management is the most key management method right now which faces a new challenge under the circumstances of complexity and uncertainty. When dealing with strategic management, enterprises also face a series of new risks, such as strategy development, available strategies, implementation risk and so on.

According to the report and statistics from *Market News* on 2007.3.3, the average life span of European companies is 40 years, while Chinese is only 8 years, and the average life span of Chinese private enterprises is 3.15 years. Data show that, 6000 enterprises registered in the Zhongguancun, but life expectancy among these enterprises only 3% at most have surpassed 8 years. Meanwhile there are also evidences that show strategic practice, 70% enterprises' failed and 65% used diversification strategy, of these enterprises most of them haven't met their desired goals<sup>[2]</sup>. Apparently, when facing increasing complexities and uncertainty, enterprises are hard to develop sustainably and build to last. While strategic management is concerned as an effective model to maintain core competitive advantages and promote everlasting businesses. However strategic management itself has experienced a continuous renewal and development, while as for China, theory and practice of strategic management have lagged far behind the developed countries.

In 2007, Sharp thinking management company, conducted a survey for the status quo of Chinese enterprises strategic management. The results showed that the important reason for the failure of China's enterprises includes lack of strategic management application, without strategic thinking, strategic decision-making mistakes. Prominent performance in Chinese enterprises' is overall low level of strategic management application. They lack the awareness of the value of strategic management in company sustainability, and the kind of arbitrary decision-making of strategy, and they are in blind pursuit of market focus. The reasons can be divided into 6 types: Type A, the lack of long-term planning and frequent change of strategy; type B, arbitrary decision-making of strategy and absence of scientific decision-making mechanism;

type C, blind understanding and analysis of market and competitive environment; type D, blind pursuit of market focus and investment over-diversification; type E, corporate strategic plans tend to be a written report and there is no clear practical strategic objectives; type F, corporate strategic plans are difficult to get strong support from the high-level, there are no concrete plan of action.

In 2000, Peking University chaired the management of Chinese listed companies survey, 75% of companies do not have strategic planning, and 5% of companies follow the traditional “15” planning, and 90% of companies’ strategies are empty and useless. In 1998, only 20% of 700 listed companies get strategic planning department, 15% of them had other departments instead, and 55% are simply not strategic. For the latter, strategy is only occasionally generated from the company decision-making. Thus, the research and application of strategic management is urgent and significant, yet many companies encounter several problems when adopting strategic management and they did not notice the strategic management of risks.

Traditional strategic management methodology is based on strategic analysis to determine the conditions and evaluation, such as the classic framework of SWOT analysis, BCG Matrix and Porter's "five forces model" with the assumption that the industry bodies and the external environment can be determined, stability identified. In the complex and changing environment, the strategy itself is a kind of uncertainty analysis, strategic analysis, strategic choice, strategy formulation, strategy implementation and evaluation of the whole process which is a risk behavior under uncertainty which is at risk.

The theory of strategic management has experienced a shift from static state to dynamic state, one single change to complex changes, and deterministic changes to uncertain ones. Meanwhile, it also has experienced the development from early strategic thinking, traditional strategic theory, and competitive strategy theory to dynamic strategic theory. There are four theories of strategic management trends, strategic management complication, strategic management diversification, strategic space justification and strategic development flexibility. In this context of the developing strategic management theory, it is important to solve Chinese enterprises’ strategic development under varied, complex, and uncertain conditions. As the American economist John Kenneth Galbraith pointed out, two major themes of the 21st century are strategic management and risk management <sup>[3]</sup>.

Conducting strategic risk focus on China's aviation company is based on the following 4 considerations: First, the important role of the air transport industry in China's overall national economy, national defense; Second, there is a great gap between China's air transport enterprise and foreign advanced air transport business, especially when the industry is facing the world crisis and the performance losses; Third, China's air transport enterprises have some knowledge of strategic management, some airlines are developing and implementing strategies, but domestic airlines strategic management is still in its infancy, generally focused on price wars, low-cost strategy of vicious competition; Fourth, the air transport industry operates internationally and is greatly influenced by international political, economic, natural environment and other factors. Firm’s strategic management is facing a larger and more

complex external uncertainty.

Of the 12 domestic private airlines in spring 2008, only spring, Juneau and East China Sea Airlines were profitable, the rest were losers, such as Okay Airways grounded and East Star bankrupt. The case of state-owned air transport companies did not look good, on April 17, 2009; Air China announced 2008 results with an annual loss of 9.15 billion RMB. The losses of China Southern Airlines, China Eastern Airlines were reported as 4.829 billion RMB and 13.928 billion RMB respectively. Losses of the total three aircraft were 27.9 billion RMB. According to the International Air Transport Association (IATA), the losses of the global airline industry were \$ 8.5 billion in 2008. According to April 17 dollar-RMB central parity, losses of China's three major air companies was 48.1% of total global losses<sup>[4]</sup>. Some of the reasons for performance loss are as followed: snow, earthquake, the Olympics, the global economic downturn and so on. In fact, in addition to these external causes are as well fuel hedging strategy, the internal governance structure, weak management capacity and other strategic failures cause. In comparison, international Singapore Airlines, British Airways, Malaysia Airlines, Lufthansa German Airlines, Southwest Airlines whose strategic management, risks and other aspects are far superior than domestic airlines.

Domestic air transport business strategy has three main stages of development: 1980-1990, this decade is China's air transport entrepreneurial stage, turning military institution to business operations with no strategic management, but each airline followed the sixth and seventh five year plans of the higher competent authorities;

1990-1998, this stage is the seller of air transport, as long as there are routes to be profitable, so this phase of the airline's strategy are staking their claims, but also there are no real strategic management principles;

After 1998, along with the fierce competition, strategic management has been accepted by air transport businesses. In 2001, Hainan Airlines Group determined the enterprise's development strategy. In 2002, China Southern Airlines brought in development strategies ruled by Roland Berger. China Eastern Airlines, Air China and China Southern Airlines the three airlines also compete, and they have developed a strategic homogeneity, and small airlines develop segmentation strategies in various market segments.

Meanwhile, considering the air transport industry as a whole, low-margin, complexities, business uncertainties, air transport enterprises face great risks, such as disaster risk, government intervention risk, fuel price risk, foreign exchange risk, state-owned assets Commission guidance and strategic risks, Adrian<sup>[19]</sup> confirmed that it is important to find the greatest risk of the whole air transport industry and individual companies, which relates to its survival and development.

Therefore, it is very meaningful to start the study on the strategic management of air transport enterprise at this time, and focus on the strategic management of risk, expecting to give some strategic management insights to air transport enterprises, to improve management efficiency, and promote sustainable development.

## 1.2 Research Scope and Structural Framework:

There is no uniform understanding of the current strategic risk concepts, theories, and research methods. After carding related literatures, the strategic risk are grouped into four major understanding.

Firstly, corporate strategic management risks i.e. “The risk of strategy”, when companies develop, implement certain strategies, due to risks of environmental changes, planning mistakes, and improper implementation, strategic failure or business goals are not achieved. Strategy is a series of specific actions and activities, and in the whole process of strategic thinking, development, selection, implementation and control, various activities is likely to deviate from the goals and thus resulting in losses, which is mainly based on the strategic management perspective. Research in this area at the moment is less, Gong Yanking pointed that the current problems are shortage of studies on strategic risks<sup>[5]</sup>. Wintry and Budd believed that strategic risk mainly comes from businesses and the overall environment, the relationship between resources and the market<sup>[6]</sup>. Yang Hauling pointed that strategic risks are mainly environmental risks, resource risks, strategic capability risks and company theme development strategy correctness risk<sup>[7]</sup>. Through literature and systematic analysis, Liu Chengdu thought that strategic risks are mainly the risks of company’s strategic connotation, company’s strategic resources, enterprises competitiveness, enterprise leadership and corporate strategic environment.<sup>[8]</sup>

Secondly, strategic risk: representative study is from James Brian Quinn and Robert Simons. James Brian Quinn, they noted that strategic risk affects the company's direction, corporate culture, information and viability, or corporate performance related factors<sup>[9]</sup>. Robert Simons believes that strategic risk would weaken the ability of managers to implement the original strategies, which are originally not expected factors or conditions<sup>[10]</sup>. This view is from the perspective of risk management, and some risks are critical of firm’s risk. That risk affects the enterprise’s overall development, core businesses, and global risk is known as strategic risk, which belongs to risk management, and the domestic and international studies of the latter are a lot.

The third one is to manage enterprise risk by strategic management approach, to develop risk strategy, risk management control, thus to manage risk from a strategic management perspective, which belongs to a kind of strategic management concepts, and known as the strategic risk management.

The fourth one is a single indicator strategic risk. There are foreign literatures viewing companies’ possibility of decline in ranking in a certain industry as a strategic risk, but also some literature is pointing the instability of cash flow as a strategic risk. But these studies are over singled, simplified, and do not reflect the firm's strategic management and risk.

This paper mainly study on the first meaning of “strategic risk”, that is, strategic management of corporate risks. Rapid change, the emergence of new markets, innovation intensiveness and the application of emerging information technology has far-reaching influence on development of strategic management. Based on social progress and changes in the environment, how enterprises identify, control risk, to

develop and implement strategy correctly and effectively in strategic management is particularly important<sup>[11]</sup>. Sandhog Zhou<sup>[12]</sup> mentioned this in the preamble of history of strategic management concepts, that the essence of strategic management is the process of dialogue between corporate and the changing backgrounds or environment, and different backgrounds, strategic management concepts, paradigms and applications changes, therefore.

There are so many definition and research of risk, which is very much related to finance, f organizational behavior, strategic management and other areas. Each specific area of risk has a different understanding of the concepts and research priorities. If it is the financial sector, the higher the risk the greater the return is a consensus, and many financial derivatives came into being in order to be able to control the risk of conditions to improve income, while the proliferation of financial derivatives cause the U.S. financial crisis. In the financial area, the instability of cash flow is an important risk indicator, but the research focus of enterprise risk, as well. In the management area, Bowman pointed that risk and return are negatively correlated, the greater the business risk, the smaller the income, which is known as "Bowman Paradox", which launched a corporate risk identification, control study<sup>[13]</sup>.

International Organization for Standardization promulgated the Risk Management Standard ISO31000: 2009 Risk Management-Principles and guidelines on November 13, 2009, providing risk management with principles and general guidelines, ISO / IEC guide 73:2009 were also released at the same period. In the latest risk management standards, the definition proposed by our country is used as an international general definition of risk: i.e. "The impact of uncertainty on objectives" National experts' evaluation on the definition are: this definition overcome the shortage of other countries whose definition of risk is too narrow, inaccurate and other defects, directing at the nature of risk, accurate, comprehensive, easy to understand, easy to use. The risks mentioned in this article are built on this definition, i.e. uncertainty on the strategic goals.

Strategic management includes strategic goals, vision, strategic planning, strategy formulation, strategy implementation and strategic control and so on. The traditional strategic management theory emphasizes more on strategy formation and strategy analysis and elaboration, including analysis of the competitive environment, internal environment analysis, strategic choice and the development of such programs.

The strategic implementation and strategic research are limited. Some strategic theories usually regard the strategic implementation as a relatively independent stage after strategic choice, and the theoretical analysis of strategic formulation and implementation becomes more general. In the present study, only a few results brought a general description and analysis of strategic implementation separately. With the development of management practices, strategic implementation has attracted more and more managers, and in the complex environment, effective implementation of strategy has a greater contribution to meeting strategic goals.

Hart has the following understanding of the strategy development process, strategy formulation process is an organizational phenomenon, which involves decision-making on key issues, and these decisions are also based on the overall interests of the

organization<sup>[14]</sup>. Strategy development process that covers a very wide range of topics such as analysis, planning, decision-making, as well as the organizational culture, vision, values and other aspects of the content. As early as in 1980, Bourgeois<sup>[15]</sup> distinguish the concept between "strategic process" and "strategic content" in detail for the first time. According to him, the strategic process is a unique area, and it is used to explain how the strategy is formulated, while the strategic content is to work out what kind of strategy. Since Bourgeois proposed the concepts of strategy process and strategy content, there have been numerous studies that began the follow-up, which haven't reached the unity of theory and experience yet. Johnson and Schools divide strategic management process into three parts, strategic positioning, strategic choice and strategy implementation.

The interaction of these three parts together constitutes a complete strategic management process. This study is based on the theory of strategic management of Johnson and Schools<sup>[23]</sup>, who studied the risk of corporate strategy process, including strategic positioning, selection and implementation, and they divide the entire strategic management process into various strategic risk factors, meanwhile they identified, evaluated and analyzed various elements of strategic risk, and then choose solutions according to evaluation of the results of the strategy to provide decision support for the air transport enterprises.

This paper will choose the process of strategic management as a start, and focus on strategic analysis, strategic choice and strategic implementation of the risk in the process of strategic management, and also focus on the generation mechanism of corporate strategic risk, strategic risk identification, analysis and evaluation, and to make programs and proposals following the strategic risk assessment results. Study frame of this paper, as showed in 1.1.

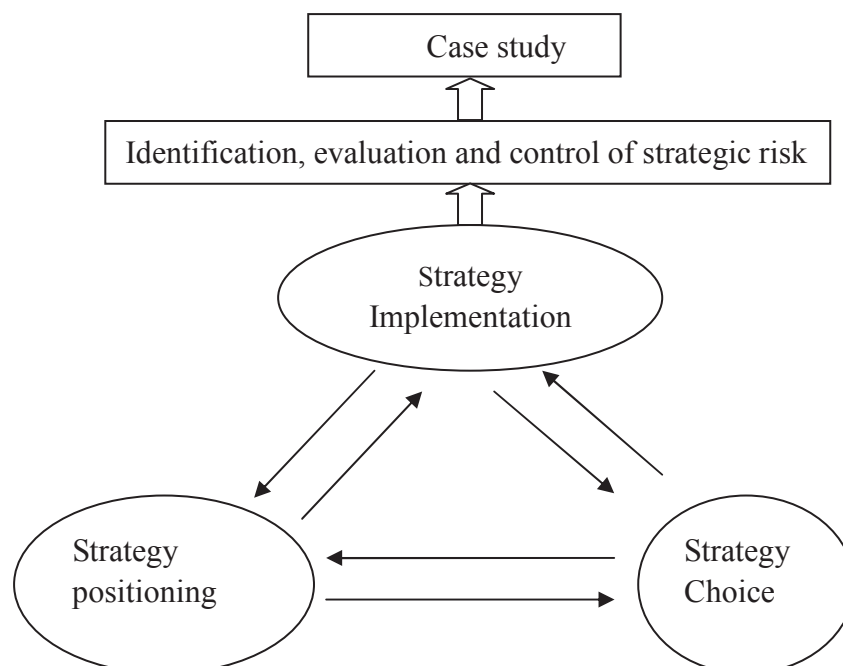


Figure 1.1 Study Frame

Partitioned by the nature of business, the current domestic air transport company is mainly of two types as State-owned and private. Due to historical reasons, the relative strength of state-owned enterprises are strong, and their development is mature and gradually become international, while private enterprises began to enter into the market after liberalization of national policy, currently they are concentrated in low-cost routes and feeders. Therefore, the domestic air transport enterprises have large differences in strategic management, but also have a certain consistency, such as price wars, low cost strategy.

In this paper, the scope of the study on business will be based on 12 domestic air transport business, through strategic risk assessment and comparison between strategic risks of 12 airlines companies. After strategic risk identification, analysis, evaluation and decision-making proposal of 12 airlines, this paper will study China Eastern Airlines as a case. The reason why it is chosen for case studies, mainly because of China Eastern Airlines has experienced significant strategic changes.

The study route of this paper is showed in 1.2.

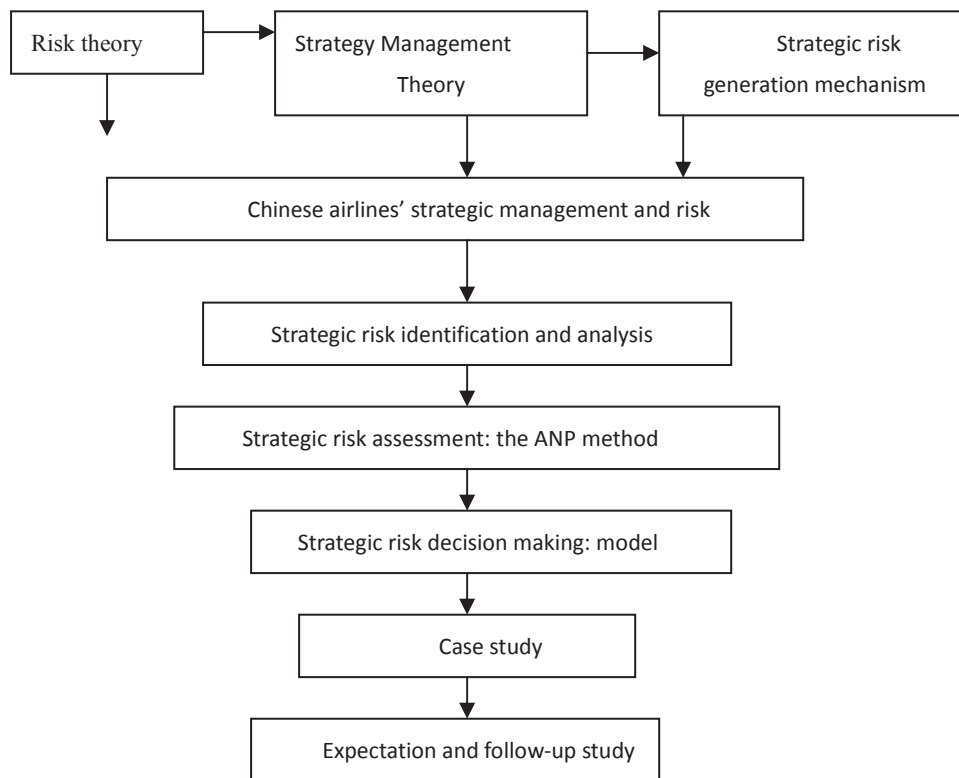


Figure 1.2 Study Route

The paper is structured as the followings.

Part I: Introduction, referring to the first chapter of this paper, it is the research background, meaning, scope, framework, objectives, content and research methods.

Part II: literature review and mechanism analysis, including Chapters II and III.

Mainly review the strategic management theory of history, stage of development, factions, trends, challenges; distinguish and analysis between uncertainty and risk, and cards related literatures that are relevant to strategic management, and ensure of related definition in this paper, such as strategy, risk and strategic risk. Chapter III reviews the air transport industry in the characteristics of strategic management, and analyzes of mechanism based on the strategic management and business operations as the two dimensions of strategic risk.

Part III: This includes chapter IV, V, VI and VII, which dwells in the study strategic risk identification, analysis, evaluation and decision support. Simultaneously China Eastern Airlines Company is studied as a case. The priority of strategic risk management is to identify strategic analysis, and through the method of strategic management decomposition, the strategic management process is divided into multi-level strategic risk factors. This paper mainly studies level1 and level 2 strategic risks. Based on strategy risk identification, analyze the conditions of transformation of strategic risk factors to strategic risk.

Based on strategic risks identified in the chapter IV, we adopt the method of expert interviews to obtain data to evaluate China's air transport industry's strategic risks. The approach is network analysis method (ANP). Selecting the network analysis method is based on a variety of risk assessment methods with comparison. In order to obtain the strategic risk from air transport industry, and then make comparison with strategy risk of 12 airlines. Through strategic risk assessment of the Chapter VI, companies can understand the overall industry's strategic risks, and also differences of strategic risk between corporate. According to specific corporate strategic risks, they need to make strategic decisions, which is of pick program selection and measures to cope with strategic risk factors. This chapter attempts to carry out research on strategic risk decision-making, and provide decision support and advice to air transport companies. Through case studies of China Eastern Airlines, we provide strategic risk assessment and decision support to China Eastern Airlines, and throw ideas for other airlines.###

Part IV, the end: Chapter VIII of this paper is the outlook and conclusion; here there are innovations points of the paper, limitations and future research are prescribed in this chapter.

### **1.3 Study Objective**

Based on development of current strategic management theories and situation of air transport corporate strategic management, research objectives of this paper are as follows:

- (1) In theory, foreign research and development status, deficiencies and trends of strategic management theories and risk management theories are summarized.
- (2) In theoretical summation of the characteristics of China's aviation transportation, development and strategic management status and history.
- (3) Evaluating the production mechanism of strategic risks of China's aviation companies.
- (4) Identify strategic risk factors of Chinese aviation industry.

(5) Select appropriate methods, and evaluate strategic risk of the Chinese aviation industry and the specific Chinese air transport enterprises.

(6) Establish strategic risk decision-making model, through strategic risk decision-making programs and proposals.

(7) Through a case study, provide decision support according to studies on strategy of firm-specific risks.

#### **1.4 Study Method**

(1) Literature review. Through retrieval understanding and analysis of strategic management, risk and other literature, identify research status and short comings, and determine the basic concepts and the research framework.

(2) Through questionnaires and interviews in two ways, make data collection of 12 domestic air transport companies, and through data analysis, mining, and together with further interviews to establish the basis for risk assessment strategies.

(3) The combination of specification research and empirical research. Based on strategy risk identification and evaluation of China's air transport business and through research on China Eastern Airlines through interviews to obtain relevant data, and conduct an empirical study.

(4) Qualitative and quantitative analysis are combined, and after making network analysis (ANP) of strategic risk assessment of China's aviation industry, fuzzy evaluation method of 12 airlines is conducted for strategic risk assessment.

## Chapter 2 Literature Review

Whether it is based on maximized shareholder value theory or theory of sustainable development of enterprises, survival and development are the natural motivation within business enterprises, which cannot be separated from the strategic management. Traditional strategic management is to plan the development of the business in a relation environment, through business planning to develop business, control risk, and thus achieve corporate strategic objectives.

However, with the increasing uncertainty and change of external environment, strategic management is facing new challenges and theoretical development, and the risks companies face are more complex and ever changing, especially for the period of the economic development of China specific business. Therefore, scientific strategic management, risk control and the use of corporate strategy can ensure enterprises to achieve strategic objectives and thus realize the business building to last and sustainable. This literature review is part of a strategic management and corporate risk-based theory, the development of the two, the impact of each settled company in China's air transport enterprises, and thus constitutes the literature of the "triangle structure", as Figure 2.1 illustrates.

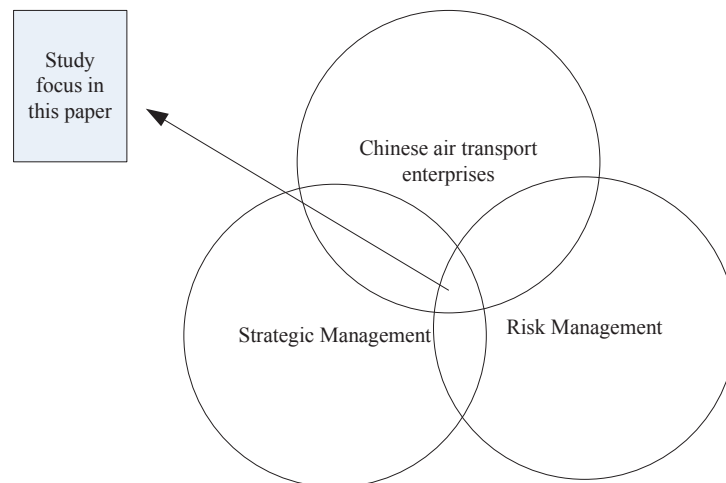


Figure 2.1 "triangle structure" the study content.

### 2.1 Strategy and Strategic Management

#### 2.1.1 Research school and concept of strategy.

Strategic thinking of the modern enterprise originated from the United States in the 1960s, modern strategic management was introduced into China both theoretical and practical areas in the 1980s, but systematic strategic thinking can be traced back to Chinese Art of War 2,500 years ago. Viewing from a broad perspective, although the history of strategic management was not long, their research is voluminous. For Chinese business community and researchers, it is meaningful for the sustainable

development of Chinese enterprises to study in-depth of the essence of strategic management to reduce the gap between foreign advanced strategic management concepts.

The importance of strategic management to business development and survival has been generally recognized. According to statistics, among the United States the proportion of corporate strategic planning increased from 20% to 100% during 1947 to 1970. Nihon Keizer Shim bun survey shows, 99% of companies in Japan have developed a development plan and business strategy, and 48% of companies without strategic planning faced loss or failure<sup>[16]</sup>.

However, strategy has being widely used in management but the concept is also widely misunderstood<sup>[17]</sup>. There has been no conformity in understanding of strategy between researchers and practitioners. Economist magazine (1993, 106) wrote that “consultants and theorists are busy to provide consulting services every day, they cannot even agree on basic issues: How to accurately define what is the company strategy”<sup>[18]</sup>.

#### (1) The concept of strategy

Strategic thinking can be traced back to Chinese Art of War 2,500 years ago as stated above. Since then there have been many different interpretations of the strategy and definitions. Strategy can be defined from perspective of the organization, competition, planning, and game theory. Thus it is difficult to form a unified concept. Understanding of diversity originated from characteristics of multi-dimensional strategy and the right degeneration. Meanwhile some consensus is gradually formed, Such as, organization and environment in strategy are inseparable, the strategy is flexible, changing, etc.

With the increased uncertainty i.e. social unrest and more complex, unexpected and more dangerous events continue to occur, Businesses are facing increasing risks, Some scholars learn strategy from the perspective of risk and believe strategy is a risk management<sup>[19][21]</sup>. According to Adrian’s understanding, strategic management can complete the business goal of long-term sustainable development, if the problem of risk can be solved<sup>[19]</sup> from a risk perspective due to the importance of the strategy, which related to the huge and irreversible use of resources that is once the strategy of risk occurs, its impact is enormous.

#### (2) Summary of Strategic Studies School

According to the historical development of strategy, many scholars summarize and draw conclusions of strategic management theory from different perspectives. This paper argues that there are three most induction systems. The most famous is the induction and description of ten schools from Mintzberg. Then Richard Whittington gives a more systematic summary and synthesis from four perspectives on the concept, meaning, development and assumptions, etc. C. K. Prasad summarized in general from old and new ideas of the strategy. There are also many strategic management scholars in China who conducted more systematic studies. This paper particularly focuses on the strategic management research of expert Sandhog Zhou.

Mint berg is a Master in strategic management regime, who believes that all kinds of understanding of strategic management from various scholars in research field is like blind men touching an elephant. Strategic management is an elephant, and different

schools analyze it from various perspectives to gain unilateral knowledge of elephant. It is only by integrating the entire schools that we can see the whole profile of the elephant. According to Mint berg's theory, Sandhog Zhou from our country proposed doubt<sup>[12]</sup>. Mr. Zhou insists that the essence of strategy is that people should understand the relationship between enterprises and environment. And he believes that the reason why all kinds of schools occur is not that strategic management thinking itself nor those researchers' perspectives but due to the changes of enterprises' environment during different history. Particularly history of the environment can lead to certain strategic management concepts. That is every school is correct according to its own condition and environment.

This can be proved by successes of much enterprise strategic management practices during different periods. This paper accepts Mr. Zhou's viewpoint, where special historical period match especially correct strategic management thoughts and different schools of strategic management thinking which products of special conditions during their history. This can be perceived by management development of China. The government makes plans in planned economy while business management is the implementer. So it is believe that strategic management is to implement government's orders smoothly. Along with the deepening of China's opening up, Chinese enterprises are participating in a global competition and the enterprise needs to determine self strategy according to environment and their resources.

## 2.1.2 Strategic Management Process.

### (1) Meanings

As a process strategic management includes external analysis, competitive positioning, strategy choice, strategy implementation, learning and control. Gerry Johnson and Kevin Schools believe that the strategic management process includes strategic positioning, strategy choice and implementation of the strategy<sup>[23]</sup>, and as one of the founders of modern strategy theory, Andrews directly simplifies the strategic management process to strategy formulation and strategy implementation<sup>[24]</sup>.

As a heavy weight of modern master in the field of strategic management, Porter believes that the strategic management process is mainly the process established by enterprises for long-term competitive advantage. Porter's understanding of the core of strategic management is how to establish and maintain a competitive advantage in a dynamic, complex environment, and thus to determine the competitive advantage of strategic management as the core dynamic system<sup>[25]</sup>.

According to the above understanding of the strategic management process, this paper integrates related theory on strategic management and insists that strategic management process is a process including strategic goal, strategic analysis, strategy formulation, strategy implementation and strategic control, as shown in Figure 2.2.

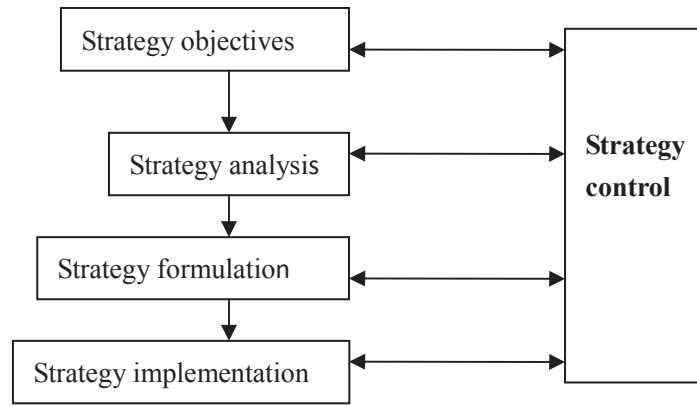


Figure 2.2 Integrated strategy management process model

Strategy management process includes strategy goals, strategy analysis, strategy formulation, strategy evaluation and selection, strategy implementation and strategy control, which constitutes six aspects of a dynamic loop-system.

## (2) Strategy Analysis

External environment has always been an important strategic issue. Environmental scanning is mainly used for companies to identify external changes, determine their business activities and strategy of the direct and indirect effects. As has been widely used in environmental scanning model, SWOT analysis is encouraged to be used but it is also questioned by researchers, and the doubt includes the efficiency, subjective, incompleteness, and lack of explanation<sup>[22]</sup>. According to understanding of this paper, the main limitation of SWOT analysis is that opportunities outside the enterprise, threats and internal strengths, weaknesses of the analysis are all static analysis, and as information technology, globalization, dynamic, complex and uncertainty become the main core features of the environment, so the opportunities and threats is a pair of short and relative concept, while non-dynamic characteristics limit the application of SWOT analysis and development. PEST element analysis tools are also facing the same problem, PEST analysis has some effect, but the effect is limited. In the analysis of corporate external environment, the environmental "hidden" signal is the focus point, but the hidden signal is not weak signal. Now, environment is complex, changeable, and uncertain, it is very difficult to fully capture the implicit signal of the environment.

Based on Porter's five forces model in strategic analysis, Gary Hamel and SK Parallax proposed that Five Forces model is lack of industry factors, the five forces model should not be seen as "established". Instead, it should change along with the changes of their own, innovative competitors, challenges and behavior<sup>[26]</sup>. Considering from this perspective, the industry reflects the dynamic characteristics and uncertainty.

Through comparison between relative market growth and relative market share of BCG matrix, considering both the life cycle of products and markets, the market's business is divided into stars, Taurus, problems, and sick dog. Company arranges strategy under the circumstances of its strategic. Sick dog business can carry out outsourcing, divestiture, bankruptcy and other strategies, while the star business is required to dedicate to and focus on development strategy. BCG matrix is a static analysis, while external factors' change will immediately turn a star business to sick

dog business, so the matrix's practical applicability have problems. Besides, the concept of market share and market growing is not comprehensive enough; it's not adequately representing the true value of a product.

In the field of strategic management, Porter is undoubtedly a master of competitive advantage theory. The general strategy of competitive strategy includes cost leadership strategy, differentiation strategy and the centralization strategy. If the company pursue differentiation strategy and cost leadership strategy simultaneously, it may bring tension within the organization. So Porter advocates enterprises should chose one of three strategies in the competition, later based on follow-up researchers' questions, Potter proposed four strategies, that is, cost leadership, differentiation, cost focus and differentiation focus.

In fact, competitive positioning is to compare the advantage with competitors, Kenichi Ohmae argues that competitive advantage is providing more value to target customers than competitors, or at less cost than your competitors to provide target customers with the same value<sup>[27]</sup>.

The competitive advantage proposed by Porter is the result of a strategic choice in the external business. Companies can choose cost leadership, focus or differentiation strategy, resulting in competitive advantage. Robert Grant challenges the viewpoint, he believes enterprises have a competitive advantage are more due to unique or heterogeneous enterprise internal resources, and these resources are often difficult for competitors to imitate, so companies should strive to acquire heterogeneous resources<sup>[28]</sup>.

According to the understanding of competitive advantage, based on the study of Kenichi Ohmae, Gary Hamel and Prahalad proposed the concept of core competence. Core competence is the sum of a set of skills; it is a capability within the enterprise. This capability is dynamic and dynamic development of core competencies and business strategy formulation and implementation of the future are closely linked. But in practice, this core competence is difficult to identify within the enterprise, and more easy to identify from the outside.

Just having a competitive advantage is not enough, the most important thing is to have a sustainable competitive advantage, because at different time requiring companies to have a different competitive edge, Table 2.1 shows the different periods of a century, the core competitiveness of business success<sup>[29]</sup>. Built to Last must have a sustainable competitive advantage to meet the needs of each period and thus invincible.

Table 2.1 Core competitiveness of enterprises in different time

period	Competitive advantage to success
1910-1920	Scale generate competitive advantage
1920-1930	Scientific management, through job design, meticulous division of labor to achieve productivity gains
1930-1940	Relationship management, through nomination management to motivate employees
1940-1950	Organizational functional structure, through the organization design to update professional level and thus control the market

1950-1960	Strategic planning, provide clear goals and action plans
1960-1970	Economic projection
1970-1980	Market strategy and organization design, through market strategy to gain market share, profits, region, product and market matrix to adjust the organization
1980-1990	Diversified development: strategic business units, total quality management, customer-oriented, the balanced scorecard
1990-	Globalization, information technology, organizational culture, learning organization, knowledge management, etc.

Source: Ruxiang Jiang, Gap- How far are Chinese enterprises from world-class enterprises [M].Beijing: Engineering Industry Press, 2003, pp.192

### (3) Strategy Formulation

Whether the developed business strategy will be accepted or not is an important issue to consider in the strategic development, strategy formulation itself is unstable and chaotic, but there is a natural tendency to resist a formal strategic plan [30]. In the strategy formulation process, it is needed to fully consider the resistance when implementing the strategy. Eliyahu Goldratt start from the strategy formulation phase to analyze the main limiting factor in different strategic stages, and gives specific measures to remove these limiting factors, so as to maintain the smooth development of the strategy <sup>[31]</sup>.

There are two ways to form strategy, well-thought-based strategy and contingency-based strategy <sup>[32]</sup>.

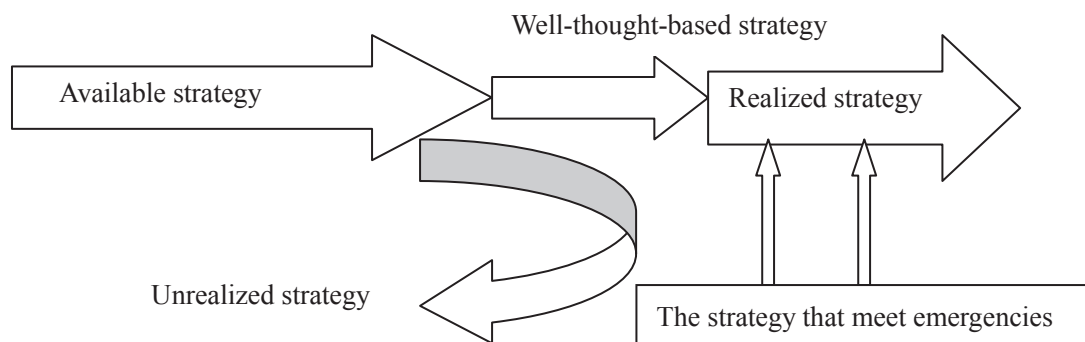


Figure 2.3 the way of strategic formulation

Grundy extended Mintzberg's way of strategy formation <sup>[17]</sup>, and proposed a mixed strategy: well-thought-based strategy, contingency strategy, focus strategy, uncertain strategy, and separation strategy. As shown in Figure 2.4.

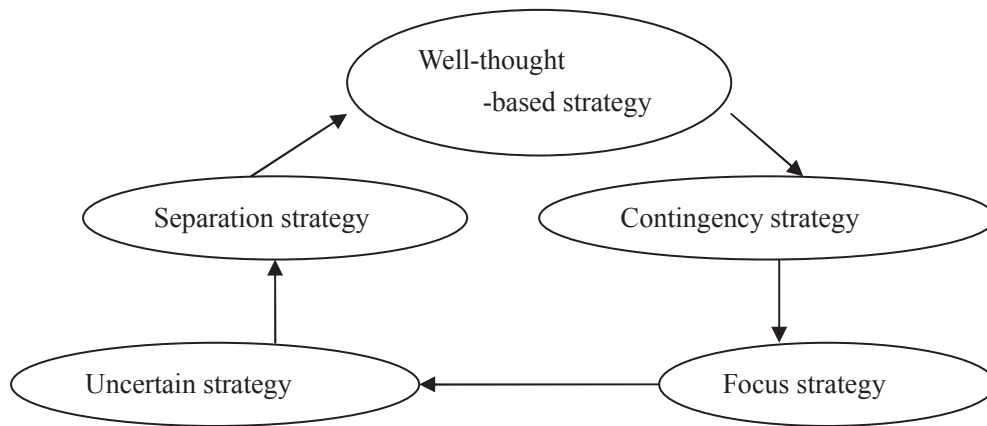


Figure 2.4 strategies mix

Because the assumption of the formation of different strategies is different, strategic management theory is divided into rational assumption of strategic management theory and irrational assumption of strategic management theory. Mintzberg separated the rational model of strategy formulation into several schools of thought, represented by Andrews design school, represented by Ansoff plan school, represented by Porter's positioning school and the environment school. However, the human's ability to access information and decision-making are limited, human behavior can not be guaranteed as rational, and therefore irrational assumption of strategic management theory came into being, including entrepreneurs, school, know school, learning school, power school and culture school .

The power of company's strategy formation mainly includes the future source of profits, business environment, concepts and theory, technology and social needs. Reduction of size and cost requirements restrict the profit source of the enterprise; environmental uncertainty, fierce competition lead to turbulent changing business environment; some new concepts and theories, for example, resources and capabilities as the basis of competitive advantage, companies base on knowledge-based theory, choice theory and complexity theory to provide a new way of thinking for companies strategies; information technology and other professional and technical development within the industry to bring new opportunities and challenges; social responsibility, environmental protection, ethics, social justice and other factors have a significant impact on the formation of the strategy.

Strategic management researchers have different descriptions of different strategic decision-making process, Mintzberg described it as its contingency, Bray Brook and Lindblom described it as chaotic, Quinn considered it to be progressive. When scholars discuss what the strategic decision-making process was like, business practice must make practical decisions, Ford, HSBC, Microsoft, Nokia and other companies have tried to use Grant's strategic matrix to make strategic option.

What an important issue when making strategic choice is considering the corporate structure or organizational structure, business is organized under the corporate structure or strategy base on the organizational structure to determine the strategy? To address this issue, early in 1962, strategic management guru Alfred Chandler proposed a

structure to follow the strategic thinking. Between corporate strategy and corporate structure, we should first determine the company's strategy, and then decide the company's structure. According to their ideas, McKinsey extracted a thought of strategic business unit.

#### (4) Strategy Implementation

The entire history of strategic management and research process is a top-heavy process, more research and literature focused on strategic thinking, strategy formulation, strategy genre, etc., but very few studies is on implementation of the strategy, and research on process of strategic learning and control is also very scarce. In fact, many good strategies have problems in the implementation process. A study on 257 managers conducted in the United States demonstrated that the ability of implementation of the strategy is more important than the quality of the strategy itself. Another study also proved that a good strategy can be successfully implemented for less than 10% <sup>[33]</sup>. Fortune magazine found in a survey that in most cases, estimated as 70%, the problem does not lie in the strategy itself is not good, but the implementation of the strategy is not good.

When scholars study on the implementation of the strategy, the basic strategy is to focus on the implementation process of the organizational structure, governance structure, stakeholder relationships, limiting factors, the coordination of the implementation, etc.

Gerry Johnson and Kevin Scholes proposed that implementation of the strategy should start with effective management of change in response to environmental change and uncertainty. Organization and structure are adjusted to ensure the implementation of the strategy (this is consistent with Mintzberg's structure is to follow strategy), while continuing to enhance self-learning ability <sup>[33]</sup>.

Charles Handy analyze different forms of organization, and analyze how the organization is restructuring to strengthen the implementation of the strategy <sup>[34]</sup>. Same, aiming at organization factors of implementation of the strategy, Rosabeth Moss Kanter emphasize the whole power of the organization is very important, but agree that the process of strategy implementation is a win-win game. In the process of implementation of internal strategy, through the game to complete the implementation of the strategy and thus make progress, at the same time, she believes that implementation of the strategy should be delegated to individuals in business, and streamline the organization is also important <sup>[35]</sup>. In addition to organizational factors, in the business strategy implementation process, companies will definitely make all kinds of relationship with business stakeholders, and how to deal with the relationship with stakeholders itself is a strategy, as well.

As for the strategy has been developed, some limiting factors will happen to prevent the strategy implementation in the implementation process. Eliyahu Goldratt is very concerned about some blind spots problems in the process of strategy implementation, which is of guiding significance to the smooth implementation of the strategy <sup>[36]</sup>.

Synergies in the implementation of the strategy, Campbell and Gould found that the value of synergies is very elusive and very vague, and can not be managed because the synergistic effect itself is very complex, and lack of the carrier, while facing different

stakeholders<sup>[17]</sup>.

How to form a complete set of process to guide the implementation and execution of corporate strategy are many researchers and enterprise managers struggling direction. According to HSBC, Microsoft, Nokia, Royal Bank of Scotland and other enterprises strategy implementation research, Grundy introduced a complete set of strategy implementation guide, of which the important argument are: intra-corporate disputes about strategy are caused due to the potential of individualism; if strategic groups want to be efficient, they must adjust a number of factors of intra-organization; analysis of the application of technique is very helpful to political issues and problems of personal relationship<sup>[17]</sup>.

## ( 5 ) Strategy Control

As the founder of company plans, Ansoff shows us the importance of gap analysis in strategic management<sup>[17]</sup>. Around a company plans, companies have future performance of plans unexecuted, future performance of plans implemented and future goals of performance. If the gap can be found, plan's validity and effect can be relatively easily found, therefore. However, in the strategic management practice, there are only a handful of companies using gap analysis which has got little attention in the theoretical study. However, this paper argues that as a strategic management process control tools, the modified strategic gap analysis is very useful. According to the gap analysis model proposed by Ansoff, we proposed the modified strategy gap analysis model, as shown in figure 2.5.

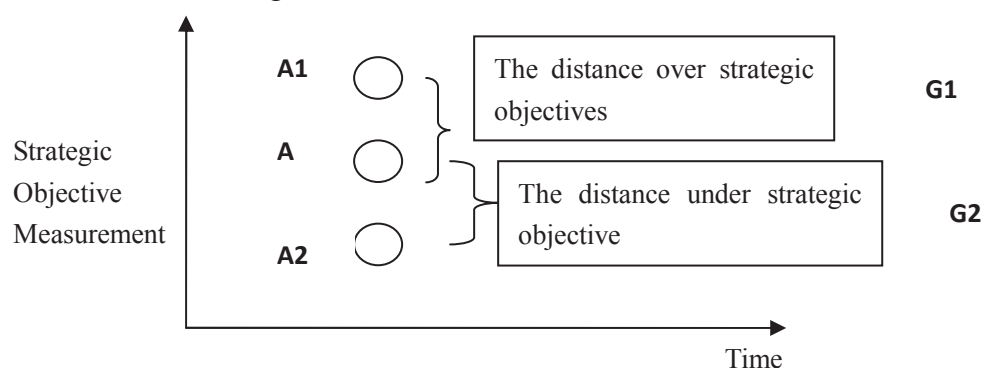


Figure 2.5 Modified strategy objective gap analysis model

Where A1 represents the time t after the execution of the strategic criteria, A represents the strategic objectives, A2 also means the standards after implementation of the strategy, then the G1 denotes that overfilling the expected strategic objectives after the implementation of the strategy, G1 can be analyzed for analyzing the factors related to success, while G2 denotes that unfinished strategic objectives after the implementation of the strategy, through the analysis of gap to control and enhance.

In addition to this gap analysis tool, the tool commonly used in strategic control is integrated balanced scorecard approach as well. Integrated Balanced Scorecard<sup>[37]</sup> is more popular and more Chinese enterprises apply it for strategic control. The core idea of the tool is a comprehensive and balanced measurement and controlling important indicators factors of business, rather than just focusing on financial indicators.

Meanwhile balanced scorecard approach is constantly improving and developing, based on the original four key indicators (customer satisfaction, operational efficiency, employee morale and financial position) it further add innovation, capacity development and other factors.

### 2.1.3 Chinese strategic thinking and problem management

#### (1) Chinese strategic thinking

China has a long history and culture; strategic thinking also appeared as early as 2,500 years ago, The Art of War is now respected as the originator in strategic management thinking by practitioners and researchers all over the world. Reading the Art of War in detail, it's not difficult to find the basic framework and system of modern strategic management theory is reflected in the Art of War. Of course, others, such as Confucius, Thirty-six stratagems, Romance of Three Kingdoms, Outlaws of the Marsh. They all have a strategic management thinking <sup>[12]</sup>. Figure 2.6 describes the links between the Art of War and the modern strategic management system.

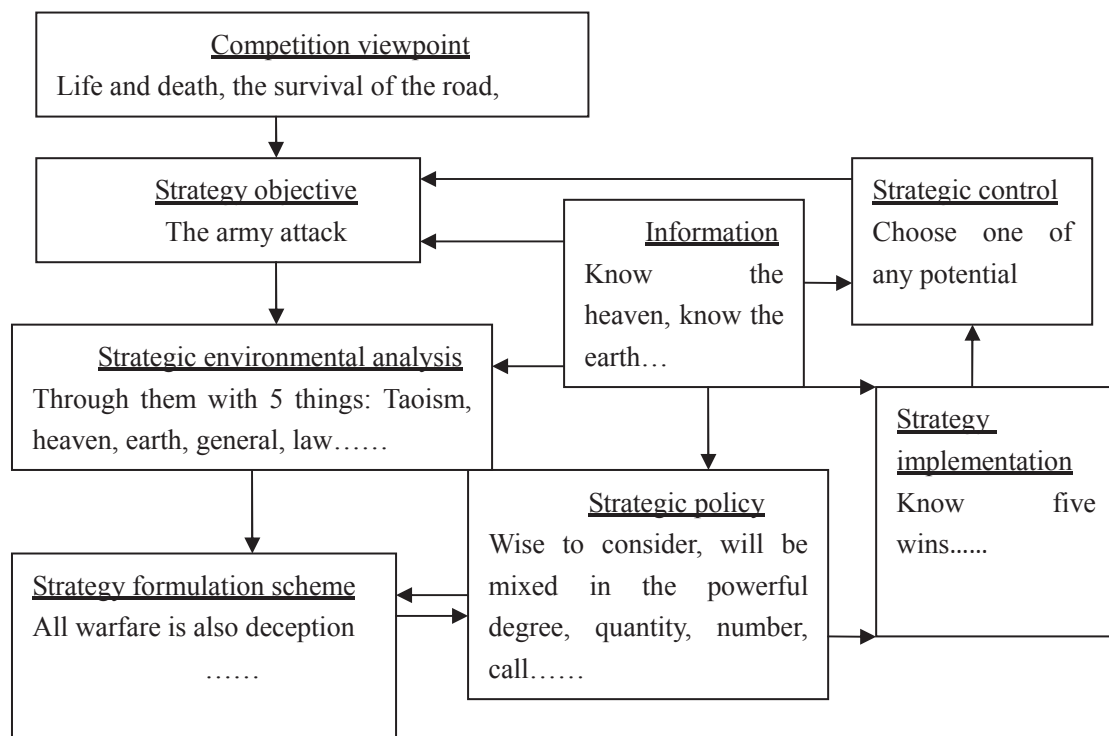


Figure 2.6 Strategic thinking system of *the Art of War*

Source: Sanduo Zhou, Tongqian Zou, Strategic management history [M]. Shanghai: Fudan University press, 2003.5:8-30

Another classic case of strategic thinking in Chinese history is Long Zhong Talk of The Three Kingdoms, which is a real complete strategic plan, including strategic objectives, strategic trend analysis and strategic choice, etc.

Since the founding of new China, the Chinese economy belonged to planned economic system before the reform and opening up, the enterprises are nationalized,

the overall business management was lack of strategic thinking, and at most budgeting and planning of strategy planning were involved. With China's reform and opening up in the 1980s, China access to the global competition, changes of the political and economic environment make Chinese companies begin to contact, use and research on strategy management, and the application of strategy of Chinese enterprise was up to an unprecedented level, and companies focusing on planning while overlooking strategy are struggling until the bankruptcy, however, through right ways to implement strategic management will benefit corporate. During this period, Chinese companies have experienced strategy failures such as arbitrary decision-making, human resource development improper use, lack of long-term development strategy, the lack of innovation, investment spread over and so on; it also appeared the success of Haier Group's brand strategy, international strategy, diversification strategy, and the effective implementation of the expansion strategy of Qingdao beer.

In theoretical research, when actively introducing the foreign advanced, in-depth theoretical results, some well-known researchers of strategic management theory also emerged in China's domestic, such as Bingfu Chen, Sanduo Zhou, Dongshui Su, Shishi Qi, Jisheng Liu, etc. However, influence by the social culture, the western management theory has its limitations when applying to guidance of Chinese enterprise management practices and the impact of oriental thinking mode on our business practices is increasingly significant<sup>[58]</sup>.

## (2) The problems of Chinese enterprise's strategy management

The CEO of Monitor Group Denis pointed out that when Chinese enterprises made enterprise strategies, they tend to formulate a vision for future development rather than a specific implementation plan, even if they formulated a specific implementation plan which is vacuous.

Ruisi management company conduct a survey for the situation of Chinese enterprise strategic management in 2007. There was many reasons for the failure of them. The most important one was the lack of strategic management, especially strategic decision-making mistakes, and the company's strategic goals were not consistent with its objective and mission. The business leaders did not know the value of strategic management very well and the companies were in shortage of professional managers, 60% of which caused business strategic management failure.

Compared with the western developed businesses, Chinese enterprises lacked a complete set of strategic guiding ideology to integrate enterprise behavior; lacked a institutionalized management platform to deal with the three major contradictions; the contradiction between the directors and executives; the contradiction between cooperation and harmony between the departments; the contradiction between the target and action; lacked a common understanding of core competitiveness, could not established a sustainable growth strategy based on the core competitiveness; lacked a set of scientific, effective human resource assessment and incentive system to integrate the personal goals and the business objectives<sup>[29]</sup>.

According to Sanduo Zhou's research<sup>[12]</sup>, the problems of Chinese enterprises are the following aspects:

- ① No clear understanding about the essential meaning of the strategy

When he visited China, Porter pointed out that many businessmen confused strategy with business efficiency. He said that many Chinese enterprises paid more attention to costs reduce, efficiency improvements, but lack of corporate positioning.

② Weight more tactics but less strategy.

The market was flooded with price wars, advertising wars and other tactics; the enterprises searched for short-term interest and did not form their own competitive advantages. The most typical price wars were home appliance market and air passenger market.

③ Strategic convergence is serious.

It is a common phenomenon in Chinese enterprises strategic management. In fact, according to the foreign strategic experts Porter and Kenichi Ohmae's view, strategy is to form their own core competitiveness, strategic differences is the key to success of the strategy, but domestic enterprises are often copied from other corporate strategy. It is a repeatedly used strategy for many domestic enterprises that they obtain cost advantage by means of scale effect and then wage the price war. From another perspective, the enterprise do not have an effective strategic analysis, and do not have fully understanding on the external environment and their own capacity, resources, so they can only copy someone else's strategy.

④ Strategic plan is empty and out of touch with strategic implementation.

Many enterprises start the strategic management in order to catch up with fashion or to cope with the superior departments, so it is empty, blind and not practical.

⑤ Weak ability of strategy implementation:

Xiaohong Wang and Hongwei Liu summarized the strategic failure of the domestic enterprise as the wrong judgment of environment, errors or changes of assumptions, dynamic competition from static perspective, blind for diversity and ignore the training of core competencies, the constraints of the traditional organizational structure, without evaluation and assessment to strategic objective, and the failure of leadership<sup>[16]</sup>.

From research view of our country on strategic management of, there are the following six errors<sup>[59]</sup>: Blind accepting western theory: The development of strategic management in the western developed countries has its assumptions, the mature market, the sound regulations and the special historical background, so it will not work just accepting western theory blindly; Blind preach Chinese management: In the process of research on strategy, in the history of China, Laozi, Sunzi, Tai Chi, I ching and Buddhism are all related to strategy management, so it is a correct research approach to combine Chinese and western theory and fully consider their assumptions and conditions; Opportunism error: Opportunism is considered to be the opposite of the strategic management by the theory and practice, it is critical, Xiao Liao believes that opportunism itself is a form of strategy, it is the strategic logic of simplification<sup>[39]</sup>; Misunderstanding of core competencies: core competencies, core competitiveness, sustainable competitiveness by Western theories have been studied by many scholars in China, enterprises use core competencies to beat the competitor, and to seek excess profits, and the core competencies are long-term and unique, and can not be copied. However, with the increasing uncertainty of the external environment, core competencies of many enterprise become the yoke of development, so the core

competitiveness of enterprises in fact is the ability to realize the unique value so that enterprise can adapt to environment changes; Defects in the Balanced Scorecard: Balanced Scorecard is very popular in our country, researchers and practitioners of strategic management view it as an effective tool, but its assumption is the successful strategic planning, strictly speaking, a balance scorecard is an effective tool for implementation of the strategy; Environment assumptions: A variety of strategic theory has its own assumptions on the environment, and some environment assumptions are continuous, and some are not continuous, the correct assumption is that both and is sufficient to count the two assumptions in.

However, along with China's economic development and progress, Chinese strategic management are facing problems, the strategic management also attracted attention of managers and researchers, and Siwei Cheng highlighted the strategic management as the highest level and the primary task of modern management<sup>[40]</sup>. (GB/T 1980-2004) national standards of performance evaluation criteria for excellence performance point that strategy is a key indicator of business excellence performance, showing that Chinese enterprises' strategic management have to upgrade to a new level.

### (3) The challenges of strategic management

The growth of strategic management is the process of strategic management continually breaking defects, completing the self-breaking, and facing different challenges at different time. Base on the strategic practice and strategic research for the 21st century, the strategic management faces challenges including strategic fails, the balance between interests of shareholders and social responsibility, competing, organization and coordination of rapid response.

#### ① Strategy fails.

Strategic management is a systematic project, influenced by many factors of enterprise, errors of a part of link or factors could cause the whole strategy failure. Generally speaking, the factors that lead to failure are: assumptions error, misunderstanding of the external environment, unreasonable strategy formulation, poor match of strategy and organization, poor implementation of the strategy, strategic control inefficient, etc.

#### ② The balance between shareholders' interests and social responsibility.

From the perspective of corporate finance, corporate goal is to achieve the maximum benefit of its shareholders. With the development of financial theory, corporate goals are described as maximizing shareholders' value or enterprise value. This indicates that the significance of existence of the business is to meet the demands of shareholders. But from the view of social responsibility in the strategic management theory, businesses are run by shareholders, employees, banks, consumers, suppliers, government and a consortium of communities. Enterprises should focus on balancing the interests of stakeholders, to do the relevant strategies base on social responsibility. This paper argues that strategic management has a dual role, both as principal shareholders, representing the interests of the shareholders, at the same time as the cell of society, taking the social responsibility.

#### ③ Competing.

Business as an independent subject, in the course of business, how to deal with other

independent relationship between the companies is a core issue of strategic management, core competencies, competitive strategy and other strategic management research and practice determine the relationship between enterprises competitive. However, there are important partnerships between enterprises and other external enterprises, more often, an enterprise always has resources shortage or capacity deficiencies, by sacrificing a degree of independence to win a higher co-benefits. The most typical case is the dialectical relationship between the strategic alliances, there is both competition and co-operate with the Union.

④ An important part of strategic management is to achieve coordination in the organization. With the increase in business unit, coordination costs continue to increase, while reducing the ability to respond to the changes in their environment, reducing the space of the strategic adjustment, resulting in the flexibility of their business reduced. Therefore, the business strategy must be balanced between the needs of organization flexibility and organization coordination, to ensure that the organization in response to the uncertainty of the environment, while improving their overall interests.

According to the strategic management process, strategic management includes strategic analysis, strategy formulation, strategy implementation and strategic control. Domestic and foreign research more in favor of strategic analysis and the strategic formation, less in strategy implementation, less in the whole process mechanism of strategy, less in learning and control. However, whether a strategy is successful that is showed by implementation, strategy not be implemented or just failed means nothing to achievement of strategic objectives.

Risk in business management is more and more important, but there are only a few strategic management researches in risk caused by strategic management, or that researchers have already not recognized the importance of risk in business management.

## **2.2 Risk and Risk Management**

### **2.2.1 The origin and definition of the risk**

The modern concept of risk comes from India - Arab counting system, it passed seven or eight hundred years of Western history, however, serious studies on the risk began the Renaissance period. The Renaissance makes people break shackles of the past, and thus challenge the established creed. It is the grasp of the risks delineating the boundaries of the modern society and past, such a revolutionary idea is to tell people's future is not just God's free, when people facing the risk is not passive and helpless, when people take risks to find a method our society are moving forward<sup>[41]</sup>.

Risk in the enterprise and business is increasingly being taken seriously, there are two reasons why risk management is importance. Reason one, in the past 20 years, the world's largest institutional investors (the world's listed company's control 75% of assets) losses due to mismanagement. Reason Two, the business environment are accelerating change, more complex and uncertain<sup>[42]</sup>. The essence of risk management

is to maximize the field where the results we have control, and minimize the field where the results out of our control and we cannot get clear causal link.

The word of risk comes from the ancient Italian word “risicare” which means "fear", according to Peter L. Bernstein’s (1996) understanding of risk, it is a choice. Table 2.2 lists the relevant definition of risk, from the table; there exists different definitions of risk in the current study.

Table 2.2 Definition of risk summarized in table

Source	Definition
Peter L. Bernstein ( 1996)	Risk is a choice
Tan Gao, 2009	Risk is the influence on future uncertainty
H. Willett 1988	Risk is about the objective reflection of uncertainty of the events not wanted to happen
Christopher J. Clarke Suvir Varma 1974	Risk is the integrated results constitute of the size of the uncertainty and the amount of the income, including changes in strategic position, financial loss, changes in corporate reputation or image
UK Institute of Chartered Accountants ( ACCA)	Risk is the chance of something wrong
Williams 1957	Risk refers to the conditions and characteristics of a given period of time, the difference between the results that may occur
Jingxun Wu1965	Risk is a specific natural environment and the existence of a specific period of time lead to changes in economic losses
American scholars Williams & Hines 1964	Although the risk is objective, but different individual subjective judgments of risk is different
Yates & Stone 1992	The three-factor model of risk and potential losses, the loss of size and the uncertainty of loss
James, 1986	Pure risks, speculative risks, static risk, dynamic risk, subjective risk and objective risk
Chengang Ye, Hongtao Zheng, 2009	Risk is the uncertainty and the resulting changes in expectations

From the definition we find that many risks and uncertainties usually go hand in hand, in fact, as early as 1921, Knight analyzed and discriminated risks and uncertainties in "Risk, Uncertainty and Profit" <sup>[43]</sup>, "uncertainty and the concept of risk we are familiar with have a great degree of difference, the two sub-regions had never been properly treated... obviously, uncertainty of measurable, or the appropriate risk and uncertainty of un-measurement is different, because the former is not uncertain. "

According to Knight's definition, if the probability of occurrence of the results is 0 or 1, then is sure; the risk occurs when the result is between 0 and 1, and it can be measured or calculated, and uncertainty is the result of a probability cannot be calculated or measured.

Although this is a certain authoritative definition about the two concepts of risk and uncertainty, but this definition and distinction have not been recognized by researchers

later, Knight economics-based risk awareness is inconsistent with the follow-up managers' understanding of risk. Both risk and uncertainty of research has been in a chaotic state<sup>[44]</sup>, from a technical point of view, risks and uncertainties are significantly different, but almost all scholars will note that this difference is then neglected, and mix these two concepts.

Looking for certainty is not only the proof of human rationality, but also the goal of human science chasing. Unfortunately, human behavior is always full of uncertainty - although certainty implies some kind of certainty (the rule). Contemporary physics, biology and other natural sciences show that scientific uncertainty has become the most obvious feature of the contemporary one.

Of course there are risks and uncertainties closely linked, uncertainty brings risks, and further affects the development of goals and results, and business models, as shown in Figure 2.7.

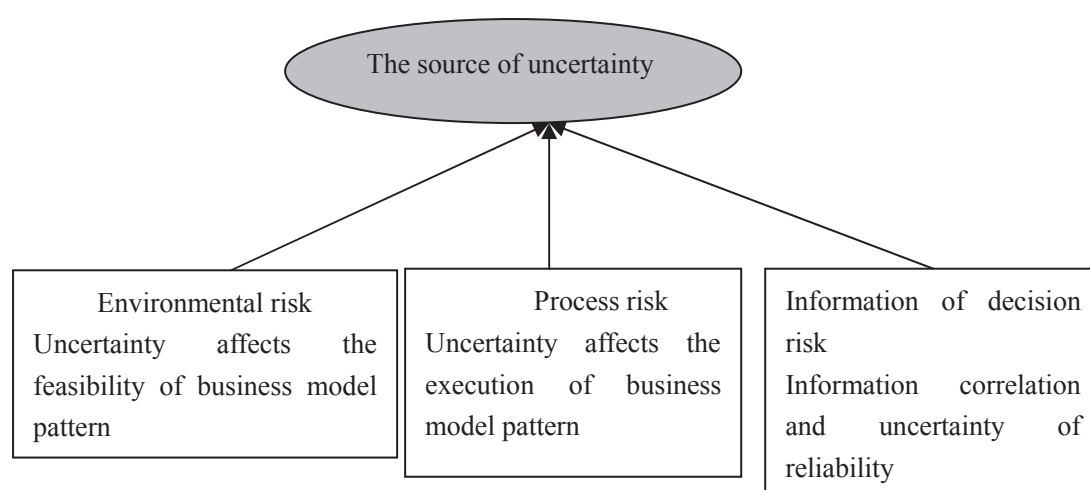


Figure 2.7 the source of uncertainty

Meanwhile, the uncertainty is to promote the development of human society, economic, when the Soviet through government orders and plan strategies to completely eliminate the uncertainty, they also inhibit the social and economic development. Knight made more directly, the uncertainty is the source of corporate profits, is the foundation of economic development, it is precisely because there is uncertainty, corporate profits can be generated.

For researchers in the field of strategic management, it is needed to improve the definition of risk, and to develop and propose a comprehensive classification system for risk, to help resolve issues related to strategic management. Risk have been studied and used in psychology, management, finance, marketing, organizational behavior, research and other fields, the risk is considered to be income changes, the results of the scale and nature of possible loss, failure to achieve the goal, bankruptcy and the lack of information, etc. Research on strategic management more often define the risk as the change in accounting data, stock returns change, innovation, lack of information, the ability of entrepreneurship and the threat or threat of bankruptcy enterprises are facing. The risk the strategic management researcher study on is referred to " the variables that

can not accurately predict the results of business activities or that variables have negative agnostic, such variables include income, costs, profits, market share, etc., which are commonly used in risk management concept (which may suffer loss)<sup>[45]</sup>, which is essentially different from risk of Knight's definition.

Over the years, there is a big controversy in the definition of “risk”, different knowledge have been put forward by different scholars according to their field. Before, including China, countries have made 14 kinds of "risk" definition. As an international standard terminology of "risk", core concept of risk management standards, the risk proposed by our experts is defined as: the effect of uncertainty on objectives. After the discussion of the ISO Risk Management Working Group, new ISO 31000 "Guidelines for the implementation of risk management principles and international standards" are formally established. This definition overcomes the "risk" definition from the other countries which are too narrow, inaccurate and other defects, directed at the nature of risk, accurate, comprehensive, easy to understand, easy to use, as the definition of eventual reunification.

This concept of risk is determined by ISO 31000 "Guidelines for the implementation of risk management principles and the international standards" used in the definition: the impact of uncertainty on the target. According to this definition, with the theme of this paper, the basic meaning of the following risks:

- (1) Risk is closely related to incident conditions, causes and the environment. Thus, the cause of risk occurs, the risk of conditions and the environment is an important direction.
- (2) The risk of a specific environment and timing.
- (3) The risk of a certain objectivity and subjectivity.
- (4) risk of a loss, it may bring harm to the target.
- (5) The risk of objectivity, meanwhile you can control, avoid and manage it.

### 2.2.2 Mechanism of occurrence of risks

According to the definition of risk, the risk consists of two parts, the probability of risk events and incidents and the severity of the consequences of the loss. The resulting three important concepts: hazard, peril and loss. Hazard is to promote the increased frequency and magnitude of the loss; it is the cause of the accident potential reason, such as, the quality of corporate officers is a potential risk factor for business failures. The risk factor in different areas have different forms, there are physical risk factors, risk factors, moral factors and psychological risk factors; Peril is the loss of life and property caused by an accidental event, directly or indirectly caused by the loss of the accident, the loss is only led to risk by risk accidents; loss is unusual, unexpected reduction in the value of the loss of the produce must meet two conditions, that is unexpected and value reduction. Reducing the value of the case showed more reduction in economic value.

As to these three concepts, it can be understood through an example for illustration, for example, rain and snow prone to car accidents, casualties, when the snow is a risk factor, the risk of accident is an accident, casualties, losses. Risk factors, the risk of

accidents and loss of the three form a chain of causation; hazard that have caused or increased the risk of accidents, peril is a direct result of the loss of another generation. Figure 2.8 shows the risk of dynamic process of great significance, one can clearly understand the mechanism of occurrence of risk, while helping to start from the causes of the risk to prevent and control the risk.

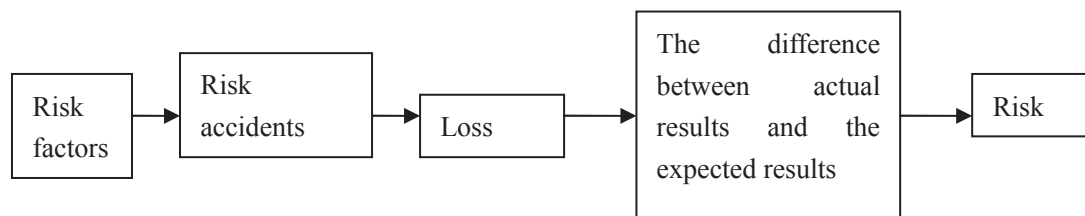


Figure 2.8 mechanism chain of risk generation

It can be seen from the mechanism chain of risk generation, the risk has a strong delivery, risk can transfer and spread through information, community, organizations and individuals. Through transfer risk can spread to society, this popular theory has ripple effects and social theory of risks. Social expansion theory of risk can explain some tiny risk starting from the source of risk through risk transfer and expansion and have a great socio-economic impact. Figure 2.9 shows the risk transfer process.

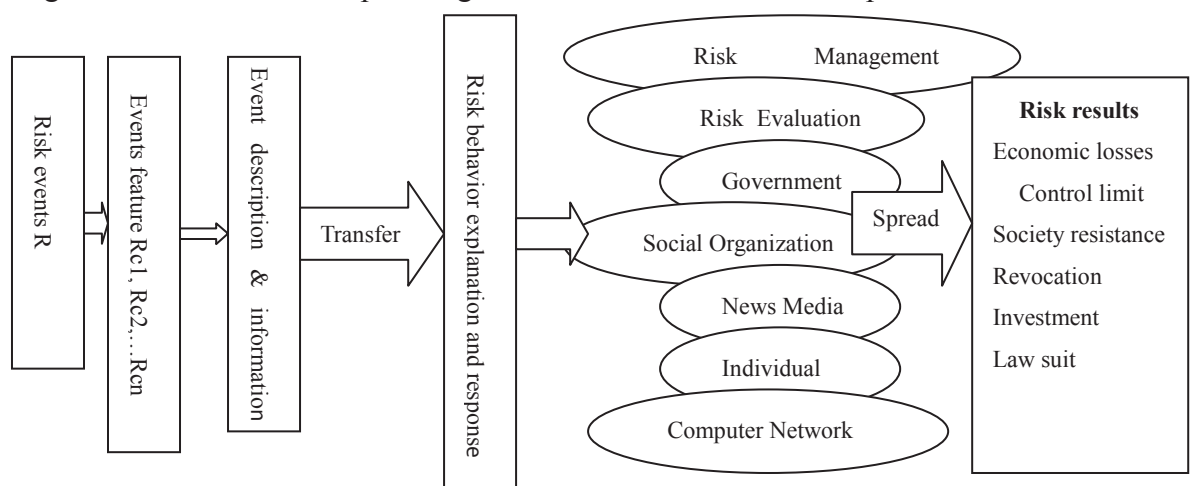


Figure 2.9 The process of risk transfer

### 2.2.3 Concepts and development of enterprises risk management

Risk Management originated in the 1930s in the United States, based on 1929 and 1933 economic crisis, the United States ran into recession period, 40% of banks and business closed, economic development retrogress 20 years, in this context, U.S. companies in response to the crisis, to protect the development of enterprises, many insurance companies set up in-house management, specifically for the business situation to arrange purchase of insurance, this is the first modern enterprise risk management coping method.

Enterprise Risk Management in the 1950s developed into a discipline, the University of Pennsylvania's Wharton School, Professor Schneider first proposed a "risk

management". After 20 years of development, beginning in 1970, the global rise of the late 1870s, as the business risk becomes more complex and diverse and the risk premium increases, the French began to draw the United States, Risk Management, risk management and then opened prelude to the development of Europe. In 1986, 11 countries by the European co-founded the "European Risk Research" began a worldwide risk management research. From 1990s, with the asset securitization in the international development, risk securitization has also been introduced into risk management, especially in the Swiss Reinsurance Company and the issuance of cat bonds issued by the United States Chicago Board of Options for the PCS representatives, marking the risk management into a new phase<sup>[46]</sup>. Australia and New Zealand jointly developed the world's first national risk management standard AS/NZS4360: 1995, which marks the national level the importance of enterprise risk management, enterprise risk management will also standardize the development to move forward. The first mandatory global risk management bill impact is produced in the United States in 2002, President Bush signed the Sarbanes - Oxley Act, the U.S. listed companies and unlisted public companies borrowing mandatory measures risk management, capital markets, the United States in the global impact of the bill which also had a profound impact on the world.

In September 2004, U.S. COSO launched the "Enterprise risk management-integrated framework" (ERM), the framework is based on the 1992 " Internal Control-Integrated Framework" (ICIF) increase, the biggest difference is that after who proposed combination of a business risk management and corporate strategic goals, from a purely internal control shifted to risk-oriented management, which mark that the company's risk management has update to corporate strategy level.

#### 2.2.4 The process and model of risk management

The general risk management process includes risk identification, risk analysis and assessment, risk decision-making, risk monitoring procedures, and as for different types of risk, the risk management process differs, due to risk management are both scientific and artistic at the same time, different subjective of risk focus differently according to different needs and situation. On the one hand, risk management provides a number of series of scientific decision-making methods and techniques, on the other hand, risk relies heavily on non-quantitative risk management methods, for example, the experience of risk decision-makers, decision-making, and other factors.

Study in this paper is the risk of corporate strategy, risk management model based on the above, combined with the characteristics of China's aviation transportation industry, Figure 2.10 shows this risk management process model.

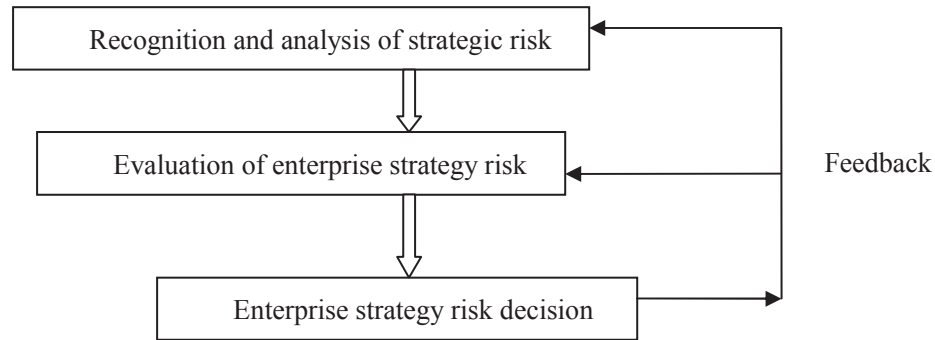


Figure 2.10 Management process of strategic risk

The process is a constantly repeated, continuous process, strategic risk identification and analysis of the basis for the evaluation, strategic risk assessment of strategic risk support decision-making, according to the results of the strategic risk decision-making to revise strategic risk identification, risk assessment strategies.

### 2.2.5 Risk management practices in our country

China's enterprise risk management practices began in the 1990s, mainly by government authorities formulated relevant laws, regulations, and guidelines. Compared with foreign theoretical research, practice, China's risk management is a new attempt, the business community's prevalence of risk management awareness, lack of risk strategy, risk management is more passive, the lack of risk management professionals, and risk management techniques, lack of funds and other issues<sup>[46]</sup>. Specifically, mainly in the following four areas:

#### (1) Corporate strategy and risk management completely out of

A major feature of China's large enterprises in the formulation of strategic objectives is on the anxious, enterprises seek the fastest way to get a return, so that the characteristics of leading enterprises in the development process itself cannot encounter too many risks, and the corporate and lack of appropriate risk management strategies and measures. Facing greater risk and disadvantageous enterprise risk management measures would lead to adverse changes in the ability, shorten product life cycle, business development potential.

#### (2) The lack of pre-enterprise risk management, often after a crisis

Existing risk management of China's enterprises are mostly post-control, lack of systematic risk, timing of assessment, the lack of positive, proactive risk management mechanism, but not fundamentally against the significant risks and losses. Much bank fraud, insider embezzlement, corruption and other cases show that companies are often other issues exposed, resulting in loss of specific matters before starting treatment and remedy the situation.

#### (3) The importance of specific risk management, lack of overall risk management strategy

The current corporate risk management has been implemented in a large part of companies, and great energy input into the specific risk management issues, the lack of systematic, holistic enterprise risk portfolio and to consider the risk of mutual relations.

For example, the airline set up a new branch; the more problems are to consider the specific operational procedures at the expense of the new company's interaction with the overall strategy and the overall impact.

#### (4) Unclear risk management responsibilities

Company's existing risk management functions, responsibilities scattered among various departments and positions, the lack of clear and for different levels of risk management functions and responsibilities described requirements, and evaluation and incentives has not been clearly stated in the content of risk management, leading to a lack of protection functional framework for the smooth running of the risk. Meanwhile, Chinese enterprises yet have not formed the current corporate risk information standards and delivery channels, the lack of information support, as well. Intra-firm is lack of common understanding of the risks, the risk information of transmission has not been effectively coordinated and unified. In fact, risk has a strong ability of transferring, especially in today's global finance, capital markets of developed capital market makes, companies make externalities more significantly obvious, corporate risks can be spread and infected by investors and financial capital markets, which can spread to the whole industry chain, country and the whole world, which partly explains the global economic crisis in 2008.

In June 2006, the SASAC issued the "central enterprise-wide risk management guidelines," which draws on international guidelines for developing the enterprise risk management standards and regulations, It includes the U.S. COSO framework and Sarbanes-Oxley Act, Australia and New Zealand's risk standards. What to specifically mention is the guidance documents bringing implement risk management into corporate strategy level, which is above the risk associated with business growth, setting consistent risk tolerance of return on goals and business growth. Thus enterprises will be the strategic objectives fluctuations control in a certain range. This is to support corporate strategic objectives and to adjust strategic goals at any time with assurances that the operation of enterprises is stable. Simultaneously, the guidelines also advocate stakeholders to grasps the company's risk status to maximize the common interests of the relevant person.

"Central enterprise-wide risk management guidelines" issued to illustrate that our government's understanding of management of risk has come to corporate strategy level, but in specific companies, the combination of risk and strategy, strategic management etc. are still in the initial stage.

## **2.3 Strategic Risk**

The study of strategic risk management, strategy cross-cutting areas mainly focus on strategic risk to study the dynamic nature of risk. The key consideration is the impact of their overall revenue and competitive advantage of uncertainty. Considering the current studies, strategic risk research focuses on the concept of identification, structural models, measurement methods, theoretical explanations and risk control. This section will review the literature concept of strategic risk, and international research to sort out and identify basic concepts and ideas of this article.

### 2.3.1 Concept, types and causes

#### (1) The concept

The concept of strategic risk decision-making theory was first coined in the field by Andrews·K 1971. Strategic risk is the risk posed by the strategic decision-making <sup>[24]</sup>. While the risk in the field of strategic management research starting to be more systematic in the late 1970s, Bowman's <sup>[13]</sup> study of the field of strategic management is considered the starting point for risk research. After ten years of development research it reached a peak in the early 1990s <sup>[47]</sup>. Management scientists believe that risk management is part of strategic management. That it is through risk management that enterprise can find new competitive advantages in their processes. The risk of a successful strategy is to get through the strategic goals of success. Adrian Sly Jaworski and Karl Weber "the so-called strategy in fact is risk management" <sup>[19]</sup>. Strategy risk managers come to realize more and more important in strategic management which is complex and lack of relevant information. So the risk of corporate strategy is often a lack of decision support. Firm's strategic management process is always faced with the question whether to take the risk? The risk strategy for the overall strategy to become the core content and the nature of risk is often considered the key to a successful strategy <sup>[48]</sup>.

Robert Simon, From a strategic point of view of risk sources and composition, define the strategic risk, strategic risk he considered by the operational risk; asset risk of loss; competitive risks; reputation risk form <sup>[49]</sup>, as shown in Figure 2.11.

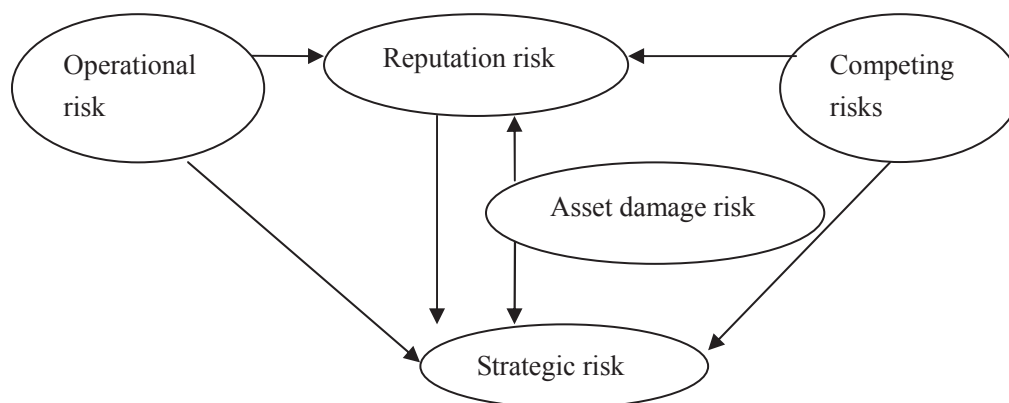


Figure 2.11 Strategic risk sources and composition

Here the financial sector with strategic understanding of risk management theory and research are very different. The study of financial theories, risk is mainly concentrated in the securities; bond market where the market forces to determine the relationship between risk and return and the corporate strategy is difficult in market transactions. So the research foundation is different. Bowman studies suggest negative correlation between risk and return in business, which is high risk and high return and financial markets inconsistent with the principles, he believes these may have the following reasons: a strong or dominant market companies can obtain high profits while maintaining lower risks; corporate decision-making may be the pursuit of risk; there

may be risk-averse; managers can determine the quality of a company's level of risk and return; poorly managed enterprises may take the profit ability of companies to avoid the risk <sup>[13]</sup>.

BAIRD and THOMAS in the analysis of the finance, marketing, psychology, risk management and strategic management theories, Baird made proposed the definition of strategic risk and lots of research methods, which prove that strategic risk is a multi-lateral, multi-features. He divided it into strategic risk and business risk for the industry, the risk that all companies within the industry have to face, strategic risks and factors that determine their own strategic risks <sup>[45]</sup>.

This summarizes the related concept of strategic risk in (Table 2.3). We can see, the concept of strategic risk can not present a unified definition, as the researchers' points of view are different.

Table 2.3 Strategic concept of risk in Table

Time	Representative	The core point of view
70's	Andrews, K	Strategic decision-making risks
2007	Adrian Sly Jaworski	Strategy is risk management
1980	Bowman	Enterprise risk and benefits of negative research
2007	Zhang RongLin, Huo Guoqing	Strategic management process because of strategic behavior of inadequate business suffered huge losses of uncertainty
1985 1999	Janos, Acs H.Lubatkin	Business income subject to fluctuations in the macro-industrial economy and the possibility of loss
2002	Jan Emblesvag	Competition in the market for the organization to achieve its objectives and showing the inevitable risk; strategic risk = probability X impact on the target
1990	Sidney L.Barton	When companies face the uncertainty of bankruptcy, business decision-making when the consequences of the risks faced

#### (1) Types and causes

This table bellow gives the summaries the authors, theories, types and cause of risk in the global perspective.

Table 2.4 Strategic risk theory, table types and causes

Theory and representatives	Types of strategic risk	Causes
INGA SKROMME BAIRD HOWARD THOMAS ( 1985) <sup>[45]</sup>	-Macro-environmental risks; -industry risk; -Organizational risk; -strategy risk; -decision-making risk	Economic, policy and law, technological change, cultural values; industry overall profits, capital intensity, industry life cycle, competitive strength; organization's values, life cycles, structure, incentives, market share, information systems; controllability, consequences uncertainty, organizations; self-confidence, knowledge, personal preferences
INGA SKROMME BAIR Revised and proposed multi-dimensional	Industry risks; enterprise risk	External causes; internal factors: -the risk of bankruptcy, lack of information hinder innovation, entrepreneurship

model of strategic risk system contingency ( 1994) <sup>[50]</sup>		
Winfrey Budd James L. Multi-dimensional model proposed strategic risk ( 1997) <sup>[51]</sup>	Venture; operational risk; competition risk	Strategy and sources of risk between companies and the overall environment, resources, environment and product market conditions between the relationship
Robert Simons; Constitute a theory of strategic risks ( 1999) <sup>[49]</sup>	Operational risk; risk of loss of assets Competitive risks; reputation risk	Core operations, business process unreasonable, manufacturing capacity weakness; financial value, intellectual property and other assets degraded; competitors' strategies, changing customer requirements, vendor pricing and policy changes.
Adrian Slywoztky Proposed composition of the strategic risks ( 2004) <sup>[52]</sup>	Technology update risk, consumer risk, the risk of new business, brand risk, competitive risk, industry economic risk, market risk	Low levels of enterprise technology, customer needs change rapidly, poor product quality, brand management capacity is weak, the competitor's strategy, industry convergence and market growth stagnation
Shigeyuki. Behavioral risk management theory ( 2007) <sup>[53]</sup>	Subjective cognitive biases and limited risk Organization of subjective bias and risk perception ability is very limited	Individual level of psychological bias to judge the risk posed, can be achieved through training and education so that they understand the adverse consequences of prejudice and the need to take responsibility, to avoid weakening or loss; Create a risk assessment model to expose potential bias of the subjective judgments
Yang Jianghua Group Strategic Risk Management System ( 2002) <sup>[7]</sup>	Environmental risks Resource Risk The risk of strategic capability The correctness of the company's theme development strategy	Political, economic, technological, market competition, industry structure and the level of competition; corporate technical resources, business management resources, market resources and financing capabilities; resources into the ability of the mechanism, strategic leadership, management control, technical innovation and new product development capabilities, marketing and market development capabilities
LIU Shengfu (2004) model of strategic risk complex systems [8]	Political,technical, management, organization, credit, markets, resources, operational risk, etc.	Meaning of corporate strategy; company, Strategic Resources; business competitiveness; business leaders; corporate strategic environment
Zhang RongLin Huo Guoqing strategic process risk model (2007) <sup>[54]</sup>	Strategy assuming risk; risk management strategy; strategic dislocation risk; strategy rigid risk	Strategic analysis, corporate vision and level of information; stakeholders in the balance of power between the degree of information symmetry, values recognition and integrity of corporate governance structure; execution, resilience and control; vested interests political losses, economic losses and inertial ways of thinking

According to Table 2.4, the current risk strategy concepts, theories, research methods are not uniform; there are four ways in understanding of strategic risk.

The first is the strategic management of business risks (The risk of strategy). When companies develop, implement some kind of strategy, due to environmental changes, planning errors caused by improper implementation of strategic business goals cannot be achieved or the failure risk. Strategy as a series of specific actions and activities in strategic thinking, development, selection, implementation and control of the whole process, various activities are likely to deviate from the goals resulting in losses, mainly based on the strategic management perspective.

The second is strategic risk (Strategic risk). One representative is James Brian Quinn and Robert Simons study<sup>[49]</sup>, James Brian Quinn noted that the strategic risks affecting the company's direction, corporate culture, information, or corporate performance and viability of the relevant factors. Robert Simon's strategic risks that undermine the ability of managers to implement the original strategy were originally not expected factors or conditions. This view is from the perspective of risk management, business risk, some risk is critical, affecting the overall development of the core business, global strategic risk is called risk, are a class of risk management which has domestic as well as international research in this area.

The third is to use enterprise risk management approach to strategic management. Developing risk strategy, risk management control, to achieve a high degree of risk from a strategic management perspective, strategic management is in a class known as the strategic risk management.

The fourth is a single indicator of the strategic risks. There are foreign companies in the industry and the possibility of the decline in ranking as a strategic risk, the instability of cash flow as a strategic risk. These studies are over simplified but do not reflect the firm's strategic management and risk.

### 2.3.2 Strategic Risk status at home and abroad

#### (1) Strategic management of risk

Ansoff matrix can be used to understand the diversification strategy risk, where the core assumption is that new products and new market development will be fundamental and disproportionately increase corporate risk and the resolution is the main form of risk diversification appropriate to enhance their core competitiveness and diversification.

As for the strategic management, in terms of its strategic management capacity it is often also at risk. Stress management more intelligent, the more they do not want to make mistakes, if they really made a mistake, they will deny, cover up their mistakes, or other more conservative behavior. This is called self-enclosed error<sup>[55]</sup>, Enron and the collapse of WorldCom in 2002 is a case in point.

Managers should focus on strategic thinking. Mintzberg stipulates in his theory, that business managers should be thoughtful thinkers, but through his day to day management activities of the business and manager of research, he found that managers of "fanatical man of action," often lost in the daily management of work at the expense of strategic thinking.

Ian Mitroff and corporate strategy says that the failure of the main risk management is that business managers do not realize the hearts of strategic assumptions. They focused on the management of psychological factors in the analysis. Corporate strategy failed because the strategic assumptions do not met strategy needs to complete. According to the heart of the business managers and strategic understanding of the importance of uncertainty, Mitroff designed the "uncertainty matrix - the importance of" matrix [56], as shown in Figure 2.12.

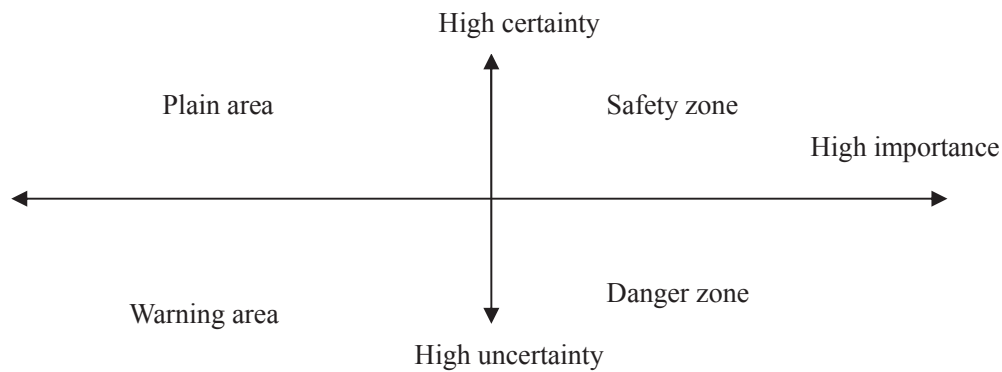


Figure 2.12 *Uncertainty - importance matrix*

Enterprises according to different combinations of importance and uncertainty for scenario planning and strategic design to respond to changes in the external environment risk control.

Strategic success requires attention in four aspects: a simple consistent and long-term goals; deep understanding of the competitive environment; objective evaluation of resources; effective implementation<sup>[57]</sup> (Figure 2.13). From the four areas, to take risks you can effectively control the risk of strategic management.

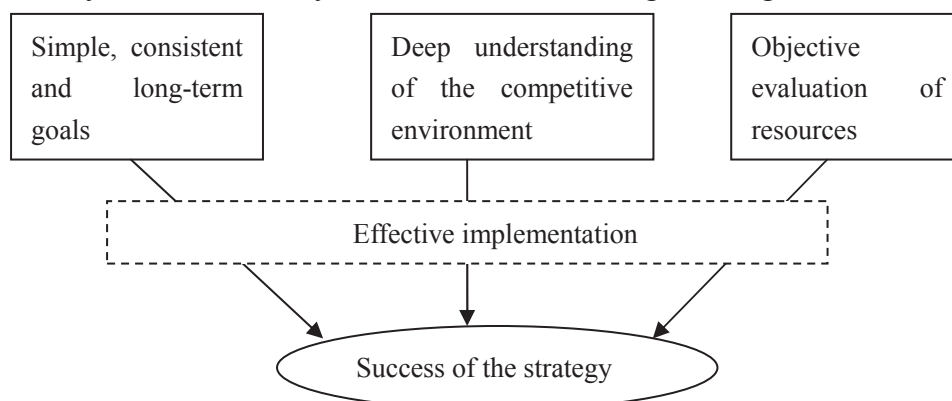


Figure 2.13 Robert strategic risk control model

## (2) Characteristics of strategic risk

Strategic risk is multidimensional. Characteristics of multi-dimensional strategic risks from stakeholder theory Freeman (1984) is the full expression of the different stakeholders of the enterprise's requirements. Risk perception is different from the shareholders in that profit is the biggest risk; otherwise there will be no return. Government considers tax decrease or loss as the greatest risk; employees their job,

remuneration unreasonable strategic risk; and for state-owned enterprises, stable development of enterprises, increase employment, protection of national security is the most important. So in terms of strategic risk as multidimensional, it is imperative to determine a core strategic objectives.

Risk and corporate performance are related. Miller and Bromiley, Wiseman and Bromiley through their study found that corporate income volatility and uncertainty will have a negative impact on business performance, at the same time, Miller and Leiblein found that sometimes the risk of the company's future performance will have a positive effect. In short, the business risk will have an impact on business performance. [58] [59] [60]

Risk-taking behavior and performance levels, Corporate performance and corporate risk-taking behavior exists between the level of the relationship, this relationship by both industry executives and other factors. Generally have such a conclusion, if a company's level of performance below the expected target level, the enterprise will adopt risky behavior, and good business performance will reduce risk-taking behavior.

Governance structure and management of risk preferences For the adventure company, the appropriate corporate governance structure requires decision-makers in the company with equity investments, but the company's equity investment as part of the portfolio, this is a very difficult trade-offs [61].

### 2.3.3 Problems of strategic risk research

Strategic risk research has had 20 years of history, but is not yet widely accepted form of research results, opinions, or competition. This paper summarizes the literature according to the current study based the following questions.

First, the basic concepts related to no uniformity.

Second, it is the emphasis on strategic risk research (Strategic Risk), the lack of strategic management of the risks of the study. According to the literature summary, the literature focused on many business and the relationship between changes in the environment, and too much emphasis on the external environment uncertainty and is not controllable from outside the uncertainties; of these constitute the firm's strategic risk, the strategic management of the enterprise's own study of small risks especially from the strategic analysis, selection, implementation and other aspects of the research process less.

Third, the domestic strategy and risks related to research and study abroad, there is a large gap.

Fourth, the strategic risk measurement methods and models in the applicability of strategic management, practical application of value have many deficiencies. Assumptions and reality differ much, thus losing the real meaning such as macroeconomic fluctuations policy-makers' preferences and subjective probabilities of selection. Strategic risk measurement methods directly affect the result, the concept of risk measurement validity and reliability need to be given more attention, such as the use variance and standard deviation to measure risk feasible? According to a method derived from the linear relationship becomes another method of non-linear relationship, and the researchers did not provide an explanation for the choice of tools to explain.

There is the risk measure from the accounting data to obtain research data may only be a superficial relationship, rather than act as a real business strategy.

Fifth, the manager's strategic decisions and risk attitude measure. Strategic management process of strategic analysis, choice and strategic decisions are difficult to obtain the actual data, what kinds of strategic decisions are risk-chasing type, which are difficult to distinguish between risk aversion.

## 2.4 Chapter Summary

This chapter on strategy and strategic management system, review of relevant literature, combined with the concept of risk and research to determine the strategies studied in this paper, risk and strategic risk of the basic meaning and scope.

Strategy: Research strategy for the research school and has many ideas, some from a different point of view, some based on different stages of historical development. Strategic management is facing many challenges. The strategic management of Chinese enterprises has many problems. Companies can complete the process for the new strategy, it could be any process in the strategic process (due to internal or external), active or forced to adopt new strategies. In short, the firm's strategic management is an ongoing strategy to complete or break the old and adopt new strategies in the process. This process is the direction of the company's vision. the process includes strategic positioning, strategic choice and strategic implementation of specific strategic model shown in Figure 2.14.

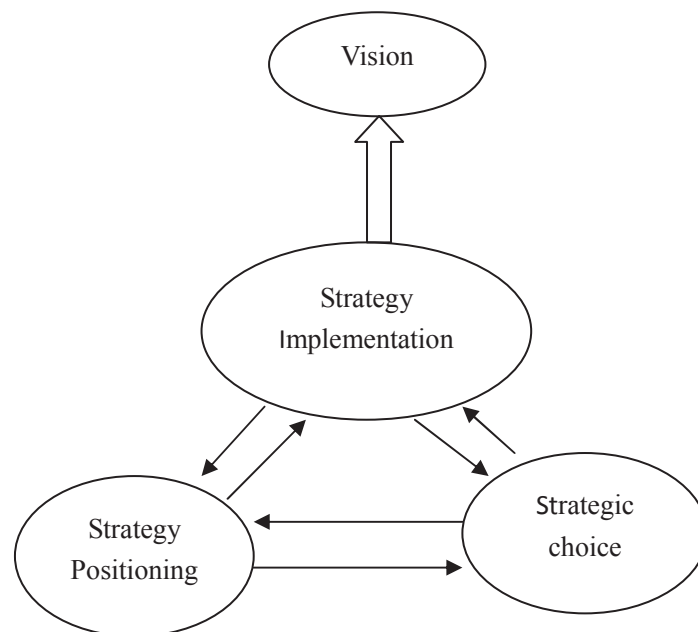


Figure 2.14 vision of strategic management

Risk: the risk of this concept using ISO 31000 "Guidelines for the implementation of risk management principles and the" international standards, as defined in the impact of uncertainty on the target (effect of uncertainty on objectives).

Strategic risk: the strategic management processes of uncertainty. With these

uncertainties, the enterprise strives to achieve strategic objectives and vision impact. Southern Airlines to seize the resources and benefit, they established Henan, Hubei, Hunan, Shenzhen, Hainan, Guangxi, Shantou and Zhuhai branches to seize the five special economic zones of the Pearl River Delta and resources. This phase of the Chinese air transport market is a seller's market, but also the golden age of airline profitability, so the enterprises concerned the only strategy to occupy the site, staking their claims.

Competition-promoting true strategic management: 1998-2009:

Southeast Asian financial crisis, the rapid growth of capacity, price competition and other factors led to a comprehensive air transport industry losses of China. This was time to start thinking about business development and corporate survival strategies. In 2001, Hainan Airlines Group to develop a true sense of the origins of the development strategy in 2002, China Southern Airlines Company hired Roland Berger for Strategy formulation and development which led to a true strategic air transport enterprise management consciousness.

However, all airlines developed strategies at the same time. Airlines have emerged between the strategic positioning strategy similar to the target close to the characteristics of strategic homogeneity and international insufficient consideration. Strategic issues at this stage focus on the airlines flying point to point, interested in a price war, ignoring technical and personnel training, lack of strategy and strategic ambiguity. For example, in network-based Shenzhen Airlines low-cost and regional aviation modeled on three strategic is ambiguity.

After 2009: International and air power.

Aviation Administration, the Civil Aviation Secretary, summary of the General Assembly meeting in 2009, presented by the civil power to a Civil Aviation of China's power development strategy. While focusing on international strategy to participate in global competition and cooperation, the future of China's civil aviation competition is global and enterprises are facing greater risk strategy.

Composition of the airline market, the current pattern of China Airlines' four two small ", and Air China, China Eastern Airlines, China Southern Airlines, Hainan Airlines are four major airlines, Shanghai Airlines and Shenzhen Airlines two small companies, of which four major airlines China accounted for 90% of the market share, and there are some small private airlines, such as Spring, good luck and so on.

## Chapter 3 Air Transport Industry and Strategic Risk Generation

### Mechanism

In this paper, the main body of the enterprise is focusing on complex and changing business environment, how to maintain everlasting, and sustainable management of sustainable development, corporate strategy of how to successfully manage control the strategic management process when risks arises. Business economics and management theory is the study of contemporary blend with each other one of the most successful branch of a large number of business enterprises that generate theoretical research on root growth boundary, development of power, operation mechanism, in-depth study, but most studies are focused on how to obtain and maintain competitive advantage and to ensure the survival and sustainable development. But the life of China's enterprises and foreign companies' development more shorter companies need to focus on strategic management to develop their own capacity and the need to study it. Many factors affect survival, strategic management is one of the most important factors; there some strategic failures of the enterprise which also operating as usual. Strategic risk management is how to generate it.

This chapter will be based on the development of air transport enterprises. This chapter for the generation mechanism of corporate strategic risk research strategy is based on two perspectives of risk, a business strategy based on the risk management process and the other is based on the business risk of running processes, as shown in Figure 3.1.

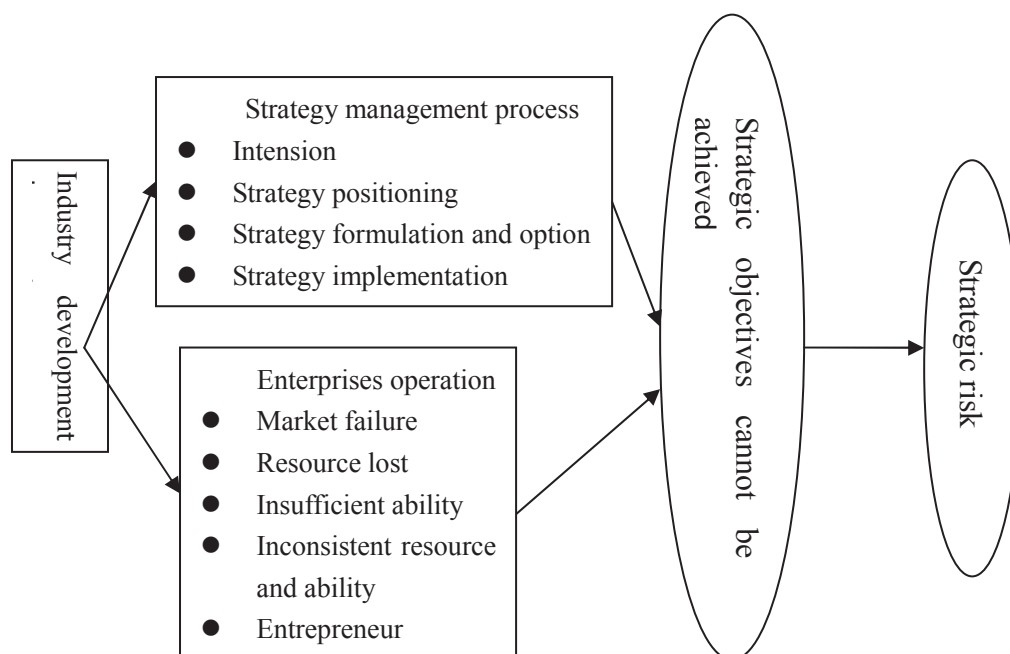


Figure 3.1 Generation mechanism (model) of strategic risk analysis

### 3.1 Types of Air Transportation risks

Air transport industry is based on capital, labor, and technology-intensive features. The aviation industry itself is a full of risks and uncertainties of the industry especially for the past 10 years. With globalization, rapid change of information and technology, global aviation industry has experienced a severe test on the one hand the uncertainty of global economic development, crude oil price volatility, global trade protectionism, H1N1 flu, the pressure of environmental protection and safety and other uncontrollable events increase the risk of aviation industry. On the other hand, as technology advances, airlines from the operation, management and other aspects of risk control, risk management, the aviation industry and aviation business development has become a top priority.

New security policies, fluctuations in fuel prices, rising costs, the consumer changes, the frequency of incidents have become so frequent airlines face major risks, these risks are seriously eroding the profits of airline companies and even the bankruptcy of the enterprise. Some airlines rely on insurance to manage risk, but insurance is limited, the insurance can only cover natural disasters, security incidents and other risks, for business operations, strategic risk is not useful. Even for such as earthquakes flight safety insurance but the event a greater impact on the company as a whole is not simply through the insurance to hedge.

In order to more accurately quantify the risk of the air transport industry in 2006, the U.S. Federal Aviation Administration (FAA) according to Arnold Barnett's research results, using a new risk index of air transport; the risks associated with index per flight hour for evaluation prior to overcome system defects.

For the airlines concerned, only the risk management and corporate strategy, corporate goals, implementation of a comprehensive risk management in order to really respond to and use of risk, financial risk management in the enterprise business processes, strategy development and decision-making process<sup>[63]</sup>. Kichisaburo proposed model is as follows:

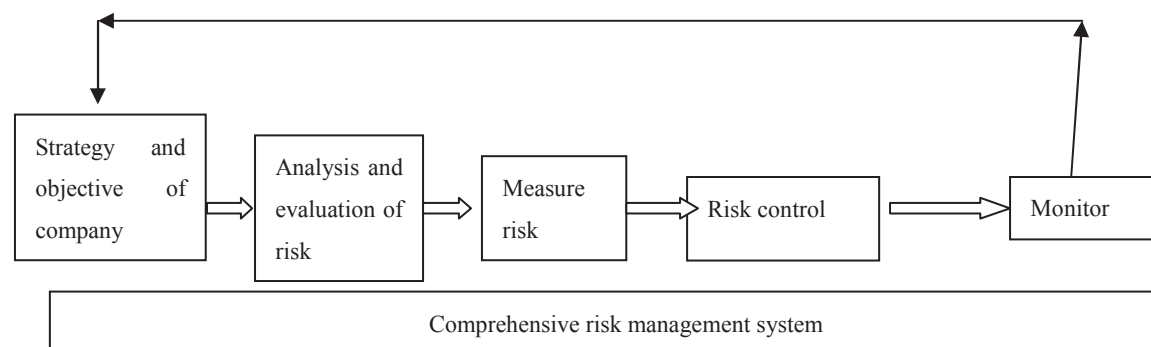


Figure 3.2 Risk strategy model of the aviation industry proposed by Kichisaburo

The airline industry form its own characteristics and features of the framework is based on four types of risk (strategic risk, financial risk, disaster risk and operational risk), Kichisaburo Nomura from the company's internal and external environment on

the distinction between risk, and he made between risk interaction and linkage. As the airline's flight operations at high risk of terrorist activity as an important aviation special risks, belong to the same range of internal and external environment can also be seen as a disaster risk, operational risk can also be seen, the occurrence of terrorist activities can affect the airline's brand (inadequate control of terrorist activities), but also seriously affect the airline's performance (cause customers to reduce, control costs, aircraft damage, etc.)

Thus, a complete risk classification model for airlines is very important, as shown in Figure 3.3.

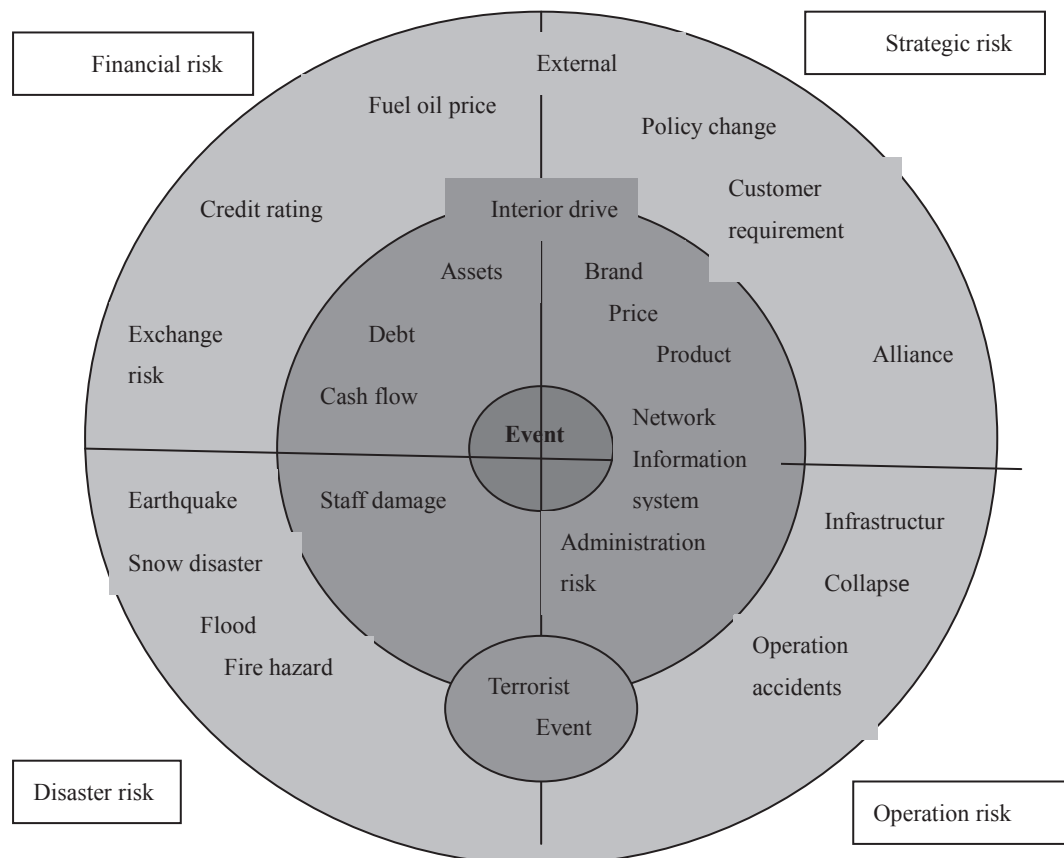


Figure 3.3 Aviation risk classification

The model from the strategic risks, internal and external drives starting at two levels, the risk of the airline were classified in the risk management based on the complexity and long-term, combined with the concept of enterprise risk management, Kichisaburo Nomura advocate risk management into the strategic level corporate executives.

From a strategic management perspective, Figure 3.4 only presents a risk management framework from a strategic point of view, risk classification is too rough, the implementation of the program is not clear, more importantly, the study is only based on All Nippon Airway's research, but not considers other types of airlines. For example, the risk of long-term, aircraft orders often lasted 7 years, thus increasing the risk of larger and more, in fact, in the country, aircraft by leasing, cooperation, etc., first

obtain the right to use. At the same time, such as jet fuel for airlines, routes, policies and other important risks, he did not analyze and explain.

Kichisaburo Nomura risk classification and the airline management is based on a single airline, but also the sources of risk does not provide an explanation, Oliver Wyman broke through the above scope of the study<sup>[64]</sup>, starting from the Asian aviation market, through the airline executive interviews, surveys and expert visits, etc., have been four main risks facing the airlines, as shown in Figure 3.4.

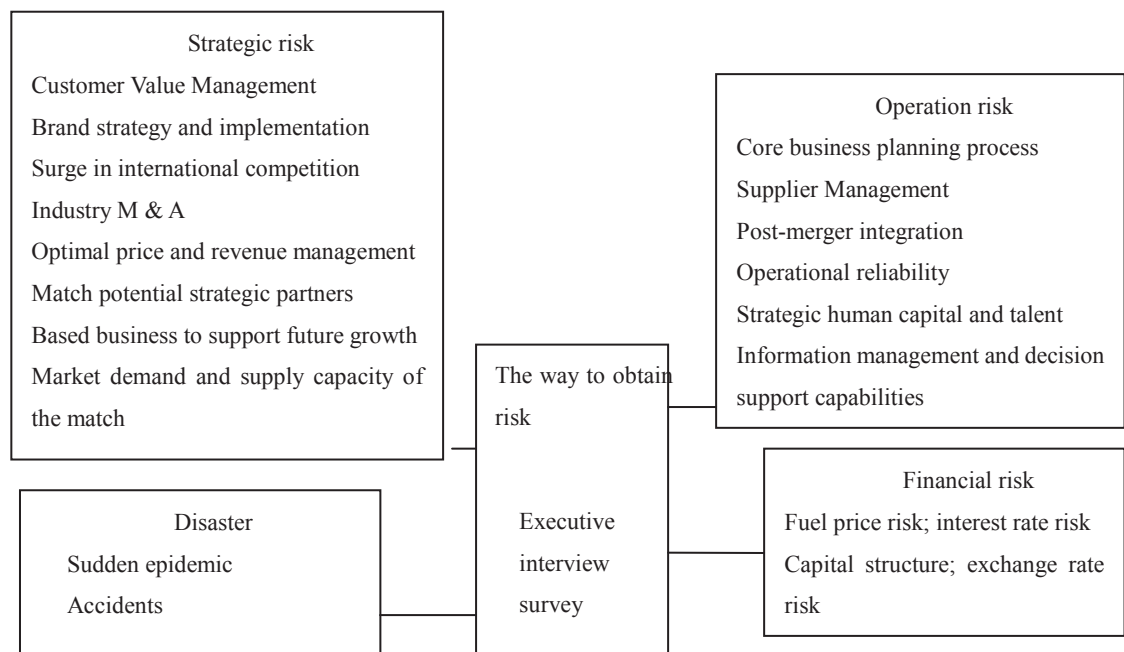


Figure 3.4 The main types of risk faced by airlines

From the systemic risk perspective, the risk can be divided into systematic risk and non-systematic risk. For many airlines empirical studies have focused on systemic risk, such as Yuan Chuang, who used three time-varying model (The Schwert and Seguin model; The Multivariate GARCH models; Kalman Filter Algorithm model) and the traditional asset pricing model (CAPM)<sup>[65]</sup>, for the nine selected capital market systematic risk estimates airlines and research, as shown in Figure 3.5.

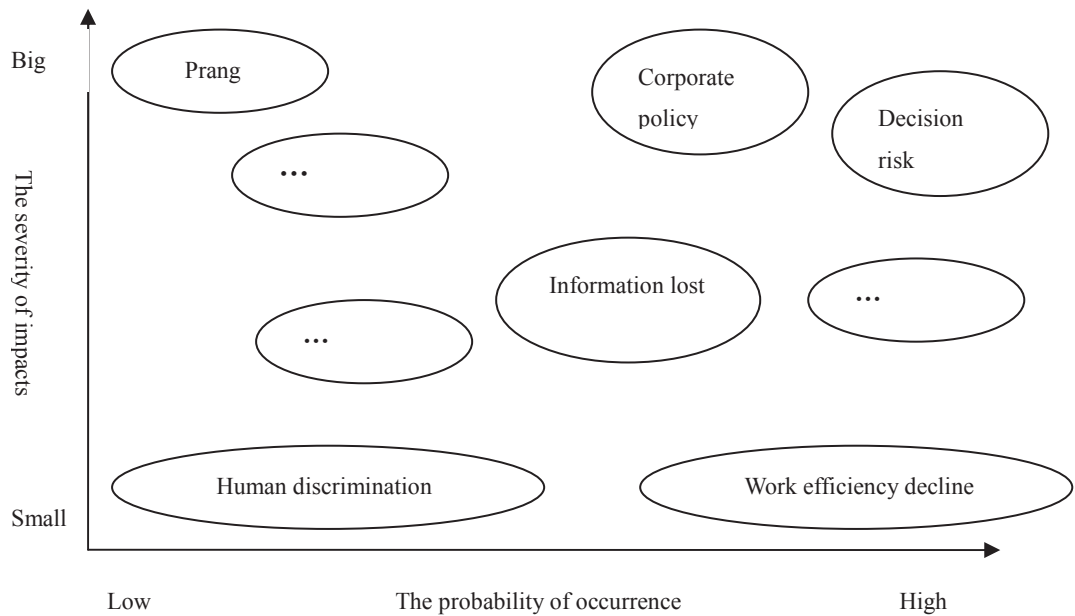


Figure 3.5 Probability and extent of airline risk

Current enterprise risk management has been integrated into the enterprise (or called integrated) risk management, require an integrated management system to identify, quantify the business risks and its potential impact analysis by considering the human resource, organizational structure, technology and other factors to develop and implement a comprehensive risk management programs to achieve maximum business value. Relative to the development of enterprise risk management, air transport enterprise risk management from a practical and theoretical research on a certain level of delay, the current air transport enterprises mostly are for catastrophic risk management, accident and flight safety risk management, also may be due to the impact of such risks involved in air transport companies too big and too much energy.

### 3.2 The Development and Strategic Air Transportation Industry

Air transport industry is a global, high tech, dynamic growth industry. Air transport industry through a unique network to people around the world, cultures and different countries together further promote the development of globalization. The world's economic, social and cultural development play particularly important role in promoting economic growth. That is world trade, international investment and tourism. In recent years as technology advances and advances in the management of air operations, aviation occupation of land, air pollution and so on gradually improving. As a dynamic industry, air transport companies must master the rapidly respond to market changes, structural adjustment and constantly changing operating environments, from an international perspective, international aviation is now an important part of the economy and society, with economic development, social and the natural environment interaction and coordinated development. After rapid development over the past forty years, air transport industry has experienced a severe economic crisis, technological

innovation, terrorism, spread of disease, social change and other challenges, has become a more mature industry. In the 21st century, low-cost operations, global alliances, mergers and restructuring of international civil aviation industry of the three main trends <sup>[62]</sup>.

Air transport industry is vulnerable to Economic crisis it faces, infectious disease (SARS, H1N1), war, oil price fluctuations, terrorist attacks, environmental protection and other challenges and threats, each occurrence of events such as these are on the air transport industry have a huge impact.

Because a significant risk exists, the air transport industry as a low return on investment of the industry, airlines in terms of the current, optimization, capacity, cost and respond to change is key issue. From a global and long-term point of view, the air transport industry is not only not a profitable industry, the industry is also ultra-complex, and its complexity is reflected in Figure 3.6.

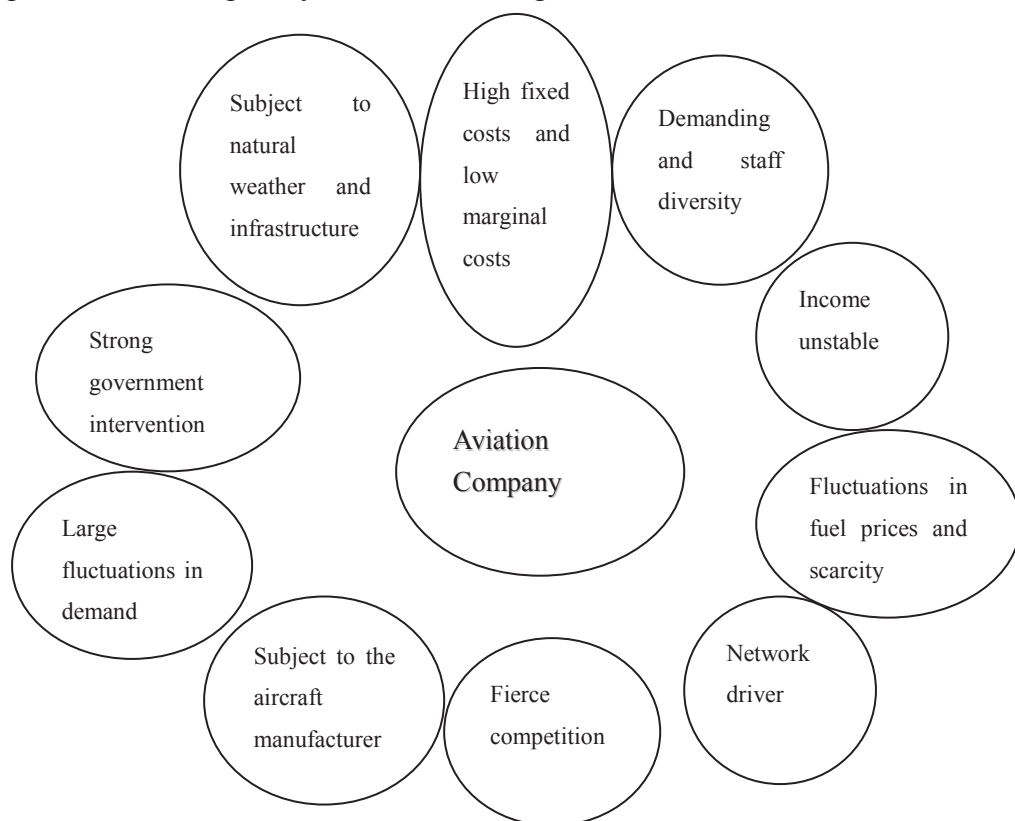


Figure 3.6 Complexities faced by airlines

Thus, from an economic point of view attributes, several of the air transports industry with the following properties: high fixed costs and low marginal costs; capital, fuel and high-technology intensive; environmental sensitivity; income vulnerability. These properties are determined by the air transport of high risk.

### 3.2.1 The air transport industry

According to the history of international aviation industry, the evolution of the air transport industry is divided into four stages, as shown in Table 3.1.

Table 3.1 Course of the evolution of the air transport industry

Year	phase	Feature
1990	Phase 4	Networks and alliances: merger phase, the importance of the airport, world-wide alliance systems, network management, low-cost airlines
1973	Phase 3	Quality and cost: deregulation, open skies, a new fare structure, new types of services, with new business, new entrants, cost efficiency, hub
World war II	Phase 2	Politics: the rapid development of international air transport regulation standards, bilateral agreements between countries, economic strength, route network
1926	Phase 1	Technology: a dangerous mode of transport, no airline profitability, supply-side business model

When the air transport industry to enter the fourth stage, increased competition, networks and alliances to become the main features of air transport, airlines world-wide competition through mergers and alliances system to be controlled, and these systems but also more and more alliances low-cost airlines and independent regional airline or a specific, yet the State-owned airline deregulation attack, so at this stage, different business models will come with a different perspective of strategic management model.

From the U.S. air transport industry in the development process (Figure 3.7), we can see, after several stages of development, competition between airlines has turned into the competition between the Union and the Union <sup>[66]</sup>.

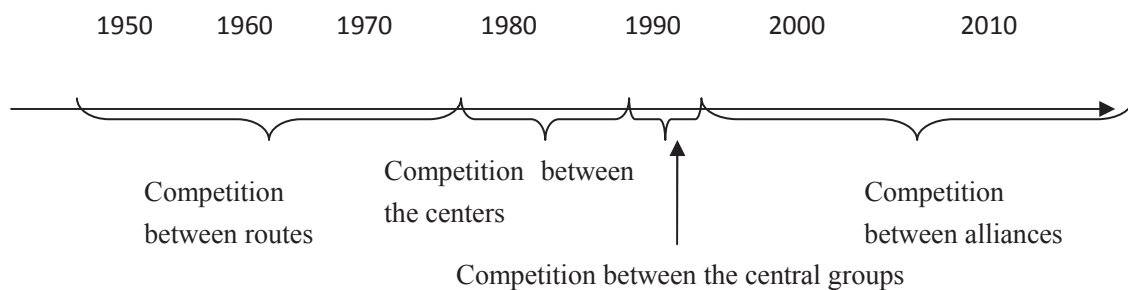


Figure 3.7 The development process of the U.S. air transport industry

From the business model point of view, the current passenger air transport on the four main traditional business models: network-based airlines, charter airlines, regional airlines and low-cost airlines.

Network-based airline's goal is to provide a complete service chain global air transport network, and network with extensive coverage all over the world, lounge with seamless customer care. Trunk, or at least control a hub airline hub, and at least a major global airline alliance members, the strategic success factors is the hub of operations management, alliance management and the management of complex cross-company network, the hub can be seen as a huge investment in its strategic resource. Hub to a variety of network economy (economies of scale, economies of scope and density economies) effects to play. The world's major airlines, such as Lufthansa, Air France,

etc., these are the typical Internet-based company, involving the alliance, including Sky Team, One world and Star Alliance.

In a sense, a regional airline can not be self-contained type, because they are often the backbone of the airline through an agreement with the collaboration, as well as the league's regional airline routes airlines offer similar services, but more and more regional airline began service in their own point to point routes, and operate their own regional hub. For such companies, define, develop, control and protection of the ability to become a niche market strategy for success. Such as, the domestic Sichuan Airlines, Shandong Airlines, etc.

LCC (Low Cost Carrier, LCC) is an important carrier type, the idea began in the United States, with the international community such as the U.S. Southwest Airlines, Ryanair of Ireland, the UK success of JetBlue, Asia emerged, such as Tiger Airways, Singapore Valuair low-cost airlines, China's Spring Airlines also operates well. The success of low-cost airline raised its full range of theorists, the main features of this model is to completely abandon the use of network effects, often from one major airport to start operations, point to point only to serve the route. For low-cost airline, how to find and keep costs low is its strategic success. From the domestic point of view, the key elements of low-cost airline, including: short-haul routes, no frills service, minimize debt service costs, standardization of the model, low-cost second-tier airports, cautious route expansion and electronic set voting systems. But not all low-cost airline are using the same model, so for low-cost airline, there is no best standard.

From a strategic management analysis, low-cost airline's strategy has three main elements of success: low-cost operations, positioning and simple product <sup>[67]</sup>, as shown in Figure 3.8.

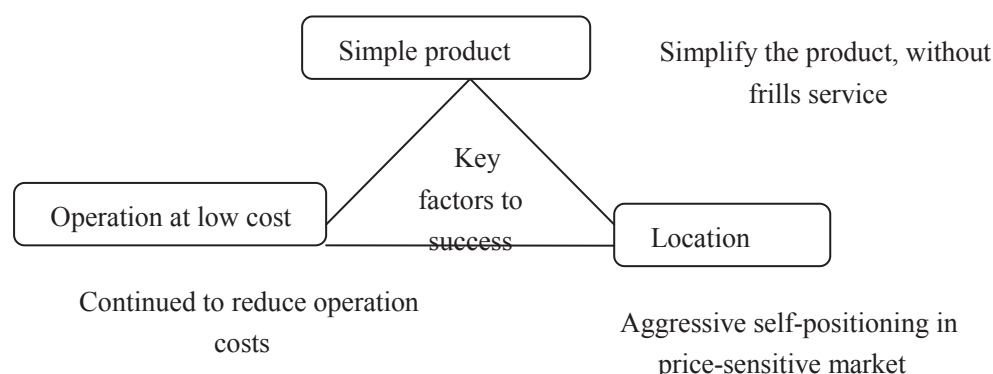


Figure 3.8 Low-cost airline's strategic triangle

On this basis, the different products in simple low-cost airlines, low cost operation and positioning of a three-pronged offensive operation, so as to achieve low-cost strategic objectives.

As mentioned earlier, low-cost airline strategy does not have a uniform standard, airlines are often based on different geographical, cultural, national, etc., and on the low-cost operations are also different. Low-cost airlines are generally seen as providing no frills service or discount airlines, such as airlines offer low fares but eliminates all unnecessary services.

Compared to low-cost airlines in Europe and America, Southeast Asia has better low-cost environment<sup>[68]</sup>. First of all, the Asian population of 3.8 billion, Asia's flight distance between cities in 3 to 4 hours; Secondly, the Asian economy continues to develop, the result of economic development is to satisfy the regional civil aviation market growing passenger base. Third, the level of education has been improving in Asia, cultural exchanges and tourism and leisure development will be a further driver of aviation. Overall, there are two types of low-cost Asian airlines, one is the secondary market, such as business aviation birds to avoid competition with the trunk air; second is like Valuair, concentrated in high-cost airport, but located in the price-sensitive customers. From a market share point of view, the European Air Express Ryanair and easy to take Europe on a regular basis 80% of the market share of low-cost, low-cost U.S. Southwest U.S. market accounted for 50% market share, while China continued as the overall market is still in the stage of dynamic development , is represented by low-cost airline Spring Airlines.

At present, similar to the U.S. low-cost airlines such as Southwest Airlines, the world has more than 60, a total of more than 1,200 aircraft have spread throughout Asia, the Americas, Europe, Oceania and other global markets. In the U.S., it is estimated that 70% of low-cost airline routes exist competitors, low-cost airlines in the U.S. market share in recent years has risen to 30%; in Europe, low-cost aviation market by the first planes Now more than enough to dominate the full, its market share accounted for nearly 30%; in Asia, the sudden emergence of low cost airlines in recent years, the end of 2009, low-cost airline Air Asia market will account for 12% of available seats sold, 2010 is expected to reach 20% of the share. Charter airlines must rely on the success factors, including cost efficiency, the integration of operations management, product development and promotion of the tourism operators. In China, the charter airline business is a variety of other types of carriers are divided.

Although in theory can be divided into four types of airlines, but in practice, the boundaries between the four types has become increasingly blurred. Cost as a concept by many other types of carriers used, and the charter airline business has been carved up by various types of airlines, charter airlines simply gradually lost its meaning. Another regional airline business model has been some limitations in the domestic and regional airline companies gradually become part of large networks. Four types of air transport companies on the market constitute the overall competition participants, their market characteristics and positioning can be seen from Figure 3.9.

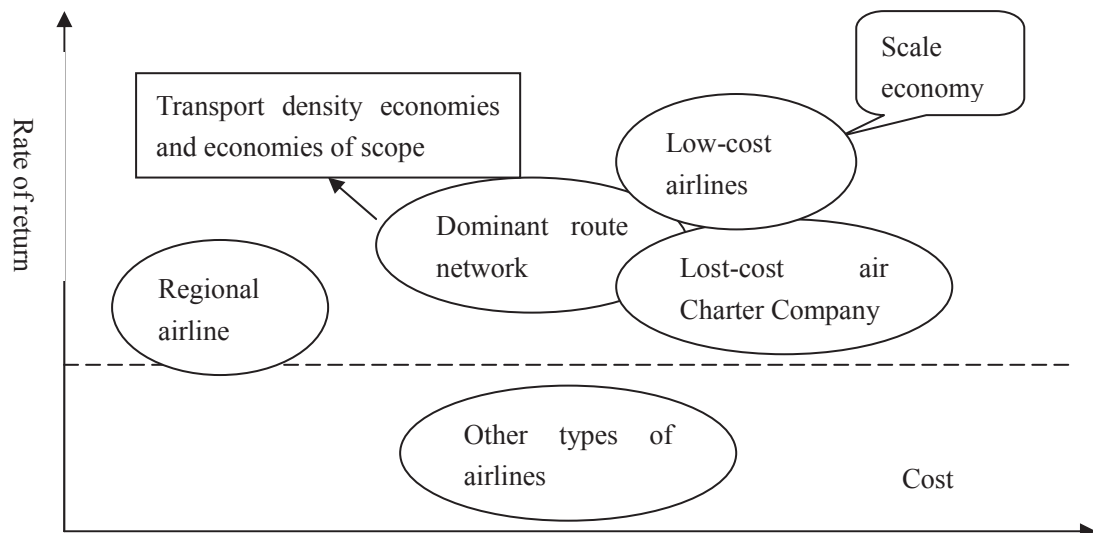


Figure 3.9 Airline type

With the large network airlines to reduce costs adjustment of product supply, low-cost airlines seek differentiation strategy, business model may be both a strategic point in the overlap, leading to large-scale network-based airlines and low cost airlines the direct competition. Such as Lufthansa's setting up their own low-cost Operations Lufthansa / Eruowings-Germanwings.

### 3.2.2 The strategic course of the domestic airline

The development of Chinese civil aviation in the 1980s mainly was a watershed, not before the concept of civil aviation, the military part of the basic system (Air Force CAA) monopoly. March 5, 1980, China's civil aviation from the Air Force, Department of State ownership, and began the road of China's civil aviation enterprise, China's strategic development of civil aviation enterprises started this.

1980-1990: the beginning of an enterprise

Although the enterprise began more than development, but corporate strategy is based on the instructions of higher authorities, such as when the "Plan" and the "Plan" program, so this phase of the Chinese civil aviation enterprises do not own strategic autonomy, market, personnel, planning, control by the competent authorities.

1990-1998: competition began staking their claims

As China's aviation market was a blank, so air transport enterprise began to seize airline routes as resources, due to the unique route resource characteristics, in an empty market, as long as it is the first to have Air

### 3.3 Strategic Risk Management Process in the Generation Mechanism

From the dynamic sense, strategic management is a dynamic process. This paper will be summarized in strategic positioning, strategic choice and strategic implementation.

These three parts are a strategic cycle. When the same assumptions, or within a specific time and space, these three form part of the successful implementation of corporate strategic goals, thus contributing to the success of the enterprise, but there is a link error has caused the failure of this cycle, thus resulting in overall strategic objectives can't be achieved.

Error analysis will be a direct result of the positioning error of strategic corporate form, the formulation of a wrong strategy for implementation is bound to deviate from the strategic goals, which speak of the control strategy, so this is a cycle of three areas, but also affect each other on a single cycle in terms of success or failure of strategic analysis is the starting point for strategic management, these four areas will form a short-board effect, that is, its effect determined by the worst part. From a strategic management in the process of a problem, with any one step will have a corporate strategic risk.

On the current status of Chinese enterprises strategic management point of view, more risk arises from the strategic positioning and business strategy development process, not appropriate, accurate and strategic positioning will lead to the development of a deviation from the direction of the strategy. In practice, many companies are often guilty of a strategic positioning error is asymmetric thinking, that is dynamic, look at the development of their own, static, unchanging view of the opponent, rather than from the perspective of each game to develop strategy. Some companies make in a certain period of time into the world top 500, catch up with rivals, proposed to improve market share, which is a dynamic view of their static thinking opponents. Such as strategic positioning is bound to deviate from the direction to develop a strategy to give business bring strategic risks.

The positioning of strategic management, development and implementation of the three phases are interdependent, mutual restraint, not isolation. Some companies develop a strategy has not been implemented, the success of strategic positioning and strategic choice does not guarantee the smooth implementation of the strategy, successful implementation of the strategy must be based on objective and accurate strategic positioning and strategic choice.

This part of the content from the strategic management, strategic positioning, strategy formation and implementation of the strategy have four stages of the mechanism of strategic risk analysis.

### 3.3.1 The meaning of corporate strategy and corporate strategic risk

Meaning of corporate strategy is the basic understanding of corporate strategy, strategic content mentioned in this article mainly refers to the basic understanding of corporate strategy, corporate vision, the connotation of a clear understanding of corporate strategy will result in the failure of corporate strategy, will not to achieve corporate strategic objectives, therefore, is strategic risk analysis of business generated by the primary problem.

#### (1) Understanding of corporate strategy and corporate strategic risk

Based on this literature review part of the strategy and the theory of analysis, this

paper argues, different historical periods, different national and industrial environment, different perspectives will have a large number of schools, but the understanding of corporate strategy, but has a basic principle understanding that if ignored these principles understanding of the failure of corporate strategy is not inevitable.

The practicality and fashion business strategy. This has a number of companies, they are advocating strategic management, strategic experts hired to develop strategies for the enterprise, or their cost to build their own business strategy, the result is shelved, they believe the use of strategic management is a fashion, rather than on their own management needs, there is no demand from starting their own businesses. Around 2000 as the rise of domestic ERP boom, many companies are not required ERP, but because we are in the ERP, is a kind of fashion. Therefore, to grasp the usefulness of corporate strategy is very important, otherwise it will cause a failure of corporate strategy.

We should understanding of the nature of corporate strategy. This article focuses on corporate strategy that is dynamic and relative, because the business environment changes faster and faster, more complex, business strategy is not static, according to philosophical point of view, corporate strategy change is inevitable, rest is relative. Another essential point is the relative nature of corporate strategy, business strategy and success is a specific environment and conditions, there is no absolute standard of successful strategies and success, the success of the strategy are relative to certain resources, capacity, environment and other conditions. Recognized as the key to Paul, corporate strategy is the essence of breakthrough innovation and self-doubt <sup>[69]</sup>.

## (2)Corporate vision and corporate strategic risk

According to previous literature review, although the researchers on the study of corporate vision, knowledge and theories are controversial, vision is the most abused and least understood man one of the terms, the paper that the corporate vision for business success and corporate strategic goals are very important, but also that the corporate vision is to form long-term accumulation of business, corporate culture is an important manifestation of this paper is to give the definition of corporate vision: the root cause of existence of the business. This article supports the *Built to Last* <sup>[70]</sup> findings, the most durable and most successful companies is that they save the basic characteristics of a core concept, while stimulating progress, in addition to the core concept of positive change than any other thing.

The process of determining corporate vision is often caused by an overall corporate direction, change the path of development, so that an enterprise strategic change, corporate vision is to develop the premise of corporate strategic objectives, strategic program development and selection of the basis on which enterprise distribution resource base, therefore, a mistake, gorgeous false corporate vision will lead to the development of businesses to choose the wrong direction, or lack of motivation in the development, which will inevitably produce a corporate strategic risks. Vision is usually found in the strategic risk as core values, core mission, goals and prospects described in Figure 3.10.

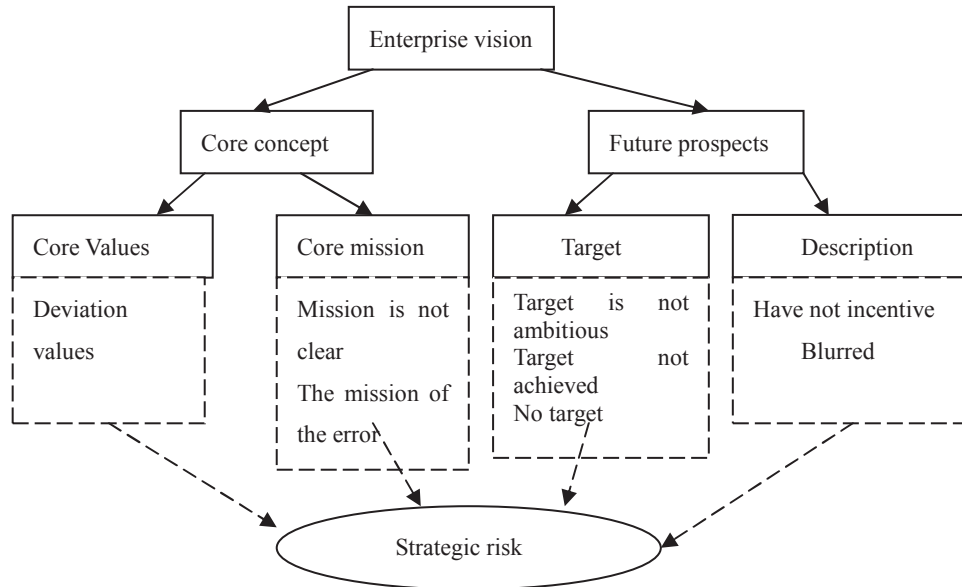


Figure 3.10 Vision and Strategic Risk

In practice, many companies have the wrong core value such as Sanlu Group executives to maximize the economic benefits for a small number of core values, core value of the error bound to lead to the destruction of business; corporate raison is not clear, so there is no development of business objectives and direction, no way to formulate development strategies. Similarly, the lack of realistic goal or not companies will lose the momentum of development, not by the motivation of employees, no hope, enterprise development is even more impossible.

### 3.3.2 Strategic positioning and business strategy risk

#### (1) Strategic assumptions and risks of corporate strategy

People's understanding of reality is constituted by a variety of assumptions, assuming that the decision cognition, cognitive influence decision-making and action. "Balanced Scorecard - Translating Strategy into Action" <sup>[71]</sup>, mentions that "strategy is a set of assumptions about causation." When we take low-cost strategy, we assume that low-cost easy to bring more customers; we adopt differentiation strategy, we will assume that the differences we have formed a unique competitive advantage. Therefore, the strategic assumptions for the role of corporate strategy and development are most important.

Some companies spend a lot of manpower, financial and material resources to develop corporate strategy and found that the development of the strategy can't be implemented, or implemented after the discovery, development strategy based on false assumptions, therefore, for a business, corporate strategy, strategic assumptions first and most important step. For example, in a house built on the land, the most important strategic assumption is that the geological structure of the land and the location and facing floods and other disasters, it would be strong house, and then the design is pretty useless. Argyris assumption of ignoring a warning: There is nothing to hide potentially

more dangerous assumption<sup>[72]</sup> Similarly, the management guru Peter Drucker said that the traditional assumptions about management science is no longer valid in the new times and new circumstances require new strategies proposed hypothesis<sup>[73]</sup>. Professor Paul items, the company's strategic assumptions include the external environment, mission objectives, the internal strength of the three scenarios<sup>[69]</sup>, this will be the basis in the literature review is divided into three strategic assumptions: enterprise value assumptions, assumptions and strategic theory strategic environment assumptions.

#### □Assumption of corporate values

This assumption corporate values mentioned here primarily refers to values, in practice, refers to assume that the value of the base, mainly companies in maximizing their own interests, social value maximization, maximizing shareholder value orientation conducted choice. The values of general business and the type of business, such as domestic enterprises, state-owned enterprises to maximize the value assumptions are based on national interests, but can not maximize their own economic interests; private enterprise values generally assume that shareholder value is the maximum technology, taking into account the social and national values. Therefore, this view is that corporate values are a function, is based on the stakeholder theory based on the value function. Namely:

Enterprise Value = F (their own value, social value, shareholder value, national interests, and other stakeholders)

Assumption is that the values of a business enterprise value function definitions and assumptions, to Air China, for example, the basic assumption is that corporate values, and to maximize the core national interests, both customers and their own value, so as to ensure the country's political and social needs, while meeting the needs of the community and customers.

Unreasonable to assume that corporate values, corporate values, assumptions or errors will result in fatal injuries businesses to maximize shareholder value at the same time, if the expense of social responsibility and interests, such as corporate values will assume the risk of corporate reputation and image of the damage suffered, thereby losing customers and profits, not to mention shareholder value.

#### □Assumption of firm boundaries

There are three different companies to extend the boundary orientation: vertical, horizontal and overall. Vertical boundaries of the enterprise engaged in the activities of an enterprise and its own from the market to buy companies on the professional scope of activities. Lateral boundaries of an enterprise business services market size. The overall boundaries of an enterprise in its competitive set a range of different businesses. Different stages of strategic management theory of the three different boundaries have different degree of attention and research focus. For example, the Boston Consulting Group in the 1960s, the learning curve and market growth companies highlighted the importance of the lateral boundaries, while others include the growth share matrix, the organization's formal planning model is the overall performance of the enterprise boundaries, and the emerging network organization Virtual enterprises are prominent vertical boundaries of the enterprise.

The success of corporate strategy corporate boundaries must be assumed, otherwise

the business market is unlimited, no allocation of corporate resources. Suppose a certain firm boundaries and their own capacity, resources, markets combined, only for the border, no more borders. In this sense, the blind expansion of some company mergers and acquisitions of domestic enterprises do not set boundaries, big blind, made the Fortune 500 and other objectives, these are the companies do not assume that the performance of the border, the risk is significant.

#### □ Strategic theory assumptions

Based on the literature review part of the review of strategic management theory, we find that the field of strategic management theory has many schools, most notably to the number of Mintzberg's ten schools of strategic management summary, through analysis we know that each theory has The basic assumptions in order to Andrews as the representative of the design school, to plan represented by Ansoff to Porter on behalf of school and the school is based on the rational position of strategic management theory under the assumption that, while the other seven kinds of schools are non- under the assumption of rational theory. Strategy is both realistic and theoretical assumptions, but also is independent of us.

Practice in corporate strategy will be summarized and concluded as a strategic theory, a company's strategy will form the theoretical assumption that the process of strategic management assumptions. As Professor Paul mentioned in item<sup>[69]</sup>, strategic theory has a strong background space-time dependence, that the firm's strategic management is based on a specific time and space, basic assumptions, the loss of a theoretical background assumptions, corporate strategy must be a failure or a failure. For example, because the 21st century, accelerating climate change and increased uncertainty, rational-if analysis would be meaningless, not to guide corporate strategy development, and replaced by a dynamic uncertainty and complexity.

#### □ Strategic environment assumptions

Strategic environment assumption is that the living environment of the enterprise's basic assumption is that the enterprises to develop the basic strategy, assuming that the digital photography industry, digital direction, then the business will have to develop a strategic rejection of traditional film. Peter Drucker proposed based on social and political dimensions of corporate strategy is based on assumptions developed countries increasingly low birth rate, the distribution of disposable income, changes in the definition of performance, global competitiveness and economic globalization and political split on more inconsistent. Lack of assumptions on the environment, corporate strategy will result in failure and death<sup>[73]</sup>.

Such as the development of Lenovo in 2001, when the three-year strategic plan, the implicit assumption is that a strategic environment: When the PC market, Lenovo achieved 30% market share, simply in the difficulty of the further development of the PC market will be bigger, more harm than good; To further maintain the rapid development, or diversification, or international; Lenovo's position in the PC market has been relatively stable. In these assumptions, the association developed a diversification strategy of development in many fields, and later the implementation of international strategy. If the strategic assumptions on the error, then the business risks facing the most serious, TCL is the failure of international strategy from the

business-to-market assumptions wrong.

## (2) Environmental Analysis and Assessment

Strategic positioning process is another important aspect is the environment where the business analysis and assessment, correct, dynamic, appropriate analysis and evaluation of business environment is a prerequisite for accurate positioning of corporate strategy, where the business environment, including survival of the natural environment, competition environment, political environment, social environment and so on. With globalization and information network technology advances, companies are more vulnerable to external influences, and sometimes external changes will bring a crisis of survival. Therefore, enterprises in strategic positioning, the need to properly assess the business environment affected the scope and extent. To China Eastern Airlines, for example, companies need to analyze and assess the external environment labor environment, oil trends, national stability, IT technology applications in the airline, natural disasters and limit carbon emissions. Therefore, a comprehensive, appropriate and dynamic analysis and evaluation environment can effectively help companies make strategic positioning; otherwise it will bring strategic risks.

## (3) Analysis and assessment of their own

"Know thyself, know yourself" is the important idea of war in ancient China, one of the enterprises concerned, need to fully understand the environment, but to our own clear and objective understanding, that is, the ability of the enterprise's own resources, stage of development, etc. a clear analysis and evaluation. The main factors of their own assessment have human resources, products, markets, strategic capabilities, core competencies, with the resources. Mistake, not an objective analysis will bring strategic positioning not allowed, thereby giving rise to the risk of corporate strategy. Meanwhile, the dynamic is very important to assess their own, of course, but also dynamic evaluation of the environment. Corporate life cycle theory is about the different stages of business development, different stages of development require different strategic positioning.

The mid-1970s, Yale University, Kimberly and Miller Sili use of biological analogies put forward the concept of organizational life cycle, have to go through that organization, growth, decline, and then either recover or disappear. Organizational life cycle concept proposed for the subsequent generation of corporate life cycle theory laid the foundation. Ichak Adizes is the enterprise life-cycle theory for the widely recognized researchers, their research into corporate life cycle theory of the formation of the mark, he's from the corporate life cycle analysis of the various stages of business growth and aging the nature and characteristics of the life cycle consists of three stages ten stages: growth stage, including the incubation period, infants, toddlers, adolescence; mature stage: prime period, stable period; aging stages: aristocratic period, internal friction early period or bureaucratic, bureaucratic phase and death phase, each stage has different distinctive features<sup>[74]</sup>.

Corporate life cycle theory of the enterprise as an organic whole, different states have different stages of growth, nature, mode of operation, resulting in different strategies, such as business growth strategy can be used to develop, mature and stable stage strategy can be used , while the aging stage of retrenchment strategy can be used.

According to the corporate life cycle theory, business strategy, the risk arises, under this strategy that the risks of life-cycle theory have two root causes: the strategic transformation of the life stages of understanding the risks and risk

Understanding of the risk of life-stage in the strategic transformation of the enterprise often happens, despite the fact that corporate life cycle theory, companies have different stages of development, different stages have different characteristics, the state, but these features are summarized and out of state, for each specific business, it is difficult to determine at what stage of business and period, especially in the external environment changes, increased uncertainty, we can not determine where the business cycle and periods, for example, the arrival of the economic crisis China's toy manufacturing industry so difficult, many manufacturers of bankruptcy, we can not judge a business in a recession. In addition, from the enterprises themselves, companies want to stay in business forever, the goal is to continue business operations, has been looking for new growth to keep the business growing, so the managers of enterprises are also developing strategies to grow as the target. According to China's business practices, very few companies to develop depression or bankruptcy strategy, even if there is such a strategy, but also are forced. Between enterprises in different stages of development is done through strategic transformation in the strategic transformation process there will be potential strategic risks, mainly arising from the restructuring strategy of resistance, inertia, path selection and development of different stages of understanding, as shown in Figure 3.11 indicated that these factors will bring strategic risks.

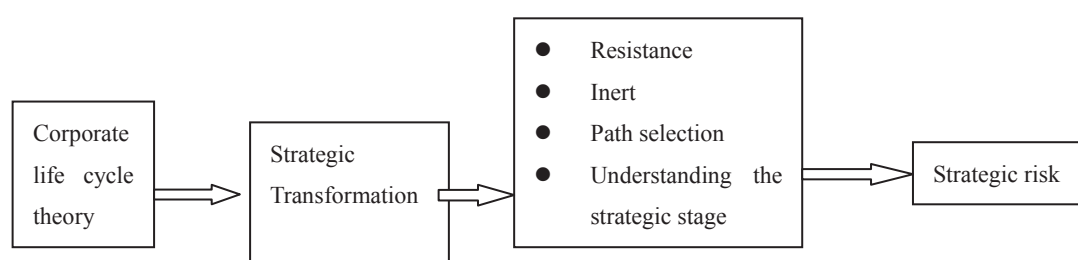


Figure 3.11 based on the life cycle of strategic business risks arising from

### 3.3.3 Strategy formulation and selection of strategic risks arising from

Strategic positioning in the enterprise accurate, objective, dynamic, based on strategic business development and to choose. Sometimes is forced to form a business strategy, and sometimes the strategy is to take the initiative to develop, these are foreign strategic management theory has been summarized. In practice, many of the companies on the strategic development and selection have great risk.

This paper argues that corporate strategy development will bring a great way to inappropriate strategic risks. Some companies are racking our brains by the number one form of strategy, some companies are formed according to government directives and policies of the strategy is to hire some outside the brain to develop business strategies, and some businesses are the most fashionable suit seeking the formation of strategy, some companies high-level group to develop strategy. Integrated into the aviation field,

Hainan Airlines will hire a consulting firm to develop a strategic U.S., China Eastern Airlines to set up the Ministry is responsible for strategic management and implementation of strategies, Spring Airlines to develop strategies by the leaders themselves. According to their needs, the formation of corporate strategy, stages of development, external living environment, their own ability and other factors. Such as positioning in the domestic regional airlines can't blindly adopt the international strategy to expand international routes, because the airline's international strategy is the need for national policy, their own strength and the support of the international environment and other factors.

As already mentioned in the strategy formulation stage of a major strategic risk is the business of asymmetric thinking, when a market share of airlines to develop a strategy, it is dynamically consider the development of other airlines? When the airlines make cost leadership strategy, which take into account the oil companies and aircraft manufacturers, the strategic behavior? Therefore, the formulation of corporate strategy and selection to be symmetrical is dynamic thinking.

Generally, the airline's strategic types are international, diversity, strategic alliances, mergers and acquisitions, competition and strategic choice each has certain disadvantages and advantages. There are some strategic risks, airline need to choose strategy for each type of strategic risk management.

### 3.3.4 Implementation of the strategy processes of strategic risk

Enterprises need to develop the strategy for implementation of the strategy, involving the implementation of the strategic business change and transformation, about strategic transformation, involving the relevant terms of strategic transformation, strategic change, strategic change, strategic updates, this paper these concepts are not be distinguished, are considered to be the consistency of business with their environment changes over time in the form, content, status shown on the differences. Strategic change both within and outside the enterprise in response to changes in the existing strategy of adjustment and change, is a dynamic process, there are four major characteristics: the right to degeneration, the game, overall, and risk. The risk of strategic change is mainly reflected the uncertainty in the external environment or internal organizational inertia, lack of relevant resources, and subjective factors, the company in response to changes in the strategic decisions taken at greater risk, as shown in Figure 3.12.

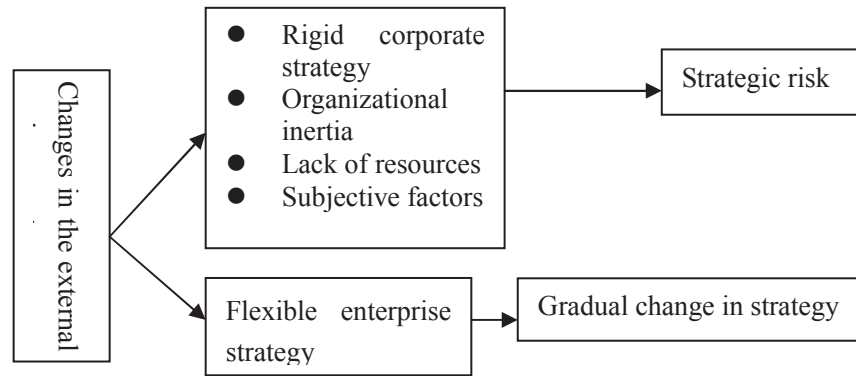


Figure 3.12 strategic risk from outside

Transition from one state to another is a state of change, a paradigm or logic or logic to another paradigm shift; can be a mode shift to another mode, it can be from a system another change to the system, each firm are constantly in transition, from growth to maturity, from maturity to senescence, from aging to death, the transformation of enterprises into three types: strategic transformation, management restructuring and governance in transition <sup>[39]</sup>.

Strategic transformation means business strategy is not suitable for the current requirements of the external environment, or their own growth needs, from a strategic transformation to another strategy faces obstacles and gaps, and gaps in the strategic transformation of the resistance management strategy arises the risk. Strategic transformation of the resistance from their own habits, the interests of the re-allocation, risk preferences, and changes in power, corporate interests will inevitably bring about strategic transformation, power and resources inside and outside the enterprise re-allocation and acquisition, and interests of the injured party would have a resistance, as well as the formation of their own inertia and so on. Therefore, the strategic transformation means that the risk of re-select, strategic transformation is also faced with the choice of the path and strategic gap analysis, different paths will bring different risks and opportunity costs, improper gap analysis will also have the risk of strategic transformation, as shown in Figure 3.13 .

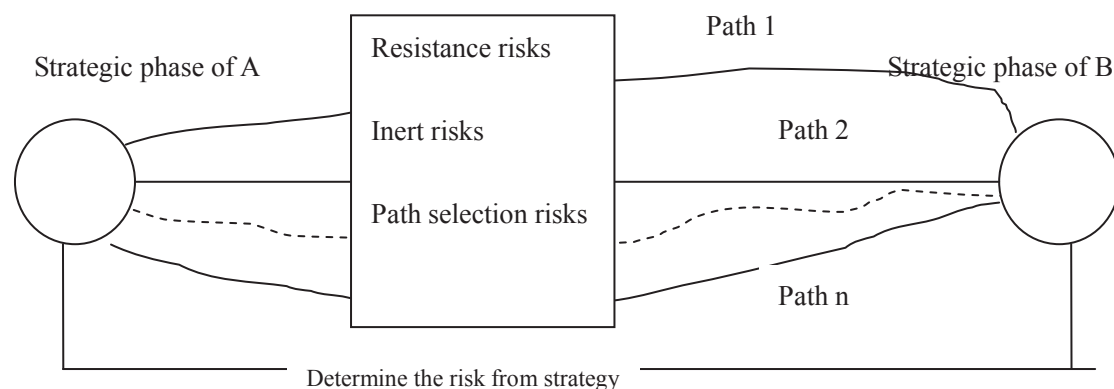


Figure 3.13 Schematic diagram of the strategic transformation of a risk

### **3.4 Strategic Business Risks During the Operation of the Generation Mechanism**

#### **3.4.1 Market failure and the risk of corporate strategy**

Market failure is a broad concept, is the concentrated reflection of the external environment, and corporate strategic risk is one of the components. According to the definition of economics, market failure refers to loss of market efficiency, the basic function of the market allocation of resources, that is, the market in resource allocation and use of resources and the emergence of inefficient or ineffective, so that loss of function. In the actual study, and the concept of market failure related to market failures and market failures, this understanding of market failure is the inevitable result of the market itself, because the market is a basic assumption of the economic assumptions to maximize the benefits it will bring people market inevitable defects. This article that: market failures, including two aspects, one is the market failure is a necessity, because the market is flawed; the other hand, as the economic cycle, such as, state failure, deterioration of competition, industry structure and other causes of confusion in the market function failed.

Market as an "invisible hand", there are other mechanisms and instruments can't replace the unique features and advantages, such as stimulating economic interests, market flexibility in decision making, the effectiveness of market information, etc. But also the market failure is e inevitability.

#### **3.4.2 Enterprise resources and corporate strategic risk**

Resources is a concept in economics, is an enterprise business process into a variety of factors, including equipment, capital, land, labor, etc. Here resources include tangible resources and intangible resources, intangible resources, including goodwill, brands, technology and so on. In general, companies have the resources financial resources, material resources, technical resources, innovation and resources, goodwill, resources, human resources and organizational resources. Based on the concept of economics, strategic management researchers introduced the concept of resources to strategic management in the 1980s pioneered the theory of strategic management theory of school resources, the core concept is derived from the success of business strategy resources. However, according to dialectical theory, corporate resources can become one of the necessary conditions for strategic success, but if the resources can't meet the needs of corporate strategy, corporate resources to produce the company's strategic risks.

The strategic importance of resources is mainly reflected in the resources to create competitive advantage, competitive advantage is the root cause of the basic characteristics of resources, while resource companies with sustainable competitive advantage is a sufficient condition to bring sustained competitive advantage to the enterprise's resources are generally terms have the following four characteristics: scarcity, resources are scarce, not all businesses are free to trade with; irreplaceable and

imitation, which is the heterogeneity of resources, can't be free for competitors to imitate and substitute with other resources; create value, that resources can create value for the enterprise; easier access to resources than their competitors, including the acquisition cost and timeliness.

Dynamic nature of business to generate resources is an important feature of strategic management, companies can't under certain conditions and time required to obtain strategic resources of the enterprise is deadly, it will affect the strategic goals, thus becoming a source of strategic risk one. LIU Shengfu (2004) study of the resource position barriers based on the low resource position barrier is one of the risks enterprise huge resources, the resulting firm's strategic risk <sup>[8]</sup>. He believes that low resource position barriers to enterprise resource system is not able to prevent competitors from building an effective imitation, not been able to maintain a relatively long period of time resources, competitive advantage as a state, is a resource position barrier is relatively low, not barriers to effective digital resources to achieve the right to use, understanding, time, income and expansion of isolation.

Firm's strategic resources, including management of resources, technical resources, financial resources and assets, resources, and lack of resources, these strategies will result in corporate strategic objectives can't be achieved, so the lack of resources to corporate strategy corporate strategy is one of the sources of risk.

### 3.4.3 Strategic risk and corporate entrepreneurship

Since 1942, Schumpeter's *Capitalism, Socialism and Democracy* has been proposed business ability, enterprise capable of becoming the object of many scholars, then capacity development from the enterprise to enterprise competitiveness, the competitiveness of the core or the organization, organizational skills or business dynamic capabilities, and so on. From a philosophical point of view, the ability of a social body (organization or individual) of the objective world can play the role of <sup>[75]</sup>; from an economic point of view, capacity can be understood as individuals or organizations that have a resource can be into another resource, or resources into force of social wealth. Business enterprises with the ability to directly affect the efficiency and effectiveness of business activities of the subjective conditions, it is a force, entrepreneurial capacity is the knowledge, structure and culture of three-way coupling generated. Enterprise capabilities in business activities in the formation and development, and business activities reflected in the force <sup>[76]</sup>.

Business is essentially a capability system, the capacity of the system by a number of specific capabilities form, and for the specific enterprise capabilities contents have different classification and interpretation, Wu Zhenggang, etc. <sup>[77]</sup> based business capacity index of the study based on the enterprise capabilities evaluation model, in which a class of indicators, including knowledge generation system, based management system, organizational innovation system, technological innovation system, to achieve synergy and value system of the game system. Capacity indicators from the enterprise system can identify the key dimensions of enterprise capabilities, Du Gang, etc. [78] is given in the capacity of enterprises of different key dimensions, as

shown in Figure 3.14. This rigidity is often speaking of the ability of the enterprise hard power; flexibility refers to the ability of soft power.

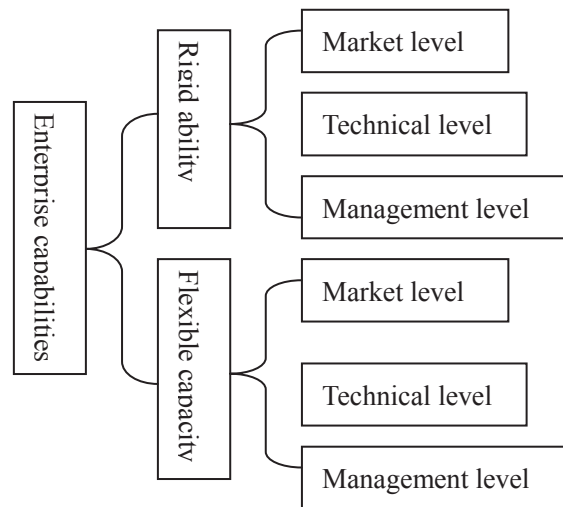


Figure 3.14 The key dimensions of corporate capacity indicators dimensions

Core capabilities to the enterprise's core competitiveness, and thus win the competition, however, increased uncertainty and a more complex dynamic environment, the ability of the rigid core business gave a fatal risk.

Ability theory, core competence is business real long-term source of competitive advantage. However, some large companies in the competitive environment in its original deep technical constraints and has experience, slow to change, lack of flexibility. People began to realize that the core does have its negative factors, namely, the core capabilities of the "rigid."

The core is hindered rigid core competencies as a source of sustainable competitive advantage inertial system. When a company formed through the gradual accumulation of many years of its unique core competencies, it will intentionally or unintentionally exclude other aspects of the ability to form the core rigidity. This means that the company lost a key dynamic capabilities, it is difficult to adapt, integrate and reconstruct the enterprise and external organizational skills and resources to keep up with changing demands of the environment. Therefore, the core essence of the rigid core competence is the cure for which led to the further development of the core capabilities of resistance. It is a concept of state, expressed as resistance to change, hinder the adjustment of stagnation<sup>[79]</sup>.

#### 3.4.4 Entrepreneurs and corporate strategic risk

In 1942, thanks to the researcher Schumpeter the word of Entrepreneur is caused by the attention. Schumpeter used the word in his book Capitalism, Socialism and Democracy in a large number. Entrepreneur was first appeared in the early 16th century in French words Entrepreneur, is a military expeditionary force for leadership, and later refers to engage in risky activities.

In practice, the role and contribution of entrepreneur to the companies is obvious,

many of the world's largest companies and their entrepreneurs are inseparable, such as General Electric's Jack Welch, Microsoft's Bill Gates, Cisco's Chambers and so on. In China, entrepreneurs are a scarce and important resources, many companies rise and fall and major decision making by entrepreneurs and state-owned enterprises is often through high-level adjustment to adjust and guide the development of enterprises, such as Eastern Airlines' Liu Shaoyong and Air China's and Li Jiexiang.

From the perspective of historical development, entrepreneurs in each period are the owner of the most lack elements of social and economic development <sup>[80]</sup>:

- In the 16th century, entrepreneurs as risk-takers, that the aforementioned people led military expedition.
- In the 17th century, the entrepreneur is the operator. Entrepreneur is often used to refer to the construction of roads, bridges and other works of man.
- In the 18th century, entrepreneurs as capitalist venture for capital, and their remuneration can be seen as the remuneration of capital.
- In the 19th century, entrepreneurs as a managers that is defined in Zaire, with all the means of production and the value of the product for an agent.
- In the 20th century, entrepreneurs as innovators that is defined by Schumpeter, innovation is the entrepreneurial ability of the standard.
- In the 21st century, outstanding entrepreneurs as decision makers in uncertain and complex environment, leading enterprises in decision-making.

The famous economist Joseph A. Schumpeter pointed out that entrepreneurs are the engine of economic development and the source of strength of social development. In the study of Western economists, entrepreneurs is the fourth largest wealth factor that is create by combination the three basic factors of production land, labor and capital.

The strategic importance of entrepreneurs in the following aspects: First, in an uncertain environment, if companies want to survive and develop, the primary problem is to develop the right strategic decisions and ensure that it can be timely implemented. Typically, the enterprises that produce wrong products by low-cost bring a more cost-stricken bankruptcy than the enterprise that produces right products by high-cost. Therefore, the strategic decision-making is a key factor in deciding earnings, while the most critical issue is the right strategic decisions can be timely and effective implementation. As entrepreneurs in the business decisions have a decisive role. Second, the entrepreneur is the business system and application developers and operator. Business management system is consisted of power system, operational risk mechanism, operating mechanism and regulation factors of production and business operation mechanism. As the operating mechanism is inherently objective initiative. Therefore, entrepreneurs must understanding, development and t use the operating mechanism to enable it to service for business activities. Also, because the business system with the external controllability, entrepreneurs can take it, use it to optimize business operations, allowing companies to significantly improve efficiency. Entrepreneurs are the organizers of factors of production, entrepreneurs have to keep a combination of production factors adjust enable enterprises to better allocation of resources to play a greater efficiency, companies can survive and grow. Therefore, from this sense, the entrepreneur is the heart to promote business development.

Entrepreneurs and corporate strategy is critical to business success, from the perspective of the concept of resources, entrepreneurs are a heterogeneous, scarce and resources that can't be copied. From capacity point of view, entrepreneurs with innovative, decision-making and the ability to implement the strategy, and thus can form a competitive advantage. From an organizational point of view, the entrepreneur can affect the development of enterprises and the development of appropriate organizational structure, and thus the formation of the required system of enterprise development. Therefore, a business entrepreneur can determine the success or failure of the enterprise, but if lack of entrepreneurs or use of entrepreneurs improper, then the loss is huge, corporate strategic risk resulting.

### 3.5 Concludes of This Chapter

In this paper, the characteristics of the air transport industry and the strategic management of a literature review, and then from two angles that conclude the process of strategic management and business operation process have the mechanism of risk analysis, as shown in Figure 3.15. Strategic risk management mechanism itself includes corporate strategy content, strategic positioning, strategy formation and implementation of the strategy, etc. Enterprise operation risk includes market failure, lack of corporate resources, lack of capacity and lack of entrepreneurial enterprises.

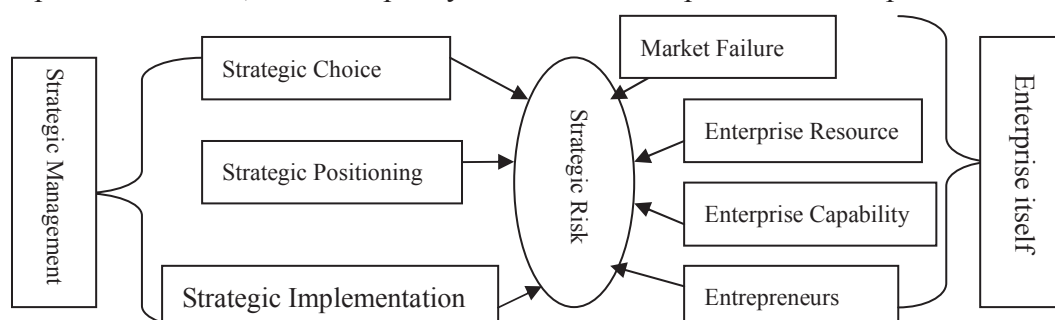


Fig. 3.15 The two models that produce strategic risks.

Produce their own causes and mechanisms of strategic risk are many and widespread, but generally speaking, basically focusing on the ability of enterprises, resources and external market failures, entrepreneurs can be referred to as resources, can also be considered a business the ability of the source. When the company's capabilities and resources can't meet the strategic objectives, it creates a strategic business risks, including lack of capacity, shortage of resources, resources and capabilities do not match and so on.

These two aspects of the strategic risk from the generation mechanism was explored by comparison of these two aspects, from the perspective of strategic management risk analysis more practical, more accurately identify the impact of corporate strategic goal of uncertainty, through the analysis of corporate strategic management perspective, the risk of corporate strategy from the corporate strategic positioning, strategic choice and strategic implementation of the three aspects, through strategic positioning, strategic

choice and strategic implementation of the decomposition to determine the next level of strategic risk. Operations through the business process analysis, combined with the actual situation, this paper found that entrepreneurs is a very important factor in strategic management process , a good entrepreneur can control for the enterprise as a whole, the game successfully in the marketplace, and effectively integration of resources, their insight, courage and power control is very important factor.

## **Chapter 4 China Air Transport Strategic Risk Identification**

The object of strategic risk management in this paper is enterprise strategic management and the risks arising from strategic management. The risk of corporate strategy research goal is to ensure corporate strategic goal, strategic objectives of the strategic business impact of risk factors for identification, analysis, evaluation and treatment. Depending on the risks of strategic, corporate can make decision.

In theory, the impact of corporate strategic goal of uncertainty is an infinite set, but from a realistic perspective for strategic analysis of business management, strategic risk factors, this article will be seen as a finite set of strategic management from the start, impact of corporate strategic goal of the strategic risk identification, analysis and evaluation studies, in practice, in order to help the business, with operability. Meanwhile, the business risk is not intuitive, exposed, strategic risk is more hidden, strategic management activities, all aspects of each period are at risk, and sometimes even risk exists in all kinds of illusion, the result of strategic risk identification is an important, complex, detailed work.

In terms of safety factors for the air transport industry is one of the most important issue, regard the safety standards of airlines operating into the first one. The International Air Transport Association has also developed a number of detailed safety standards to protect the safety of air transport. This paper focuses on the air transport enterprises of strategic risk, without considering the safety factor is not because security is not important, but because of security issues is undoubtedly the most important of all risk factors.

### **4.1 Process and Basic Content of the Enterprise Strategic Risk Identification**

#### **4.1.1 The meaning of strategic risk identification**

Strategic risk identification is the most basic aspects in the strategic risk management process, other aspects are the result of a strategic risk identification as the basis for, and only to identify potential strategic risk factors we can analysis and evaluation the corporate strategic risk, and then to make decisions.

Strategic risk identification is through the investigation and analysis of strategic risk to determine the potential risk of the source of strategic risk management object. According to the literature review part of the generation mechanism of risk management analysis, strategy risk identification process, there are two main aspects. First, identify the source of strategic risk, that is, strategic risk factors. Second strategy is to identify the risk factors into the strategic risk conditions. Strategic risk factors alone is a potential source of risk is required by certain conditions to be transformed into strategic risk, through the analysis of transformation conditions, can be cut off or reduce the risk of strategic risk factors into the strategic way in transforming the chain to intervene, the transformation of risk control strategies to reduce the likelihood of

strategic risk and the extent of losses.

#### 4.1.2 Principles and content of Strategy risk identification

Strategic management itself is a dynamic process, therefore, strategic risk management is a strategy to minimize the risk of the lowest cost dynamic process, so the basic requirements for risk identification strategy is a comprehensive strategy to effectively identify risk factors to determine a clear strategy for improving risk factors into the strategic risk conditions. From this strategic risk identification must follow the principles of integrity, principle and global importance of the principle.

The integrity of Strategic risk is to determine the all potential risk factors entirety in the original strategy risk factors and risk managers can't miss important risk factors because of subjective reasons. In order to ensure the integrity of the strategic risk identification, risk can be identified using a variety of strategic methods for analysis from multiple perspectives and identification.

Business to analysis, evaluation and treatment all of the strategy risk factors is unrealistic, according to the definition of strategic risk, strategic risk factor is a potential impact on the strategic objectives of uncertainties, so the strategy should identify the risk factors the focus. Enterprises according to their criteria, identified the expected loss of the larger risk in the strategic risks factors, less impact on the risk factors can be ignored, so you can save time and economic costs, while improving the efficiency of risk management strategies.

Strategic risk management from the perspective of corporate strategy, overall principle is very important. Some risks may only be a strategic point in time or impact a department's goals, while considering the overall situation of the enterprise is not important. Such strategies risk factors can be ignored.

Strategic risk consists mainly of two aspects, perceived risk and risk analysis. Perception of risk is through the investigation and understanding, identifying the presence of strategic risk factors, risk analysis is based on the perception of risk, risk factors for strategic analysis, classification, processing, determine the causes and risk conditions. Perceived strategic risks and strategic risk analysis constitute the basic content of the strategic risk identification is a two-stage, strategic risk perception is the basis for strategic risk identification, analysis, strategic risk is a key strategic risk identification.

#### 4.1.3 Processes and methods of strategic risk identification

In general, the basic process of strategy risk identification include the development of business plans for strategic risk identification, to determine the scope and the object of strategy risk identification, to determine the strategic risk identification tools and methods, the implementation of the investigation, submit identification results, and other steps, as shown in Figure 4.1.

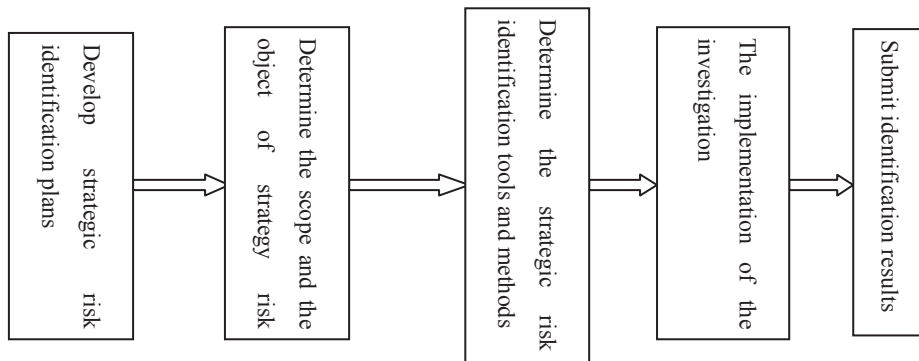


Fig. 4.1 The process of strategic risk identification

Risk management itself is a dynamic and innovative application of discipline, and thus risk analysis methods and risk management measures are also numerous. The main task of strategic risks identified research in this paper is to determine whether particular strategic risk factors exist, and through analysis to determine its properties and characteristics. Strategic risk identification is mainly qualitative identification, risk-based identification method, commonly used methods of risk identification expert survey, security check methods, work-risk decomposition (WBS-RBS), scenario analysis, fault tree, the financial report analysis, event tree analysis and hazard and operability studies. As strategic risk identification methods, as it relates to corporate strategic management, commonly used methods include expert surveys, literature research methods, scenario analysis and work - risk decomposition method.

#### 4.1.4 The challenges of strategic risk identification

Strategic risk research is the primary task of the strategic risks identified before further analysis, evaluation and program development, business risk, however, is not fixed, different companies have different perceptions of risk, the same company at different times have different risk environment, the same company during the same period of different people have different perceptions of risk, so companies do not recognize the risk inherent in the strategic model can learn from.

Strategic risk is the risk relative to other types of specific terms are abstract, important, and ambiguous, the companies have identified all the risks is unrealistic, so to try to make the strategic risk identification can't miss an important risk, but also taking into account the feasibility and cost of identified risks.

Another place is a challenging strategic risk identification methods, has formed a number of risk identification methods, such as expert survey, security check methods, work-risk decomposition method (WBS-RBS), scenario analysis, risk list, field inspection law, and different types of risk have different methods for identification.

## 4.2 Chinese Aviation Industry Strategic Risk Identification

This chapter is out to analyze strategic risk identification in Chinese air transport enterprises. The object of the study is Chinese air transport enterprises. Contents of the

study is strategic risk identification., The basic framework of the study are: risk measurement criteria → Strategic risk factors identified → determine the conditions that strategic risk identified factors into the strategic risk → strategic risk analysis (shown in Figure 4.2).

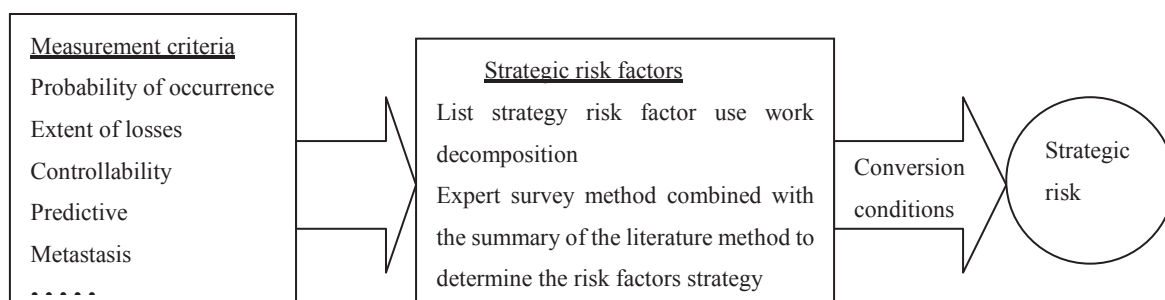


Fig.4.2 Strategic risk factors transformation process

Therefore, this chapter first step in the strategic risk identification study is to determine the strategic risk measurement criteria. The second step is based on the strategic management model, the use of work decomposition, the decomposition of strategic management, to determine the full, complete list of strategic risk factors. The third step is use of experts to investigate and summarize the literature method, combined with China's current development of air transport enterprises, strategic management status and future trends, strategic risk factors are classified list, sort and organize, eliminate unimportant factors, a final strategic risk factors. The fourth step is a strategy for each risk factor analysis to determine the strategic risk Strategic risk factors for conversion to the conditions.

#### 4.2.1 Strategic risk factors identified

Different types of risk measured in terms of different criterion, usually measures of risk criteria for risk have probability of occurrence, the risk of losses, risk control, risk of predictability, risk transferability and so on. For example, the risk of urban development scholars consider it more controllable <sup>[81]</sup> risk more from the motor vehicle may be considered metastatic. The risk of predictability and transferability of this paper that has been included in the risk of controllability, therefore this strategy for air transport enterprise risk measurement criteria is mainly the risk probability of occurrence, the risk of losses and risks can be control of, and identify risk factors for the strategy is based on three principles of the measure.

According to the analysis of this literature review part, the strategic management, risk, risk management and the concept of strategic risk is determined. Strategic risk research for this paper are mainly based on the strategic management model (Figure 2.14) to start, strategic management is divided into three parts: strategic positioning, strategic choice and strategic implementation. These three parts interdependent, complementary and together constitute the strategic management of content, only when the successful completion of all three parts, the corporate strategic objectives can be

achieved.

(1) The list of strategic risk factors

① Strategic positioning risk factors

➤ Environment

Macro-environment: According to the PESTEL analysis, the external macro-environment factors, including political factors, economic factors, social and cultural factors, science and technology, environmental protection, and law.

Industry environment: According to Porter's five competitive forces model elements, including the potential market entrants, suppliers, buyers, substitutes and competitors.

Internal environment: the value chain analysis, the internal environment include raw materials, production, logistics, sales, service, procurement, research and development, infrastructure, human resources, finance, security and information systems.

➤ Strategic capability

Conclude the ability to obtain and integrate resources, the ability to form strategic and implementation strategies.

➤ Expectations and goals

Conclude vision, corporate governance, stakeholder expectations, business ethics and cultural background.

➤ Strategic assumptions

Mainly refer to the strategic environmental assumptions and business assumptions.

➤ Enterprise resources, capacity and environment match

② Select the risk factors strategy

➤ Development and selection

Conclude stage of development, business and corporate strategic choice of policy makers, business development and corporate strategic choice the choice of method selection.

➤ Internationalization

Conclude the international impact of their own choice of international strategy and international strategy of influencing factors.

➤ Diversification

Conclude whether diversification, related diversification and unrelated diversification and related to a wide range of factors.

➤ Stakeholder strategy

➤ Strategic Alliance

Conclude the strategic alliance, strategic alliance types and the factors that affect the strategic alliance.

➤ M & A

Conclude whether there are mergers and acquisitions, M & A motivation.

➤ Budget

Conclude whether to take low-cost airline strategy and budget airline factor.

➤ Competition

Conclude the ways and methods of Competitive strategy

➤ Exit and contraction

Mainly conclude have or not exit and contraction strategy, how to understand the

exit strategy and contraction.

- Expansion

There are two aspects, if there is expansion of the type of strategy and expansion strategy.

- Strategic functions

There are human resources strategy, market strategy, procurement strategy and operational strategy.

③ Implementation of risk strategy

- Resources to match

For Examples, human resources, information management, financial management, technology management and resource integration must be matched.

- Organizational structure

- Strategic change

- Culture

Based on the above list of strategic risk factors, risk factors, classification and collation strategy map, as shown in Figure 4.3.

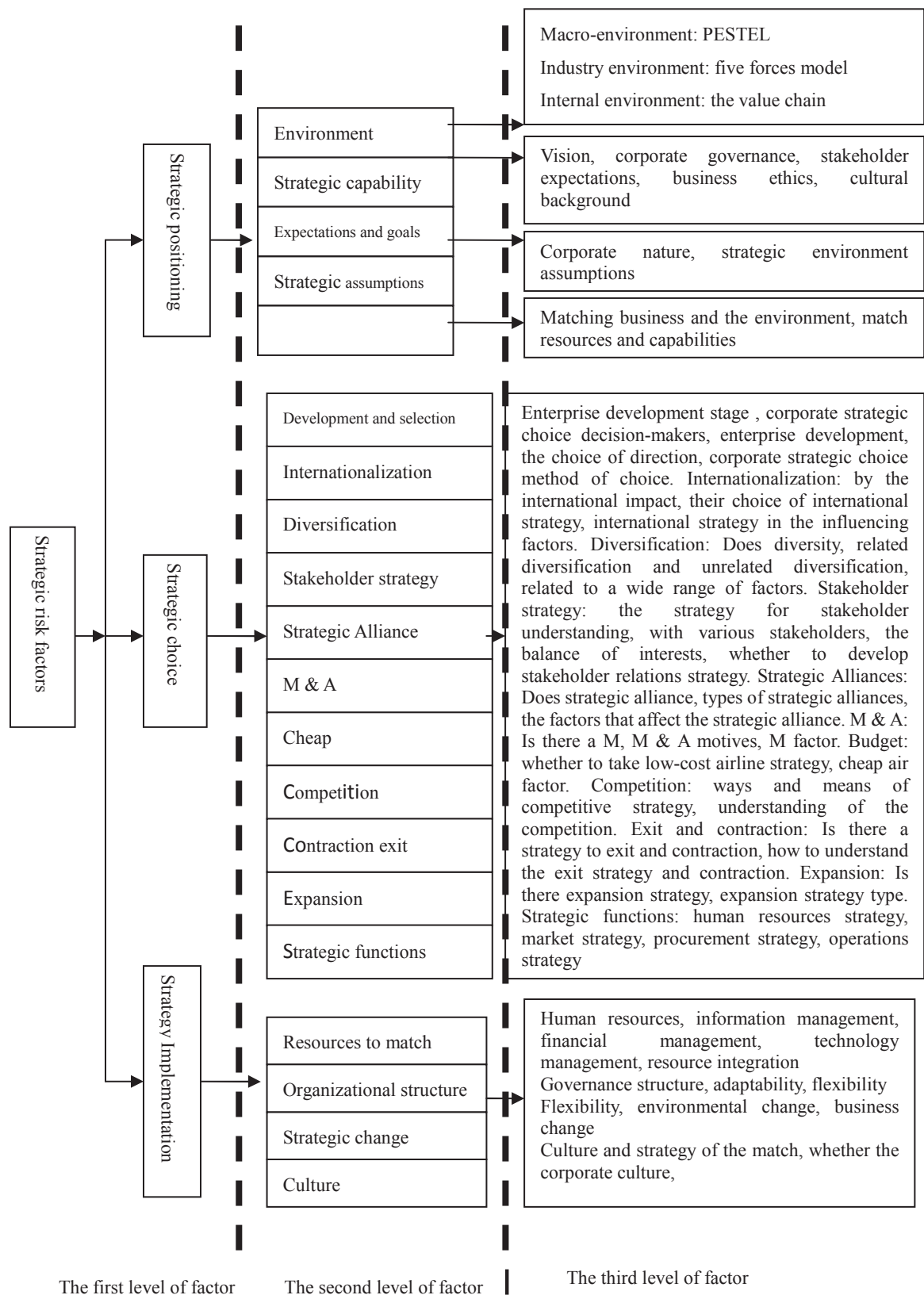


Fig.4.3 Strategic risk factor decomposition

## (2) Strategic risk factors identified

The use of work breakdown method, by the decomposition of the strategic management model, Figure 4.3 shows a detailed list of strategic risk factors, this paper focuses on the study of Chinese air transport enterprises of strategic risk, so this part of the air transport industry experts and managers interviews, research experts, risk factors for each opinion, the investigation into its strategic risk conditions, the same time, combined to collect this information and literature on strategic analysis and eliminate risk factors, identified in this paper formed the China Aviation transport business strategy risk factors, as shown in Figure 4.4.

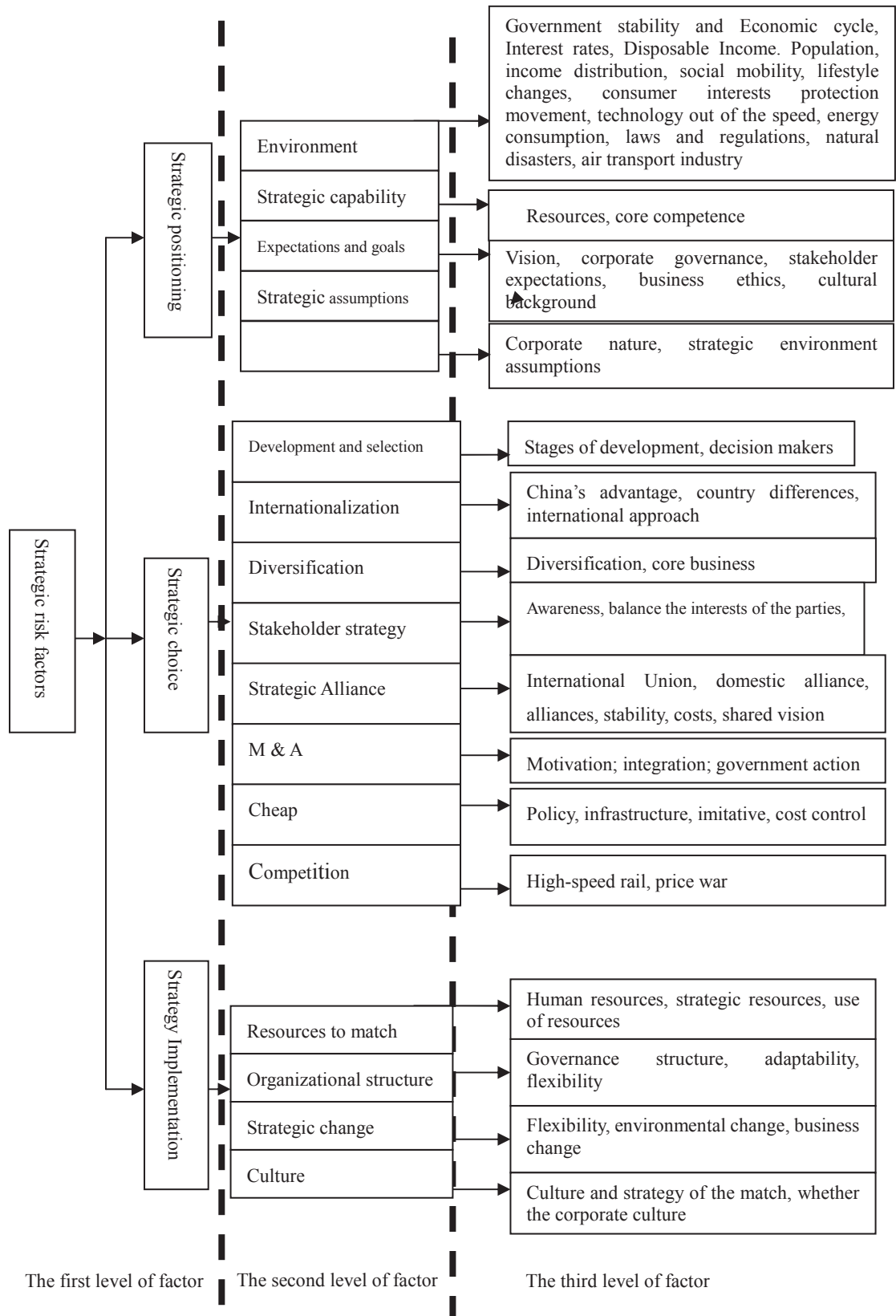


Fig.4.4 China's strategic air transport enterprise risk factor

Strategic positioning in the environment is very broad scope and complexity. China's air transport industry has its own unique environment for the survival and development. According to this article on the air transport industry to research and summarize the literature identified as shown in the two Figs - level strategic risk factors: the environment, strategic capability, business objectives and strategic assumptions.

In strategic choice, enterprise faced many company's side strategic choices. Air transport adopt the main types strategic is internationalization, diversification, mergers and acquisitions, strategic stakeholders, strategic alliances, low-cost, competition, out of contract strategy. Strategic direction and selection is also very important.

Implementation of the strategy in the second-level of strategy risk factors are: the implementation of the resource match, implementation strategies, organizational structure, strategic change and corporate culture.

Every second strategic risk factors include multiple third strategic risk factors; each third strategic risk factor can also be unlimited analysis and find infinite factors. Based on operational and practical needs, this paper focuses on the second risk factors for strategic research, analysis of risk factors into third terms.

In order to study the strategic risks that have identified clearly, where air transport enterprises of China's strategic risk number, as shown in Table 4.1.

R said that the Chinese air transport enterprises of strategic risk. R<sub>1</sub>, R<sub>2</sub>, and R<sub>3</sub> represent the risk of strategic positioning, the risk of strategic choice and the risk of strategic implementation respectively. Risk in the strategic positioning (R<sub>1</sub>), the environmental risk, the risk of strategic capabilities, expectations and objectives of risk and strategic risk assumptions were used R<sub>11</sub>, R<sub>12</sub>, R<sub>13</sub> and R<sub>14</sub> said. The risk under the strategic choice (R<sub>2</sub>) were used in R<sub>21</sub>, R<sub>22</sub> and strategy risk (R<sub>3</sub>) respectively, with the risk of under R<sub>31</sub>, R<sub>32</sub>, R<sub>33</sub> and R<sub>34</sub>.

Table 4.1 Strategic risk factors

R <sub>1</sub>				R <sub>2</sub>								R <sub>3</sub>			
Strategic choice				strategic positioning								strategy implementation			
R <sub>11</sub>	R <sub>12</sub>	R <sub>13</sub>	R <sub>14</sub>	R <sub>21</sub>	R <sub>22</sub>	R <sub>23</sub>	R <sub>24</sub>	R <sub>25</sub>	R <sub>26</sub>	R <sub>27</sub>	R <sub>28</sub>	R <sub>31</sub>	R <sub>32</sub>	R <sub>33</sub>	R <sub>34</sub>
Environment	Strategic capability	Expectations and goals	Strategic assumptions	Development and selection	Internationalization	Diversification	Stakeholder strategy	Strategic Alliance	M & A	Low-cost strategy	Competition	Resources to match	Organizational structure	Strategic change	Culture

#### 4.2.2 Strategic risk factors into the strategic risk and strategic risk analytic conditions

The above impact the China Air Transport corporate strategic goal of uncertainty factors were identified and also the strategy identified potential risk factors such as the

impact of strategic goals is uncertain. Where the uncertainty is the probability of occurrence, uncertainty after the occurrence can harm and impact uncertain. In certain conditions, strategic risk factors will be translated into strategic risks; therefore strategic risk identification is the second important part of the strategic analysis of risk factors for conversion conditions.

#### 4.2.2.1 Conditions of strategic positioning factors into the strategic risk

Strategic positioning is the strategic management process as a basis for work, by identifying where the business environment, business strategy, enterprise, and the expectations of all stakeholders assumed existence in the business. Companies can self-position strategy and implementation strategy for the selection basis. Therefore, strategic management, strategic positioning is the foundation but also the most important strategic risk factors. When companies can't clearly understand their own environment, when the enterprise's own resources and capabilities can not be accurately determine, when the strategic positioning is too high, too low or the wrong position, the subsequent strategic choice and strategic implementation of the inevitable shift, strategic goals can't be achieved. Then the strategic positioning of elements into a strategic position on the risk is not clear.

##### (1) Conditioning of environmental factors into the strategic risk

Environmental factors is an important factor affecting the development of enterprises that will lead to a favorable environment for enterprises to successfully achieve the strategic objectives, volatile, often adverse environmental constraints of the development of enterprises. When there is volatile business environment where, or with the expected large differences in development, environmental factors into business development, strategic risk outcome is not clear.

##### ☐ The stability of the government.

As the air transport industry for national defense, security, social and other implications for the air transport enterprises, the country's political stability is a prerequisite for the development of business. When there is political instability in a country, other countries will pass through customs, aviation and other prevention and attention. Thus, when the airline is situated or related to national political instability, the airline is difficult for normal operation.

##### ☐ The economic cycle

Economic cycle, economic development has become an inevitable phenomenon, although many scholars to study it, however, the law and the impact of the economic cycle often than expected in the economic cycle, irregular and unstable conditions, the economic crises bring to the enterprise greater impact in 2007 of the global economic crisis is an example. Therefore, the condition that economic cycle factors into strategic risk factor is the economic cycle irregular and unstable, and the harm and effects is very huge.

##### ☐ Rate

All businesses must learn to control the currency risk, even purely local enterprises also in the world economic environment in today's world. A huge number of virtual wealth in the world, according to Liu Yuan Zhang who is an academician of Chinese academy of Sciences point of view, the world is asset capitalization, capital securities,

securities diversified. Business strategy must be considered in the formulation of this assumption, the exchange rate will continue to remain volatile and volatility, which implies that companies must be able to manage foreign exchange risk, if the strategy does not take into account and then the organization's strategy will not be considered a real strategy.

The exchange rate from the situation in recent years, the appreciation of the RMB has been in orbit, the RMB appreciation on China in the international aviation enterprises have an important impact, Figure 4.5 shows the appreciation of the RMB to the airlines of the favorable factors and risks.

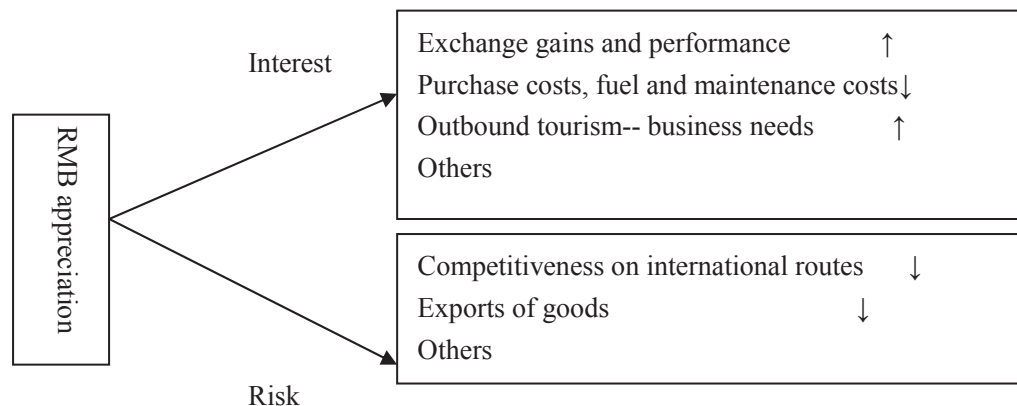


Fig.4.5 Changes in foreign exchange risk

#### □ Disposable income

For the airlines in terms of understanding where the market proportion of disposable income of customers is very important that each country has different proportions and trends. Due to cultural, economic development and other reasons, China has its own specific percentage of disposable income, longtime residents of China's savings rate is high. Ma Jianjun who is the secretary of China's National Bureau of Statistics said ,in 2008, China's savings rate is fifty percent one three, the savings rate of increase has seriously affected the Chinese people in tourism, leisure and other aspects of consumption, so that from this point on in terms of airlines is to focus on the problem.

When customers have a considerable part of disposable income and leisure time to travel, the aviation industry will benefit from, the opposite case, the disposable income distribution factors into the strategic business development for the aviation risk.

#### □ Population

At present, more and more low birth rate in developed countries is unprecedented, Western Europe, Central Europe, and Japan's birth rate has dropped enough to supplement the population replacement level, the U.S. fertility rate is also lower than 2, but also a steady decline. Shanghai's natural population growth rate is declining, as shown in Figure 4.6, the population growth rate for Shanghai is of great significance for Shanghai-based auspicious Airlines, Eastern Airlines and Shanghai propitious aviation Limited company.

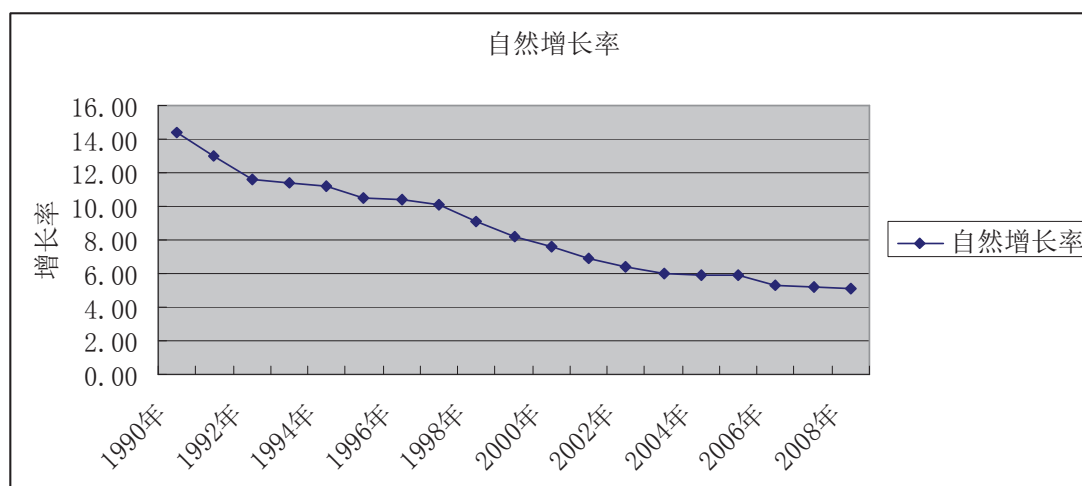


Fig.4.6 The natural population growth rate of Shanghai

Source: Shanghai Statistical Yearbook 2009.

China's airlines faced competition in the world aviation market, the domestic aviation market development and competition. Demographic factors will be China's airlines strategy must be fully analyzed before the enactment of important factors. As China's population growth slowed, improvement of living standards, China's population will inevitably increase the average life expectancy, the aging of the worldwide airline will challenge. Thus, demographic factors in the following areas of development will affect China's airlines to achieve the strategic objectives:

The structure of customers of airline is changing. The future of young customers gradually reduced, increasing passenger aging. Aging passenger will service for new demands. Currently the standard widely used by airlines is aircraft passengers older than 70 years of age must provide proof of other healthy. The future will certainly be faced with policy adjustment and upgrading of aging services.

The working age of staff of airline is changing. With the increase in life expectancy, the staff work required to increase the number of years, the retirement system will produce change. The other hand, the productivity of workers, especially knowledge workers will be further enhanced. These factors will lead to airlines pay system, staff motivation and work arrangements have an important impact.

Uneven distribution is China's population characteristic, a large urban population is too dense and rich, poor and sparsely populated in Midwest. To this features and possible changes in future for these demographic, airlines need to make to carry out route planning. It can be seen from Figure 4.7, the population proportion in the Asia Pacific region, Singapore, New Zealand, Australia, Japan and other Countries greater than China to fly.

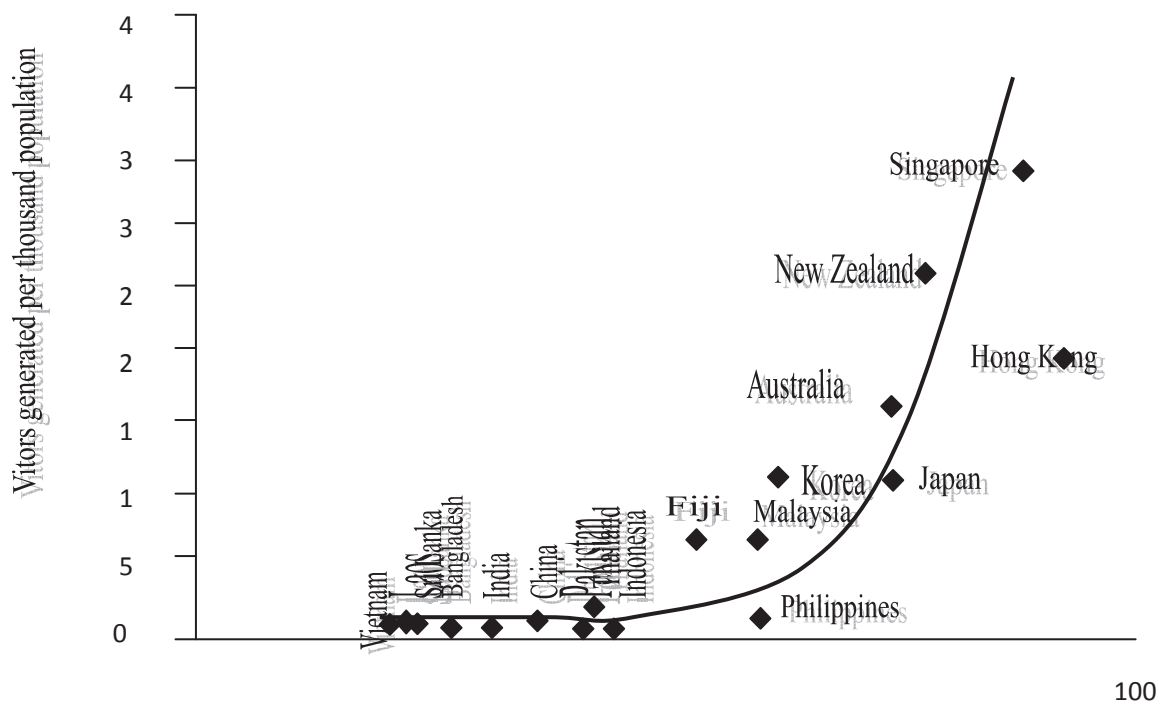


Fig.4.7 The proportion of the population to fly

Source: Swatch Stern Claes, Quake Klein. German Low-cost Airline's Strategic Positioning. Werner Hofmann: In Health and Other Transaction, Airlines Strategic Management [M]. Beijing: China Civil Aviation Press, 2008.10:97.

#### □ Social mobility

In general, the increase in social mobility can increase the demand for air transport enterprises, favorable to their development. Social mobility, however, when abnormal flow or liquidity volatility, the airline is facing a huge risk. For example, China's annual Spring Festival of the huge market demand exceeds the airlines' supply capacity. So the airline is not benefit, but will cause some loss.

#### □ Lifestyle changes

With the social and economic development, the Chinese way of life has also undergone tremendous changes, associated with the air transport industry, a lifestyle change is that people pay more attention to leisure and tourism, which will enhance the overall industry demand, but traveling by car lifestyle correspondingly reduced the prevalence of customer demand.

#### □ Movement to protect the interests of consumers

Economic development and consumer awareness of self-protection to the air transport enterprise services challenges. Many consumers began to claims litigation for flight delays or other service issues. On the one hand, it can improve the service capacity. On the other, there is a potential risk. When companies can't provide customer

satisfaction with the service and compensation, its brand and reputation will be damaged.

#### □ Speed of technological innovation

The developing of air transport industry thanks to the rapid and stable development of aviation technology. However, when the technology is too slow or too fast will result in constraints on business development. For example, the development of fast aircraft, the airlines' huge aircraft procurement may soon face eliminated, then entrants will have an advantage.

#### □ Energy

Air transport enterprises are facing energy factors are fuel. Three major airlines in China cause huge losses by fuel price fluctuations in 2008. So all of the airlines executives regard the volatility of fuel prices risk as a significant factors impact on the air company faced risk. Therefore, when energy shortages, price increases, price volatility, the energy factor has become a strategic air transport enterprise risk.

#### laws and regulations

Laws and regulations is the important safeguard for economic and industrial development. However, some laws and regulations would be a huge risk of a particular airline. For example, China's air transport enterprises are facing higher taxes, as well as state-owned airlines to private airlines than the more preferential policies.

#### Natural disasters

Air transport industry is seriously affected by natural disasters of the industry, floods, earthquakes, snow and so will have serious impact on aviation. So the transformation of the conditions here are very obvious.

#### Industry

Industry structure risk is important. Domestic transport growth is lower than international transport. According to previous analysis, most of the air transport companies have raised the international strategy, the top four airlines have joined the international coalition, the State Civil Aviation Administration also proposed the establishment of strategic air power, however, the fact is China's domestic market growth is greater than the international market, China's civil aviation transportation enterprises are facing tough international competition.

The international cargo of domestic was monopolized by foreign aviation. Although this paper is the study of passenger aviation, air cargo, however well-known fact is more profitable than passenger traffic. However, air cargo market in high-profit, international freight airline occupies more than half the market share and have a stronger competitive advantage. Such as the United States, DHL, Malaysian cargo.

Dry feeder developed imbalance between transport networks, regional atrophy. China's air transport companies tend to establish a network-based airline, the results from the survey to see only a few airlines to operate in regional aviation. Competition in the domestic high-speed rail, regional imbalance of economic development and other factors, the emergence of regional aviation trend of shrinking foreign air transport, according to the development of history and experience, regional aviation also has strong vitality and competitiveness, and regional aviation is the trunk air indispensable complement. Regional aviation faces regional aviation major national policy, industrial

management, airspace management, aviation, airport operators, local government and other risks. While its high cost is also causing a loss of regional aviation, as shown in Figure 4.8.

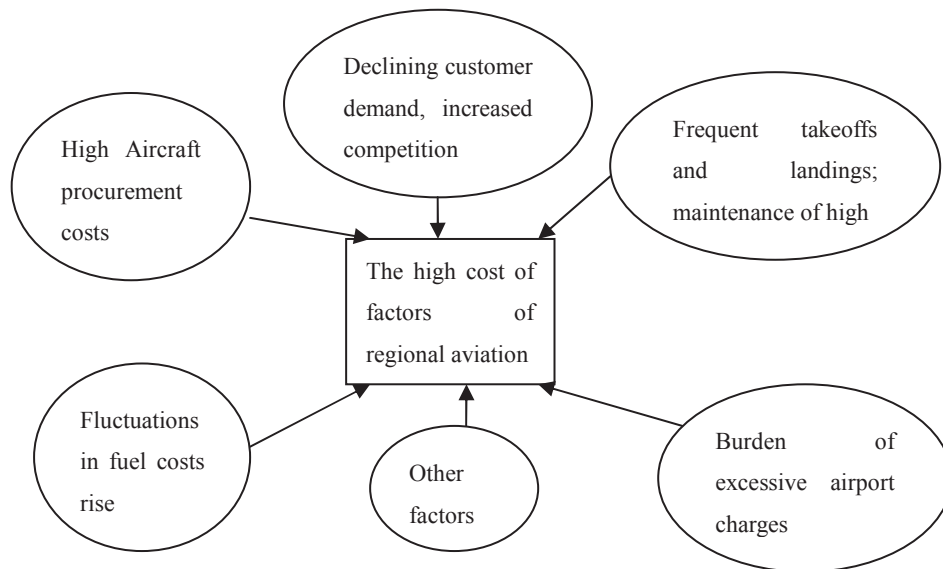


Fig.4.8 The high cost factor in regional aviation

The introduction of aircraft speed and growth rate greater than the growth rate of infrastructure and personnel training speed. In recent years, under the Chinese government guidance, enterprise introduction large of advanced aircraft, including Airbus and Boeing, the rapid growth in the domestic market, while domestic infrastructure and personnel training are seriously lagging behind the rate of growth in the aircraft.

Earnings often fluctuate. In 2008, Air loss of 9.15 billion Yuan RMB (7.47 billion jet fuel hedging), China Southern Airlines loss of 4.829 billion, China Eastern Airlines loss of 13.928 billion Yuan RMB (6.3 billion fuel hedging), the industry overall loss in 2009, the industry profit 7.4 billion, one important reason is that the gains derivatives positions, such as fee waiver and tax cuts, of course, is an important improvement in macroeconomic factors. This shows that the air transport industry, frequent and severe fluctuations in earnings, affected by other factors too.

The risk is unsustainable. Society and the natural environment is not sustainable strategy for the airline has an important restrictive risk, the airline based on the social and strategic nature of the risk of unsustainable on the basis of understanding. Text by Gerard Thomas • Research indicates that companies must be fully integrated in the strategic management of non-sustainable social and natural factors<sup>[82]</sup>. (Figure 4.9)

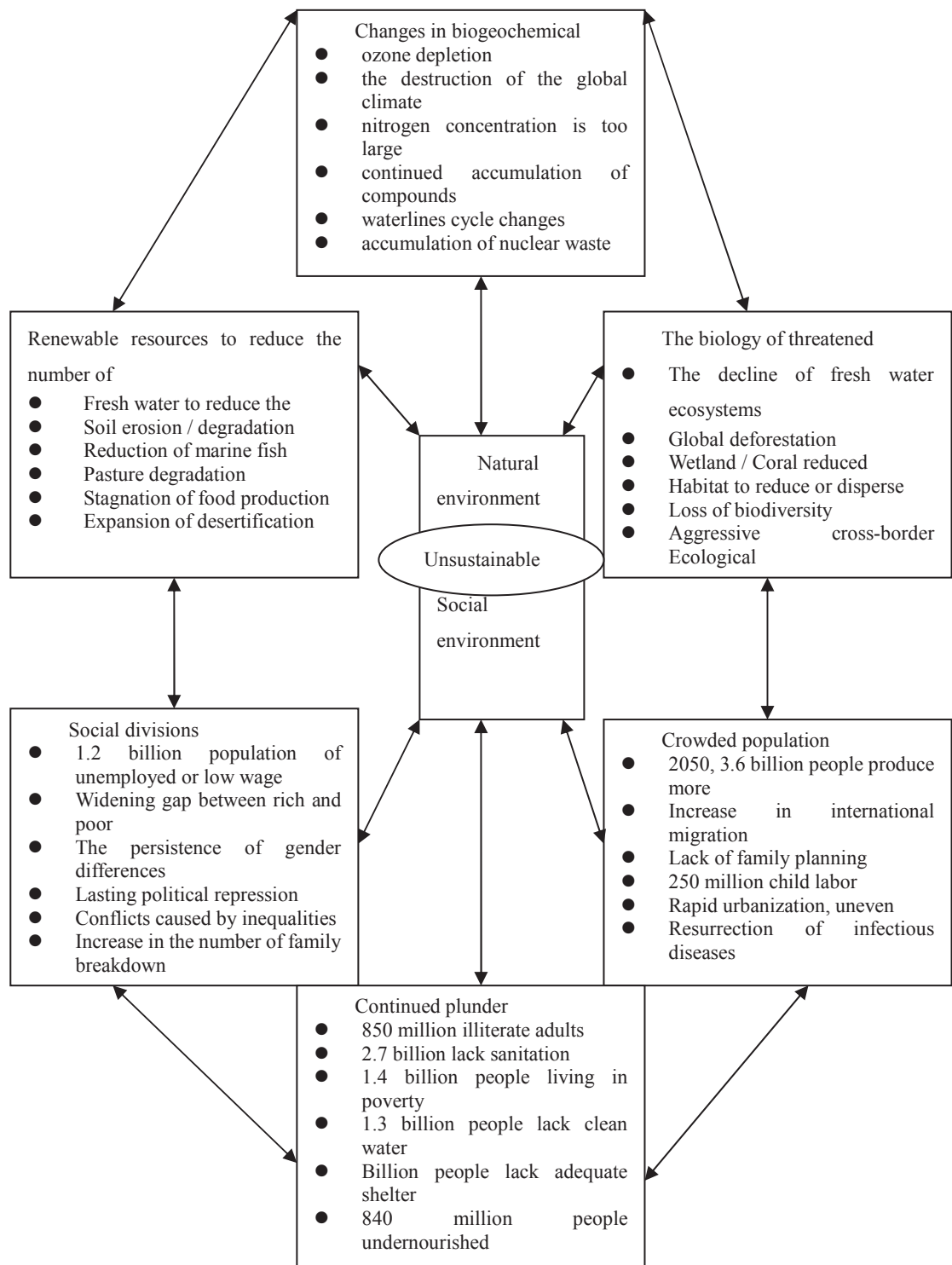


Fig.4.9 Unsustainable social risk

Air transport enterprises due spend a lot of oil, produce large amounts of harmful gases and a lot of carbon emissions, how to restrict the development of the aviation industry and environmental protection has become an important topic.

## (2) Strategic capability

Here's strategic focus is the ability to obtain business, the ability to integrate resources, when the enterprise has unique resources, companies have a competitive advantage; When an enterprise has the minimum resources, companies can develop

normally, and when corporate resources are not sufficient, the firm can't achieve business goals, strategic capability at this time factor into business strategy on risk.

### (3) Expectations and targets

#### □ Vision

In accordance with Chapter III for the vision of how to generate corporate strategic risk analysis, corporate vision in strategic risk resulting primarily from whether there is vision and whether there is scientific and rational vision of two angles.

According to Jim Collins's study <sup>[70]</sup>, the company's vision is the Everlasting One of the key characteristics of an enterprise without vision, as there is no waterway vessels, no direction and power, can only be floating in the sea until the storm was knocked over. In this paper, based on previous knowledge of corporate strategy, business is done around the start of the corporate vision. Corporate vision is to corporate strategic planning and strategic goals. Thus, for a business enterprise, there is no vision the fatal risk. This vision of the domestic airline companies have been studied, the current domestic airline business vision is summarized into a table. On the surface, each airline has its own vision. However, careful analysis has found that only Air China, China Eastern Airlines, China Southern Airlines and Shenzhen Airlines' vision is to have a certain meaning, reflecting the company's values, mission and business objectives. Description of the other airline's vision is more like a slogan, there is no real value and significance. According to the description of our vision for the airline and related literature, this paper presents a vision of enterprise risk identification model, as shown in Figure 4.10.

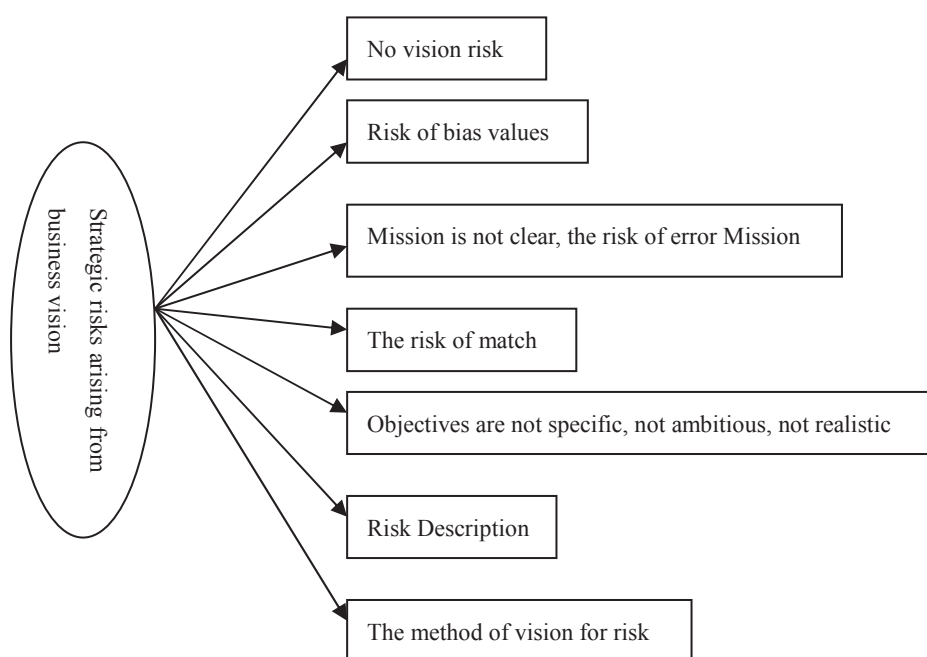


Fig. 4.10 Vision risk identification model

For air transport company, values can't produce bias and error, simply to maximize profit values is not suitable for air transport, because too many factors affecting the performance of airlines, too complicated, Air values (high level of service the public generally agree) is very appropriate, very suitable for the specific circumstances of Air

China, Air China is because of hoisting the national flag carrier, service state and the people are supreme values. Vision of matching risk exists in many companies in China, the vision of many companies are similar, in fact, a vision system is based on the specific corporate culture, history, system of governance, leadership style, and generated, many companies with their business development proposed does not match the vision. Another risk is worth noting that the method for vision, and some business leaders racking our brains to make a corporate vision, and some meetings to develop a vision, these methods are not scientific, in general, corporate vision is not created there, is formed through a gradual process, is the need to go through enterprise development through culture and precipitate out the form.

For China's air transport enterprises, through the analysis of risk and identify the company's vision, corporate vision development control and management of identified risks to be addressed, which is a long-term business development and strategic management is essential.

#### □Corporate Governance

Corporate governance mainly related to the issues such as governance structure and distribution of power. When the company's governance structure can't motivate employees, the company's development will be seriously affected. The company's strategic risk management as conditions of corporate governance structure is irrational, not suitable for business development needs.

#### □stakeholder expectations

The development of enterprises will inevitably involve many stakeholders, air transport enterprise stakeholders including the airport, customers, suppliers, governments and banks, etc. Each stakeholder has its own expectations and goals, focus to the airline point of view, when the stakeholders of the serious conflict of interest, or their expectations are not met, the airline will face the pressure of cooperation failure and bankruptcy, when stakeholders expect to translate into strategic risks.

#### □Business Ethics

Corporate social responsibility in business ethics is a hot spot in recent years. When companies do not comply with the basic business ethics, once by the consumer or the government found that its effect is lethal. For example, Sanlu milk powder incident lead to Sanlu Group went bankrupt, violation of business ethics is a profound lesson of.

#### □cultural background

Cultural background is an abstract concept, the enterprise where the countries, regions, cities, industry has a certain degree of culture, enterprise development and its cultural background when the repulsion, the firm will face the risk of the development. Hainan Airlines is one of the success factors in a firm grasp of the local culture in Hainan, Hainan Airlines led many publicly talked about, is dependent on the development of Hainan Airlines Hainan cultural heritage.

#### (4)Strategic assumptions

Assumption is very important, assuming that to a large extent determines the subject of researchers, practitioners awareness of the fact that a disciplinary research often depends on the fact that their basic assumptions. For management, the basic assumptions are more important than the assumptions of natural sciences. However,

there are very few people analysis, research and questioned management's assumptions. In the strategic management process, know about strategic management assumptions is very important.

#### □ Assumptions about business nature

Based on understanding the theoretical of the business nature, different types of carriers in different periods have different risk-based strategy, corporate strategic risk decisions by the firm's strategic goals, and the corporate strategic objectives determined by the nature of business.

Based on the theoretical understanding of the nature of business and the nature of China's air transport enterprise, the vision of empirical research, China's air transport is divided into state-owned airline companies (including state-controlled), private airlines and the airlines are three types of joint ventures. For such as Air China, China Eastern Airlines, China Southern Airlines and other state-owned airline in terms of services and people is the core of national targets, the maintenance of national, social stability and development is a priority, so all this will affect the risk of a firm's strategic risk; and for private airline in terms of more economic benefits from the business point of view to define the nature of private capital into aviation sole purpose is to profit, in profit can be developed on the basis of social responsibility, thus affect the economic goals factors will become a strategic risk.

What kind of airline performance of a truly successful? That is, the evaluation of the success of airline standards, this standard assumption is the basis for the strategic development of all airlines, but also to determine the enterprise value basis.

From a business perspective, the success and profit is certainly closely related, however, market share or sales revenue can be measured. On the company's internal management, the airline's success in obtaining good performance of a wide range of performance or satisfaction, that is to achieve a satisfactory goals, including sales, profits, market share, and labor to keep the stock prices, etc.; the company in terms of technological progress, success is often accompanied by new technologies, new procedures for applications, to overcome the resistance of production, which effectively reduce costs and achieve economic development; antitrust authorities, success means no use of the market dominance, there is no way to get through the inefficient economic interests.

From a social point of view, the airline's success criteria is achieving social welfare maximization, that is, passengers, cargo and mobility improved accessibility. In the current economic environment, the airline's success in creating and maintaining focus on the performance on the job.

Therefore, the success of the airline business and evaluation criteria should include social aspects, and social rights more important than when the weight of commercial point of view.

#### □ Environmental trends assumption

Firm's strategic management is based on the specific strategy environment, where the strategic environment, including industry, environment, conditions and so on. Liu Yuan Zhang who is an academician of Chinese academy of Sciences said that management must be suited to the condition<sup>[83]</sup>, while the situation is not the same, the

management on the one hand to fit the situation, but this can improve the situation. According to Peter Drucker's ideas<sup>[84]</sup>, the traditional assumptions about management science is no longer valid, it is now assumed to be the best time to make new, the traditional management assumptions, including the fact that two sets of assumptions for the management of

The first set assumptions of management principles form the basis of: the management of enterprise management; business should have, or must have an appropriate form of organization; companies should take, or the manager must take a proper way

Second hypothesis laid the foundation of management practices: techniques and end-users are static and known; manage the scope of the legal decisions; management of internal management; divided by national borders, the economy is relying on business and management the "ecological environment."

Since the development of globalization, competition, environmental uncertainty and other factors, the traditional management assumption is no longer suitable for management theory and practice, and the new generation of strategic assumptions for the business management is an inevitable trend.

#### 4.2.2.2 The conditioning of strategic choice factors into strategic risk

##### (1) Strategic direction and choose

Companies to complete the environment, their own ability, resources analysis, will determine the positioning of the enterprise. The next stage is the formation of strategy, this is called strategic choice. The first is the development of corporate strategy to determine the direction, then from the strategic options.

Strategic direction is influenced by the environment, enterprise development phase and policy makers and other factors. Early-stage companies need to make the strategic choice of healthy growth, development bottlenecks encountered when companies need to consider innovative development. The same decision-makers and decision-making on the choice of corporate strategy and the formation of a major impact, some enterprises are determined by the arbitrary number one corporate strategy, some rely on a strict team policy, and some businesses rely on a set of procedures to make decisions. In any case, when the company the wrong direction, choose the wrong strategy, companies can't achieve its strategic objectives.

##### (2) International

Civil secretary Li Jiayang put forward an international strategy that China's aviation shift power from big, to foster an internationally competitive network-based airline<sup>[85]</sup>. Some of the previous literature has analyzed, for the current Chinese airlines, even if the market, in the country still to have an international perspective. Many companies believe that their domestic market in the country, need to consider global issues, there are some fully localized domestic airlines, such as the auspicious Airlines, Sichuan Airlines, they really do not have a global perspective? Globalization is not just a phenomenon, not just a temporary trend, it is a system to replace the Cold War international system, is inevitable<sup>[86]</sup>. Globalization of capital, technology and information integration that transcends national boundaries, this combination creates a

single global market, to some extent it can be said is a global village. In a globalized world, the business will face a very large downside risks if we haven't a global perspective. To compete on a global scale we must follow the global standards for management and operation of business, any business needs of enterprises with outstanding performance in accordance with industry standards for their evaluation.

Global perspective is particularly important in the aviation field, because aviation is to promote the development of an important factor in the development of globalization, especially with the policy of further opening up of national airspace, flying over the border to compete is the most basic competition for airlines to speaking, fuel, foreign exchange, international aircraft, airspace rights will also become increasingly international, domestic airlines also need to be a world-class airlines to develop their own standards as a benchmark.

Globalization from the perspective of international corporate strategy is the strategic issues. International strategy is an inevitable trend when this perspective used to the China's civil air transport company. So take active or passive in international business strategy at the same time, their strategy is particularly important to identify risk.

In 12 domestic airlines, only Okair Air, China Express Air and Propitious Aviation haven't opened to international flights, and China Express Air and Propitious Aviation did not develop international strategy. Here first is a business strategy without the risk of development of international issues.

According to the current flight schedule Shanghai Pudong Airport, international flights from 46 airlines were carriers, including airlines of the Mainland 4, 33 foreign airlines, in addition to five Taiwan airlines, Hong Kong three airlines, Macau Airline 1. It can be seen, the international airlines have begun to enter the domestic market. Another factor is China's open skies policy and international open-door policy, China has with the United States, the European Union signed an open skies agreements with each other. It can be seen, even if China Airlines not abroad, but also bound to face international competition, whether operating on international routes, the development strategy for the internationalization is necessary, otherwise it will be competitive in the international mergers or bankruptcy. As for how successful internationalization of China's aviation strategy, expert Xie Sixin and Li Rong proposed the establishment of international competitiveness of China's airlines need to outward learning, to operate without borders, which is characterized as follows: global distribution, is not confined to individual countries and regions, the pursuit of global distribution; headquarters location dilute; global network strategy, standing cross-border global perspective to configure the company's value-added chain, from economies of scale, economies of scope both to form a global division of labor; through strategic alliances with the most rapid and lowest cost of sharing resources; out of narrow national pride, to develop global vision and breadth of the operator<sup>[87]</sup>.

Therefore, for international air transport business strategy, the following risks need to be identified and controlled.

□ Risk of country differences: In recent years Hainan Airlines to Europe as the focus of international strategy development route, while in other countries to postpone the construction of international routes. Because Hainan is concerned, the U.S. airline to

fly a long time and intense competition, coupled with the U.S. economy in recent years volatility factor. Thus, the domestic airlines in the international process must be distinguished on the international market, to find and develop an appropriate international route.

□ Risks of dependent own advantages. In the international process, the over-reliance on sources of state enterprise a comparative advantage or the advantage is very dangerous, so in the field of import and export, the air transport industry as well. In the air transport industry, international and national strategic premise is the country between the open skies agreement, however, companies can't over-rely on our government's support and advantages in the international competition to improve the enterprise's core competitiveness is the basis of international strategy success.

□ The risks of international approach. For different industries and companies, have different ways of internationalization, product manufacturing, many companies choose foreign direct investment, international mergers and acquisitions, such as Haier, China's direct investment in the United States, Lenovo acquired IBM, enterprise internationalization general way, including direct investment (including wholly owned and joint ventures), mergers and restructuring, import and export, franchising, strategic alliances, and for Chinese airlines in terms of the approach is more suitable for strategic alliances and joint ventures with foreign companies, and different approach also corresponds to different risks.

### (3) Diversification

Despite the practical and theoretical research has many of the arguments for diversity, according to the literature review earlier in this article some of the conclusions from the specific enterprise is unable to determine whether it should diversify, according to the results of this empirical study, almost all our air transport enterprises are carrying out a wide range, are based on air transport as the main, diversification of hotels, tourism, finance, airport, culture, logistics, import and export, aviation food, aviation training, a handful of airlines is not involved in real estate-related, shipbuilding, machinery and so on. From the company perspective, only Okair Air and China Express Air isn't diversification currently.

Air transport industry has a unique business background and business background, so accordingly there are some risks need to guard against and control, otherwise it will cause the failure of diversification strategy, which led to their overall strategic failure. Diversification strategy of choice must pay attention to the following aspects of risk.

□ Lack of overall strategic risk:

Diversified company must have a strategy beyond the specific business of the company, so that the company's strategic vision for the future with greater emphasis on the overall control strategy to avoid the business unit as a profit center is not, GE's four global strategy, service transformation, 6 Sigma Mary, e-commerce, these are not related to the specific business. Therefore, our diversification strategy, the airline in order to succeed, must have a strategy beyond the overall air transport.

□ Lack of learning ability and core competitiveness

Diversified company must have at the corporate level organizational learning and creativity emphasize the core competencies, core competencies to support the

diversification of business, or diversification will be to failure.

□ Lack of core business

For air transport enterprises, must establish a core air transport business diversification strategy, as compared to other industries in terms of air transport capital, technology, labor-intensive, there is also vulnerability and risk.

□ Distributed enterprise resources, loss of competitive advantage in the original risk:

Enterprises to enter new business areas, it will weaken the industry or the product of the original capital, resources, and management of R & D investment, and these are generally the core of the enterprise's main industry or product, so not only reduces the competitiveness of the original, also affect the new business support.

□ Management costs and risk management increase.

Corporate diversification strategy reflects the diminishing marginal returns, and the law of increasing marginal costs, enterprises to enter a new area or develop a new product, always with the original business in the technology, processes, marketing channels, personnel requirements, etc. There are different degrees of difference, enterprises lack of management experience and coping skills in the new business, integration, division of labor, coordination and learning costs is high.

□ The risk of new industries to enter and exit barriers

New industry or business will inevitably bring new risks, and in the business to opt out, often there are investment funds, equipment, personnel costs can be recovered and learning situation.

□ Airline can't take advantage of economies of scale and scope of the effects of risk.

Air transport enterprises in a wide range of important aim is to achieve greater performance, diversification brought about by economies of scale and scope effects, by air, travel, hotels, etc. between the economies of scale to improve profitability and promote each other, but When the diversified businesses of the cost is greater than the benefits of scale, the strategic risk arises.

#### (4)Stakeholder strategy

China's air transport enterprises, Sichuan Airlines made it clear that only a stakeholder strategy, according to the literature, the success of the U.S. Southwest has been attributed to the successful implementation of the parties with the interests of blue-chip strategy, air transport companies reached with all stakeholders, balance of interests. China's current stage of development and business conditions have shown that air transport business strategy for stakeholders is extremely important. Based on the literature review section of stakeholders to discuss the strategy for China airlines concerned, their main stakeholders include: customers, employees, suppliers, government, competitors, etc., and establish and implement such a strategy is relevant need to control the risk, otherwise it will result in the failure of corporate strategy.

The risk there isn't stakeholder strategy. Most enterprises do not develop and implement strategic stakeholders, the interests of all parties with common interests to enhance the balance and is important in terms of airlines, handled the relationship with suppliers and will bring the rising cost of raw materials shortages; customers are not satisfied with the direct reduction in income, and further lead to brand damage; government relations handled properly will lead to not enjoy the support of the

government and concessions; employee dissatisfaction will result in reduced efficiency, will also damage to brand value.

There is different relationship between the different stakeholders in the program. For airlines face different stakeholders, different common interests between the parties, not necessarily the same value, so take the relationship to maintain programs should also be different, but there are some must be unified, such as win-win principle.

The risk there isn't airport relationship strategic. The first is between the airport and airline strategic partnerships, as air transport services on the supply side; but all the airport's aeronautical revenues from airlines, so the two sides is the customer relationship; in the control of resources and business facilities, use of resources, both there are still some degree of competition. Airport face a number of airlines can be divided into base of airlines and non-base airline. Base for an airport the airline has an important impact on the volume of business, the airport traffic generally accounts for more than 50%. Non-base airport for airlines to increase the airport's navigation points, to improve the airport's position in the aviation network for travelers and shippers more choices. Airport operations have an important impact on airline operations. Since the majority of the airport's operations too much reliance on a base of airlines, allowing these bases Airlines signed a related contract with the airport, the airport charges, facilities, resource utilization and allocation of resources has a business operating force, hence, have a certain control of the market. If a base for airlines within the airport master control of the market, it will weaken the degree of competition between airlines, airports to reduce the efficiency of resource use, and the airport authorities should be avoided for the control of the market base for the airline's control. From the international aviation industry trends, airport flight allocation of resources will be more market-oriented, more flight time coordinator independence. China airport's flight time is still in the administration, and that this posed a challenge for the airline, how to handle the relationship with the airport is particularly important.

Therefore, airlines need to control the relationship between risk and the airport, how to keep balance developing in the competition relationship, partnership relationship and customer relationship is the key to control the risk of relationship.

Air transport companies need to balance the interests of stakeholders including employees, customers, competitors, government, shareholders and suppliers. Table 4.2 shows the stakeholders need to pay attention and strategic measures.

Table 4.2 the risk factors of stakeholders strategic and relationship

Stakeholders	Risk	Relationship between the target
Suppliers	Supply shortages, rising costs	Lasting benefit and win-win
Customer	Loss of customers, brand deterioration, decline in revenue	Value is greater than the price and service provided to bring the customer loyalty
Staff	Efficiency, costs, brand deterioration	Employees and businesses to develop a good system
Government	Subject to policy restrictions, reduced or no government support	In support of the Government, and balance game
Competitors	In the competition lead to higher costs, lower	Competing

	earnings	
Shareholder	Divestment or failure of the governance structure of shareholders	Harmony

#### (5) Strategic Alliance

Strategic alliance in the field of air transport has certain specificity, air transport enterprise strategic alliance may be decisions of an enterprise life and death, and each airline must be through strategic alliances with other agencies or airline alliance, the maverick in the air transport the industry does not work. China's current three major airlines joined by different forms of international alliances, Hainan Airlines has just won the title of SKYTRAX four-star airline, will soon join the international coalition in a three. China's air transport strategic alliance is divided into two categories: International Union and the domestic League, the League mainly refers to join international alliances, and alliances between international airlines and domestic alliances mainly refers to the national local government, banks, airports and airline alliances.

Strategic alliance with two-sided risk characteristics, for strategic risk management, benefits of complementary resources, risk sharing, economies of scale, synergies, increase revenue, reduce costs, breaking limitations and other strategic consideration, the development of strategic alliances become an important strategic content, you can reduce the risk diversification. However, when strategic alliance help companies deal with risk also bring new risks to the enterprise.

#### (6) M & A

Due to the impact of development history, management experience, industry structure and other factors, China's civil aviation business mergers and acquisitions strategy faces serious challenges and risks. The restructuring of the three major domestic airlines which carried out in accordance with national policy-oriented have been completed, and the recently completed restructuring of China Eastern Airlines and Shanghai Airlines raised the concern of the industry, so concerned about the merger and restructuring risk is important for the success of the strategy. According to the research, mergers and acquisitions of the three airlines are in accordance with national directives and policies, but for other companies, they are from their own point of view. For the mergers and acquisitions industry, they are basically within the aviation industry mergers and acquisitions and restructuring.

There are the following risks we should take into account from the overall industrial structure: the number of aviation companies are many but smaller, less powerful, difficult to create scale economies, coupled with the cost of management is higher, thus the economic efficiency of enterprises is not very satisfactory; the allocation of transportation resources of China's civil aviation is repeated, and the organizational structure is relatively backward; The barriers of entering aviation is lower, but the exit barriers is higher, leading to excessive competition and monopoly industries co-exist. Many companies which operates on the same route repeatedly is not uncommon, such as Japan, Fukuoka City, which only have a few hundred thousand people have Air China, China Eastern Airlines and China Southern Airlines to competing for the route;

This resulted in the plight of mergers and acquisitions and restructuring. The main strategy risks of China's air transport business are as follows:

The motive risks of M & A: The ideal result of mergers and acquisitions is to achieve a win-win or multi-win goal, and in the domestic airline mergers is in the presence of motive risk. For example, airlines can get rid of the bank debts through changing brand for the purpose of government financial and tax incentives; In order to avoid blaming for failure responsibility, business leaders often implement a number of acquisitions to cover up the fact; The strategy design is hasty or even false because of satisfying the contents of mergers and acquisitions which proposed by SFC; blinding worship of economies of scale, and in the absence of the premise of strengthening the management, many companies merge blindly.

The risk of government action: Because the development of industry is not mature enough, the government intervention for the merger and reorganization of civil aviation is strong. And even some civil aviation business merge under the executive order of government, as some local governments consider social and political reasons rather than the economic factors to strongly require the mergers and acquisitions of company. In 2002, three groups restructuring are led by government, Yunnan Airlines which is good performance is assigned to the Eastern Airlines. But Eastern Airlines have been losing for three years after restructuring, and Yunnan Airlines has not been developed under Eastern Airlines subsidiary.

Integration risk: The effect of M & A relies heavily on the integration of the reorganization. The consolidation includes the following aspects: first, maintaining the consistency of the strategic operation and management institutional; Second, the reasonable adjustments for human resources and organization agencies of the merger company; third, restructuring the accounting and production factors; fourth, and to achieve the integration of corporate culture.

#### (7) Cheap airline

The study divided airlines into network-based, cost-based, network-based regional and charter airlines. This paper thinks that low cost type can be easily misunderstanding by the industry and researchers. Industry researchers' thinks low-cost airline model should be called "cheap type". Spring Airlines is China's low-cost carrier, this can lead to the understanding risk of cheap strategy.

The use of low-cost is the necessary means for the airline company. In the premise of safety and quality, the enterprise controls the cost by improving management efficiency, human resource management and strategic coordination. Companies must continue to improve operational efficiency and enhancing competitiveness by reducing unnecessary costs, which is inevitable in the competitive market, except in monopolistic market, because in the monopoly market it is not necessary to focus on reducing cost. Therefore, low-cost strategy is a strategy that all airlines must be used, and it is one of the direction of enterprise development.

Low-cost airline model is based on three cores: stimulating the market, creating new customers and driving the price-sensitive passengers for more frequent flight; the implementation of strict cost control, to maintain low fares; To use the capacity and effective flight preparation, so that each aircraft flight can be fully and reasonably using.

If it is out of these three cores, it will be a risk.

The Representative of low-cost in domestic airline is Spring Airlines, and it is also a private airline. Although several major state-owned domestic airlines is stating support, monopolizing the resources and have financial strength and other advantages, Spring Airlines has blazed a more profitable route. In order to be successful, Spring Airlines implemented a high degree of cost control, including single model (A320), single class (economy class), point to point routes, reducing the investments on ground facilities, maintenance and training, the daily aircraft utilization rate is 13 hours which is the highest in the domestic. Meanwhile, Spring Airlines removed some additional services which increase the cost, such as not providing catering; baggage allowance is 15 kg, the use of Internet sales to reduce sales costs. In 2009 when the economic situation is intense, company executives' collective pay were cut by 30%, which reflected a good flexibility.

Spring is initial successful for the low-cost strategy, however, not every airline can be successful in low-cost strategy. There are risks for low-cost strategy as follows.

(a) The risk of scale benefit. Budget is often the strategy that private aviation wants to take. There is a lack of scale benefit in the certain, such as on the most important aircraft purchases, large state-owned airlines can purchase aircraft in bulk to reduce the cost of a single aircraft. But due to the constraint of the number and mill type, the budget cannot get scale benefits. And this also exists in the fuel territory.

(b) Infrastructure risk. In domestic there is lack of the necessary airline terminal, the terminal user fees generally accounted for 11% of total cost while only 3% to 4% in foreign developed countries. Now, only Zhengzhou is emphasis on constructing low-cost airline terminal in the expansion engineering in China.

(c) Imitative risk. Low-cost strategy does not have the characteristics of the core competitive advantage in itself, so how to maintain sustainable and profitable is very important. Low-cost strategy can be easily imitated, Lufthansa set up a branch easily compete with low-cost airlines which are exhausted.

(d) The risk of customer demand. When the focus of customers shift gradually from price to the product's brand image; personalized service, the price advantage of low-cost airline cannot be reflected.

(e) Policy risks. According to the "price reform program of the domestic air transport aviation", the domestic airline allowed fares go up from 25% to 45% of the benchmark price. While the benchmark price of domestic air transport is 0.75 Yuan per kilometer for one person. Besides, the domestic air transports have higher taxes and other charges; these are the risks of low-cost airline development.

(f) Fuel risk. For low-cost airline, the proportion of fuel costs in total cost is much higher than the general airlines. Because other costs can be reduced by the method of management, but fuel costs are beyond the control of the company. When the fuel price is high, the international routes can increase fuel surcharges to offset part of the fuel costs increasing, but due to the rigid, complex and unresponsive oil management system, the domestic airlines reflect slowly.

Table: the oil cost account in total cost of airlines in 2007

Air China	China Southern	China Eastern	Cathay Pacific Airways	Singapor e airlines	Lufthansa	United airlines
36.22%	34.55%	35.08%	36.42%	36.29%	17.14%	26.19%

Source: ShenYin Wanguo securities institute in 2007

(g) International competition risk. As the open policy and globalization, the internationalization is inevitable. At present in the Asian market, Singapore low-cost airline Jet star has entered China market, and Malaysia Asia Air entered early in 2007. So far only Spring Airlines operating in the country is facing a huge risk in international competition. Risk is also a driving force, which prompted spring to step up to take the initiative to enter the international market.

#### (8) Competition

While competition is generally considered the business level strategy, because of the special nature of the air transport industry and the importance of competitive strategy for air transport enterprise, it is regarded as an important corporate strategy. Each of our airlines have developed a competitive strategy, and in recent years, the price war between airlines also allow us to see that the fierce competition do not only exist within the air transport industry, but also within other modes of transport, such as high-speed rail, long-distance trucking and so on.

(a) Understanding risk of compete with high-speed rail. At present, in domestic there are formed high-speed rail such as Beijing-Tianjin, Chengdu-Chongqing, Changsha-Guangzhou, Zhengzhou-Xi'an, Hefei-Nanjing, Hefei-Wuhan, Wenzhou-Fuzhou, Fuzhou-Xiamen. This especially after China's Beijing-Shanghai high-speed rail opened brings greater impact to civil aviation which is in the former monopoly situation. According to China's civil aviation experts Zou Jianjun said, the competition cut-off point between civil aviation and high-speed rail is 990 kilometers, or 3-4 hours, when more than 990 km or four hours, aviation has obvious advantages, whereas high-speed rail has more advantages, more specific technical and economic characteristics can be seen in Table 4.4.

Table4.4 The comparison between civil aviation and high-speed rail

Technical and economic index	The economic characteristics of technology			
	Railway		Civil aviation	
	Evaluation	Contents	Evaluation	Contents
Speed	fast	200~300	faster	800~900
Transport capacity	Strong	1600~1800 person	Weak	The load of main airline is 500 person
Quality	High	Can transport in whole day	Low	Can be affected by the bad weather
Mobility of the route	Bad	Restricted by the terrain	Good	The ability to across natural barriers is strong

Security	Good	Systematic, information, and high-tech security guarantee	Good	Mature, information security guarantee
Service accessibility	High	Time and cost is lower for tourists	Low	Time and cost is higher for tourists
Investments	multiple	One billion for per kilometers	less	The lifecycle is short, the investment is less
Land occupancy	multiple	4.5 million Mu, New route is 1000 kilometers,	less	1 million Mu
Transportation cost	Low	High-dense transportation	High	Transportation capacity is low
Energy source	Diversity	Fire, water, nuclear electricity	Signal	Oil, and affected by the market
Energy consumption	Low	The energy consumption is 1/174 of civil aviation	High	The energy consumption is higher

However, the relationship between high-speed railway and civil aviation is not absolute complete, their relation is competition and promotion, high-speed rail have the promoting effect on structural adjustment and network layout improvement of civil aviation, forcing airlines to improve the optimization process and service quality. While the formation of aggregates and network of high-speed rail further improve the country's transportation system. Moreover, although the clients of high-speed rail and air services have some overlap, but they can be also complementing each other, especially the complementary effect between high-speed rail route and main line is obvious.

For the competition between high-speed rail and aviation industry, China Eastern Airlines Chairman Liu Shao Yong think that, the effect of high-speed rail for aviation is obvious in 500 kilometers, and most routes will be canceled; 500-800 km is a significant impact, high-speed rail will take 30% to 40% of passenger traffic; 800-1200 km will take 15% to 20% of passenger traffic. However, in more than 1200 km of routes, the advantages of aviation are obvious; we should give full play to their strengths.

The opening of high-speed railway will further strengthen its efforts to adjust the short-haul airline route structure, compression the overlapping high-speed railway, pursuit empty iron seamless, thereby enhancing the rail and air transport capabilities and benefits. Train tickets and airline reservation networks is in parallel to achieve the convenience and benefits of both services. The constructing relationship between civil aviation and high-speed rail make great contribution for the future collaboration.

(b) The competition between national and foreign airlines. In May 2007, China and America modify agreement on China-US air services agreement in 2004. The new agreement regulated that increasing passenger capacity by stages and areas, the direct airlines from the central, western, Northeast and Hainan of China to the U.S completely

open.

Civil Aviation Authority of China Eric in the Avenue similarities wrote that, the characteristic of scale and scope economies of aviation industry will become more apparent, and becoming the super carrier is a common goal. At the same time, the policy of open skies has spread to China. And it has signed 106 bilateral agreements, there were already more than 90 airlines fly to China. At the same time, various forms of foreign capital enter into China's aviation industry, such as joint venture, cooperation, acquisition, particularly blue-chip large-cap stocks. Therefore, the characteristics of international competition will be more and more obvious in China's domestic aviation market.

With the open skies policy and the globalization, China's domestic airlines will face strong competition from international airlines, so the international competition risk will be further intensified.

(c) The risk of a price war. Price wars are a common mean of competition in many industries, air transport enterprises are no exception, especially after the low-cost airlines representative-Spring and autumn joined in, the discount tickets are commonplace. However, the price war is a double-edged sword, while the consumers are benefit from it; the vicious competition will decline in profits which will harmful to the development of the whole industry. Thus, China's airlines should start from the other strategies, such as auspicious airline concentrate on high-end business customers, Deer focus on the charter market segments; compete from improving service and enhancing management. Vicious competition will impose fatal risk.

There are two reasons for most Chinese enterprises obsession price war. Firstly, the industrial structure of China is severe light, and most enterprises is in the low-level competition. Secondly, considerable numbers of Chinese companies are accustomed to rough competition; there is no other competitive strategy. However, for air transport enterprises, there are some deeper causes and risk.

#### 4.2.2.3 The conditions for shifting from implementation factors to risk strategy

The strategy can play a role only through the implementation. And it expresses by the relationship between the organization's daily operation and various departments. When implementing corporate strategy, there is the absence of supporting resources or effective supporting organizational structure or change strategy or cultural support. the implementation of corporate strategy will be seriously affected. Then, the implementation of the strategy will turn into a strategic risk.

##### (1) The allocation of resources

The aim to develop and post strategies is to implement, and it needs obtain, basic and unique resource to support. Basic resources ensure the survival of enterprises. But in the era of fierce competition, only with the basic resources is not enough, you need to find unique resources and it has critical impact on the organization<sup>[88]</sup>. When companies don't have basic and unique resources, their strategy are likely to fail, then the allocation factor at this time is converted into corporate strategic risks.

##### (2) The organizational structure

Organizational structure is the basic of organizational significance and survival mechanism. It is the form of business organization such as business goals, coordination,

personnel, job, relationships, information and other organizational elements of effective combinations way. That is to say, it decomposes the company's target to jobs, and it is an organic whole which formed by many departments' vertical and horizontal system<sup>[89]</sup>.

Many scholars have repeatedly studied the relationship between organizational structure and strategy. When an organization established strategy by management, how to provide effective resource allocation by organizational structure has become the key issue for the strategy successful. Therefore, the organizational structure ensures the successful implementation of the strategy, but also brings risks to the enterprise.

### (3) Changes in business strategy

The implementation of strategy will inevitably bring changes to the enterprise. When the company worked out a strategy, and design appropriate organizational structures and processes to achieve it, this does not mean the end to achieve strategic objectives. The process of implementation will encounter resistance and revolt, because people always have a inertia tendency and tend to maintain the existing way to do things [88]. At this time, the enterprises need manage the strategy change. When the strategic change can not be successfully carried out, the strategic change will seriously affect the implementation of corporate strategy, strategic change at this time transformed into a risk.

### (4) Corporate culture

The matching between corporate culture and strategy implementation is the necessary condition for the success of strategy implementation. Any strategy implementation is in a particular corporate culture. There are two corporate culture they are heterogeneous and compatibility culture. Heterogeneous culture is a culture that has its own characteristics and advantages, but relatively difficult to integrate with other organizational culture, so heterogeneity culture is matching with the enterprise competition strategy; compatibility is a culture that be good at integration, relatively easy to fuse with other types of organization, thus such a culture is often matched with the cooperation strategy. For air transport enterprises, because of its alliance is more important than competitive strategy, so compatibility culture is more suitable for airline. Therefore in the process of strategy implementation, enterprises should focus on corporate compliance culture building.

Here the risk of corporate cultures are as follows, such as lack of corporate culture; an improper building manner; misunderstanding for corporate culture and so on. For our airlines situation, the enterprises have short growth history and lack of corporate culture generally. Second, many corporate exists errors in culture building. The words and deeds of many companies' founders are regarded as the corporate culture, and some companies even copy other successful business culture.

## 4.3 Conclusion

The primary task of the strategic risk management is strategic risk identification, and the identification principle included risk probability, loss size and controllable. This chapter uses the work of decomposition and expert interviews to decompose the

strategic risk into three-level primary risk factors (strategy positioning, choice and implementation) and 16 secondary risk factors. Strategic risk factors can be infinitely decomposed, however, take into account the feasibility and operability, this article only study the three level and 16 secondary factors. Strategic risk identification included two core elements, one is strategy risk identification, and the other one is the condition analysis that strategy risk factors turn into strategic risk. This chapter focuses on 16 secondary risk factors and is the basis of further study.

## **Charter 5 Risk Evaluation for China Airlines**

This chapter describe the concept and means about risk evaluation, then to evaluate risk from the probability of occurrence affecting magnitude and non-controllable. According to the results of the strategic risk assessment, corporate take different treatment options for different strategy risk. According to this chapter, the Chinese air transport industry and specific companies can have a clear strategic understanding of strategic risk and their priorities. The last step is to manage the strategic risk.

### **5.1 ANP and AHP**

Analytical Hierarchy Process (AHP) has been proposed by the American mathematician T.L. Saatty in the 1970s. It is an evaluation method that is used in combining qualitative and quantitative analysis and widely used in economics and management fields<sup>[90]</sup>.

The basic idea of AHP is to decompose the complex problem into several levels and in the lowest level to reached weight by multiple comparisons. Then calculating from low to high through the layers analysis, and finally calculate the weights of each program's total goals which providing decision-making basis for decision-makers.

The basic steps of AHP in the application of risk assessment are as follows:

- (a) Establish a hierarchical structure model according to the evaluation objectives and evaluation criteria.
- (b) Structure comparison judge matrix.
- (c) Determine the relative importance of project risk factors, and does the consistency test.
- (d) Calculate the overall important degree of project risk.
- (e) According to evaluation criteria and overall important degree to make decision.

AHP has three basic assumptions: there is no dominate feedback between the different levels; there is not existing interaction and domination between different internal elements; there are only dominate relations between adjacent layers, and indirect dominate relations cross-layer elements.

Due to the there basic assumptions of AHP, its using scope is greatly reducing. In actual practice, there are dominate feedback between different levels, and there are interaction and dominate function in the internal elements. Besides, there are a dominant relationship between adjacent levels and cross-layer element also exists dominate relations, so the U.S. mathematician T.L. Saatty made improvement on the basis of AHP, and the network analysis have breakthrough three assumptions. After improving, this method is suitable for the analysis of this article.

### **5.2 The strategy risk analysis of China's airline transport enterprises**

Based on the principles of analytic hierarchy process (AHP) and network-level analysis (ANP), combining with the strategy risk factors identification which

completed in the fourth chapter, this chapter adapt network-level analysis to evaluate strategic risk of the Chinese air transport enterprises. The data is mainly from the five experts in aviation field.

### 5.2.1 The construction of ANP model on strategy risk factors

From the research of risk, traditional risk analysis identified the two basic measurable criteria is the probability and loses of risk. But for the strategic management of risk factors, these two factors can not fully reflect the strategic risk essence. So there are scholars' analysis risk from the probability of risk, losses, unpredictability, uncontrollability and transferability. According to the study of strategic risk, this article proposed that strategic risk control property already contains predictable and transferability. So in the constructing of ANP model, rule hierarchy will use probability of occurrence, losses and uncontrollability.

In the fourth chapter of the strategic risk identification study, there did not study on the relationship between all directions' factor. In fact, there exists mutual influence between primary and secondary risk factors. And this is also a reason why this article chooses ANP to analysis. The ANP model is shown as Table 5.1.

Table5.1 The list of strategy risk

R1	Strategy positioning	R11	Environment
		R12	Strategic capability
		R13	Expectation and objects
		R14	Strategic assume
R2	Strategic choice	R21	Development and choice
		R22	Internationalization
		R23	Diversification
		R24	The strategy of stakeholders
		R25	Strategic alliance
		R26	Re-organization and merger
		R27	Low-cost strategy
		R28	Competition
R3	Strategy implementation	R31	Resource matching
		R32	Organization structure
		R33	Strategic change
		R34	Corporate culture

Thus establishing strategic risk assessment model as Figure 5.1 shows. This model is a multi-level, multi-criteria. The rule hierarchy includes risk probability (P), loss (L) and uncontrollability (U), the network layer has three interacting factors: the strategic risk positioning R1, strategic choice R2 and strategy implementation risk R3.

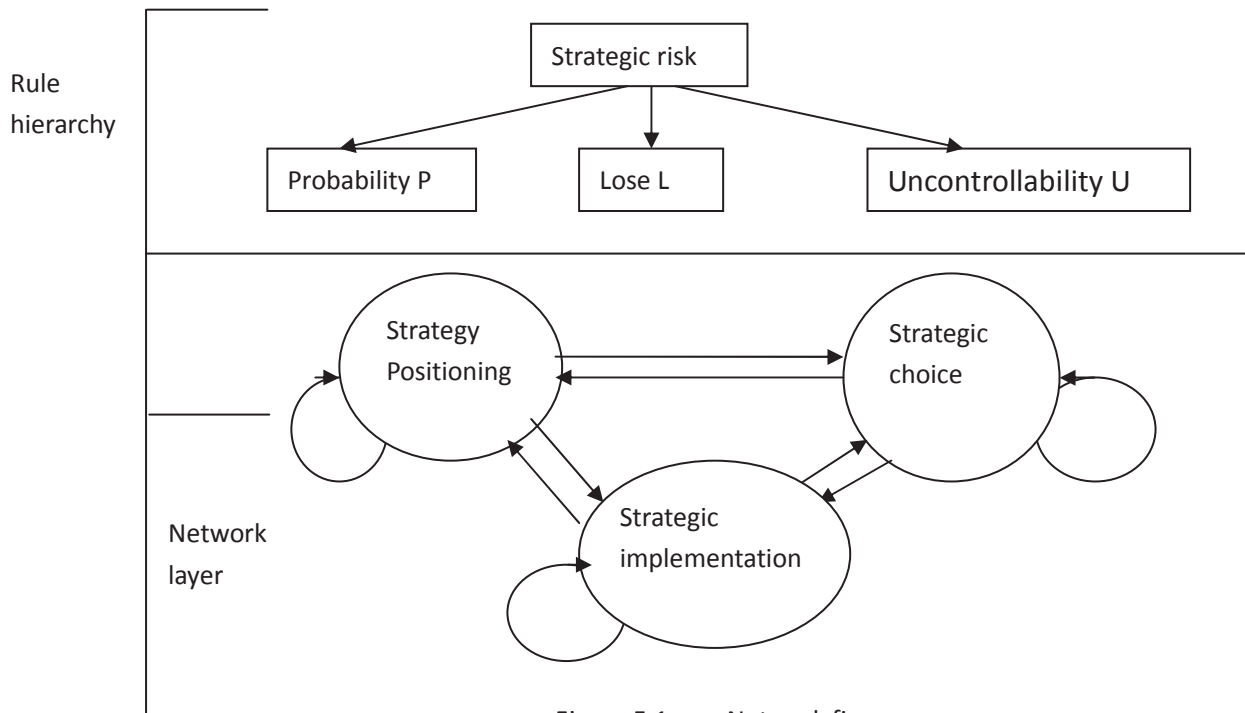


Figure 5.1 Network figure

### 5.2.2 Weight determination and

This article use 1-9 ratio scale method to obtain the determine matrix through experts interview. According to the needs and realities of this article, the paper interview five experts on air transport industry in domestic, and input the interview into software. These five experts are executives and managers of Civil Aviation of airline. They have engaged in the practice of civil aviation management, business strategy for many years, and can make accurate and authoritative judgments. As the network analysis method is very complicated, we use Super decisions to calculate which was developed by William J.L Adams and Rozann Saaty. Specific calculation can be seen in Appendix three, and the result was shown in Table 5.2.

Table 5.2 The sorting of strategy risk of airline transport enterprises

	Strategic risk	Weight	Sorting	Levels
R33	Strategic change	0.36929	1	Strict control layers
R11	Environment	0.34198	2	
R21	Development and choice	0.2675	3	
R31	Resource matching	0.25649	4	
R13	Expectation and objects	0.25148	5	
R27	Low-cost strategy	0.22045	6	Control layers
R14	Strategic assume	0.22018	7	
R34	Corporate culture	0.20193	8	
R22	Internationalization	0.19605	9	
R12	Strategic capability	0.18636	10	Focus layers
R24	The strategy of stakeholders	0.18462	11	

R32	Organization structure	0.17229	12	
R25	Strategic alliance	0.06874	13	
R28	Competition	0.0336	14	
R23	Diversification	0.01692	15	
R26	Re-organization and merger	0.0121	16	

Table5.3 The list of strategy risk

		Risk factors		Sorting
R1	Strategy positioning	R11	Environment	1
		R12	Strategic capability	4
		R13	Expectation and objects	2
		R14	Strategic assume	3
R2	Strategic choice	R21	Development and choice	1
		R22	Internationalization	3
		R23	Diversification	7
		R24	The strategy of stakeholders	4
		R25	Strategic alliance	5
		R26	Re-organization and merger	8
		R27	Low-cost strategy	2
		R28	Competition	6
R3	Strategy implementation	R31	Resource matching	2
		R32	Organization structure	4
		R33	Strategic change	1
		R34	Corporate culture	3

According to the final sorting of strategy risk factors in Table 5.2, the sorting are as follows: strategic change, environment, development and choice, resources matching, expectations and objectives, low-cost strategy, strategic assume, corporate culture, internationalization, strategic capability, strategy of stakeholders, organizational structure, strategic alliances, competition, diversification, re- organization and acquisitions.

According to the actual situation and the results of this article, the paper regulate strategic change R33, environment R11, development and choice R21, resource matching R31, expectation and objectives R13 as the the strategy risk in strict control layers, it can be seen in figure 5.2.



Figure 5.2: The layer structure of strategy risk

The first category is strictly control layers of strategic risk: strategic change R33, environment R11, development and selection R21, resource matching R31, expectations and objectives of R13.

The second category is the control layer of strategic risk: low-cost strategy R27, strategic assumption R14, corporate culture R34, internationalization R22, strategic capability R12.

The third category is the focus layer of strategic risk: the strategy of stakeholder R24, organization structure R32, strategic alliances R25, competition R28, diversification R23, re-organization and acquisition R26.

According to Table 5.1, in the strategy positioning risk factors, the environmental factors are considered the biggest risk factor; in strategic choice, development and selection, low-cost strategy and internationalization is considered the most important. In the implementation factors, strategic change is the biggest one.

### 5.2.3 The explanations of strategic risk factors' weight.

#### (1) Strategic change

The impact of air transport industry strategic change on the business is considered to be the largest, where the change is divided into active and passive changes. Strategic change will force enterprises to have to re-engage in strategic positioning, re-equipped with resources, making it the largest strategic risk.

#### (2) Environment

Air transport industry is a fragile industry, highly sensitive to environmental change. The environment of political, natural, technological and legal will bring a huge risk to the business operation and development.

#### (3) Development and Choice

The development is undoubtedly important to business. If the direction development

is deviation or the enterprises choose the wrong strategy, there will be a huge business risk. For domestic airlines, there are major strategic direction as follows: whether to choose to enter the international route, which type of operating mode do enterprises select (network-based, region-based, low-cost type, business type, etc.), and whether introduce the equity of government.

#### (4) Resources matching

The air transport is a industry which needs tremendous resource, so when resources cannot meet business requirements, the risk is enormous. The main strategy resources of Air transport are airline, human, fuel, financial and government support resources. The success of the airline's strategy relies on the variety resource matching. The reason that resource matching considered one of the most important strategic risk is mainly based on the scarcity of resources and severely competition.

#### (5) Corporate culture

The history of China's airlines, particularly private airlines is very short, less than 10 years development history. Corporate culture is guarantee of the strategy implementation, and the corporate culture need to be accumulated and built. It can't form quality corporate culture in short time. The risk of China's airlines corporate culture is as follows:

##### (a) Ignore the corporate culture.

There are various reasons that many companies ignore the importance of corporate culture. They think that culture is dispensable.

##### (b) The wrong way to build corporate culture.

Some companies regulate the thought of leaders as corporate culture; some companies believe that corporate culture will naturally form. And others develop corporate culture as doing companies plan. All of this will bring risk to the strategy of enterprises.

##### (c) Changes will influence the corporate culture.

The strategy of China's Eastern Airlines changes frequent, so do the corporate executives. This is harmful to the corporate culture building, and it is difficult to form lasting corporate culture.

#### (6) Strategic alliance

Because the development of airlines operating needs great resource, companies must join or establish strategic alliances with the outside world to gain more resources and support. However, strategic alliances also bring the risk of cost, autonomy, stability.

(a) From a cost perspective, the cost-saving advantage of the strategic alliance is relatively small. Many airlines do not consider the cost of join or withdraw from the Union, and these costs include information platform technology, system integration, standardized business processes, held consultative meetings, etc. Therefore, for a small airline, the cost of entering into the alliance is great; the company should join alliance considering their needs and actual situation instead of blindly choosing.

(b) Many companies rely on alliance. The alliance between airlines will bring certain benefits to members, but the distribution of benefits is uneven. In order to gain more benefits, companies must strengthen its core strategy, including route network, fleet building and flight frequency. Only strengthen their own capacity building, can they get

rid of the Union reliance.

(c) Airlines may lose their autonomy and flexibility after joining the alliance. The alliance with other airlines will be restrict, and the sunk costs of training, IT systems and marketing and to leave or replacing alliance will reduce the flexibility.

(d) The instability risks of strategic alliance. Many members the alliance will cooperate within the Union's members, but also with the Union's external cooperation, so the Union members often cannot share a competitive advantage and management information. Meanwhile, because of different target, cultural and decision-making, there will have conflict between the members. Therefore, there are some instability of strategic alliance, including the league's instability and the instability of cooperation among the members.

(e) Integration risk of system. Each airline thinks that their system is the most feasible, consider them as the core, and hope other companies to make a seamless connection with them. This is very dangerous; the only way for the dominated corporate is to control others and to impose its system integration.

(f) The risk of lacking shared vision. Establishing a shared perspective which can maximize the ability of alliance members and resources using is exceptionally important for strategic alliance members.

Shared vision is the guidance system of strategic alliance; it is to guide the growth of business<sup>[93]</sup>. Specifically, the shared vision of strategic alliance includes that the shares vision shared must be reached by consortium members; the company must have a clear core values and depict the potential value. However, the formation of shared vision is not form rapidly, but through partner selection, negotiation, relationship depth.

(Figure 5.3)

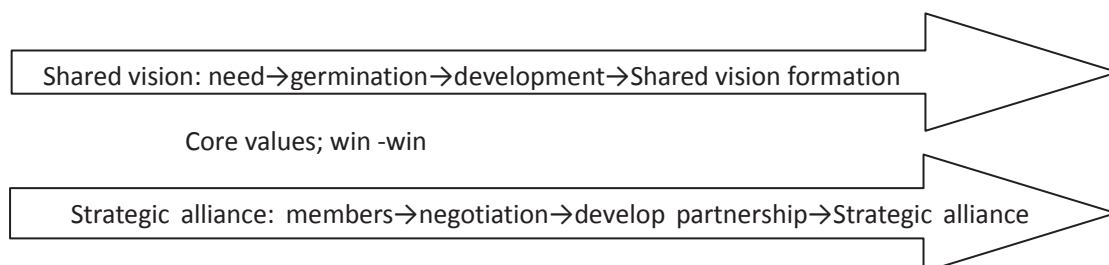


Figure 5.3: The form process of shared vision of strategic alliance of company

Source: Zhangsong, Huangli ping. The analysis of adjust mechanism of shared vision of strategic alliance. No.4; 2002, pp.26-29

### 5.3 The strategic risk comparison of airline transport in China

#### 5.3.1 The object of strategic risk evaluation

The object of this study is air transport companies in mainland China, specifically the State Civil Aviation which is currently running and approved by Administration. Besides the airlines is the passenger-oriented and the specific information can be seen in Appendix four.

According to Appendix, The airlines which should be researched were 19, however, as the domestic air transport industry are rapid growth, frequent changes, acquisitions and restructuring frequently, this article made some special processing to some airlines. Such as Tianjin and Chengdu aviation, they are all the newly formed and its reorganization is in progress, so the research on its strategy and risk can not be done. In 2009, Shanghai Airlines was incorporated in Eastern Airlines as a sub-brand presence. So the research objects include: Air China, Eastern Airlines, Southern Airlines, Hainan Airlines, Shandong Airlines, Shenzhen Airlines, Sichuan Airlines, Xiamen Airlines, Okay, spring, China airline and auspicious airline. Accordance to the strategy of the national aviation, now it has formed three types of airlines: the first one is mainly dominate by Air China, Southern Airlines, Eastern Airlines, the second one is supplemented by medium-sized, regional aviation such as Shenzhen Airlines, Shandong Airlines, Sichuan Airlines and Hainan Airlines, and the last one is spring, China, auspicious.

The basic information about questionnaires (appendix one) can be seen in Table 5.4.

Table5.4 The basic information about airlines (1)

Corporate (airlines)	Alliance	Ages	Characteristic	Types	International airlines	Listed information
Air China	Star alliance	22	State-owned	Network	Yes	Hong Kong, London, Shanghai
China Eastern	Sky Team Alliance	22	State-owned	Network	Yes	Hong Kong, London, Shanghai
China Southern	Sky Team	18	State-owned	Network	Yes	Hong Kong, London, Shanghai
Hainan Airlines		21	Joint-venture	Network	Yes	A, B stock
Shandong airlines		16	State-holding	Network	Yes, Japan and Korean	B stock
Shenzhen airlines		18	Private holding	Network	Yes	No
Sichuan airlines		24	State-holding	Network	Yes	No
Xiamen airlines		26	State-holding	Network	Yes	No
OKAIR		5	Private	Region	No	No
Spring airlines		6	Private	Low-cost	yes	No
China Express		4	Joint-venture	Region	No	No
Junyao Airlines		5	Private	Region	No	No
Average		15.5				

Table5.4 The basic information about airlines (2)

Corporate (airlines)	Scale			Diversification						
	lines	Bases	Airplan es	Real estate	Hotel	Touris m	Finance	Airport	Ads	Others
Air China	250	7	256			Yes	Yes	Yes	Yes	maintenanc e training
China Eastern	330	10	207		Yes	Yes	Yes	Yes	Yes	Food
China Southern	600	9	350	Yes	Yes	Yes	Yes	Yes	Yes	
Hainan	500	9	148	Yes	Yes	Yes	Yes	Yes	Yes	shipbuildin
Shandong	110	3	60			Yes			Yes	Mechanical
Shenzhen	300	6	150		Yes	Yes			Yes	Food
Sichuan	130	2	51		Yes					
Xiamen airlines	140	7	69		Yes	Yes			Yes	Import and export
OKAIR	20	1	11							
Spring airlines	40	2	15			Yes			Yes	Display
China Express	25	3	30							
Junyao Airlines	30	2	14							
Average										

International air transport industry is mature but currently China's aviation is in the formative stage. According to international experience, the growth stage is from 30 to 40 years. China's air transport industry is in mid-term growth stage from 1984. We can see from the survey that the average age of China's airlines is 15.5 years compared with the age of mature foreign airlines. Thus China's airlines are so young. While the state-owned or state-holding companies have long history, the new private airlines began to appear from the 21st century, and Hainan Airlines which is one of the three major state-owned airlines accounted for 90% of the domestic aviation market share. Therefore, the domestic air transport market is still obvious oligopoly.

On strategic alliances, Shanghai Airlines and Air China joined in Star Alliance, while Southern Airlines join Sky Team alliance. Shanghai airlines merged into Eastern Airlines, becoming the sub-brand of Eastern Airlines. The three major state-owned airlines have joined in world's largest Alliance. A graph of airline alliance can be summarized by research. (Figure 5.4)

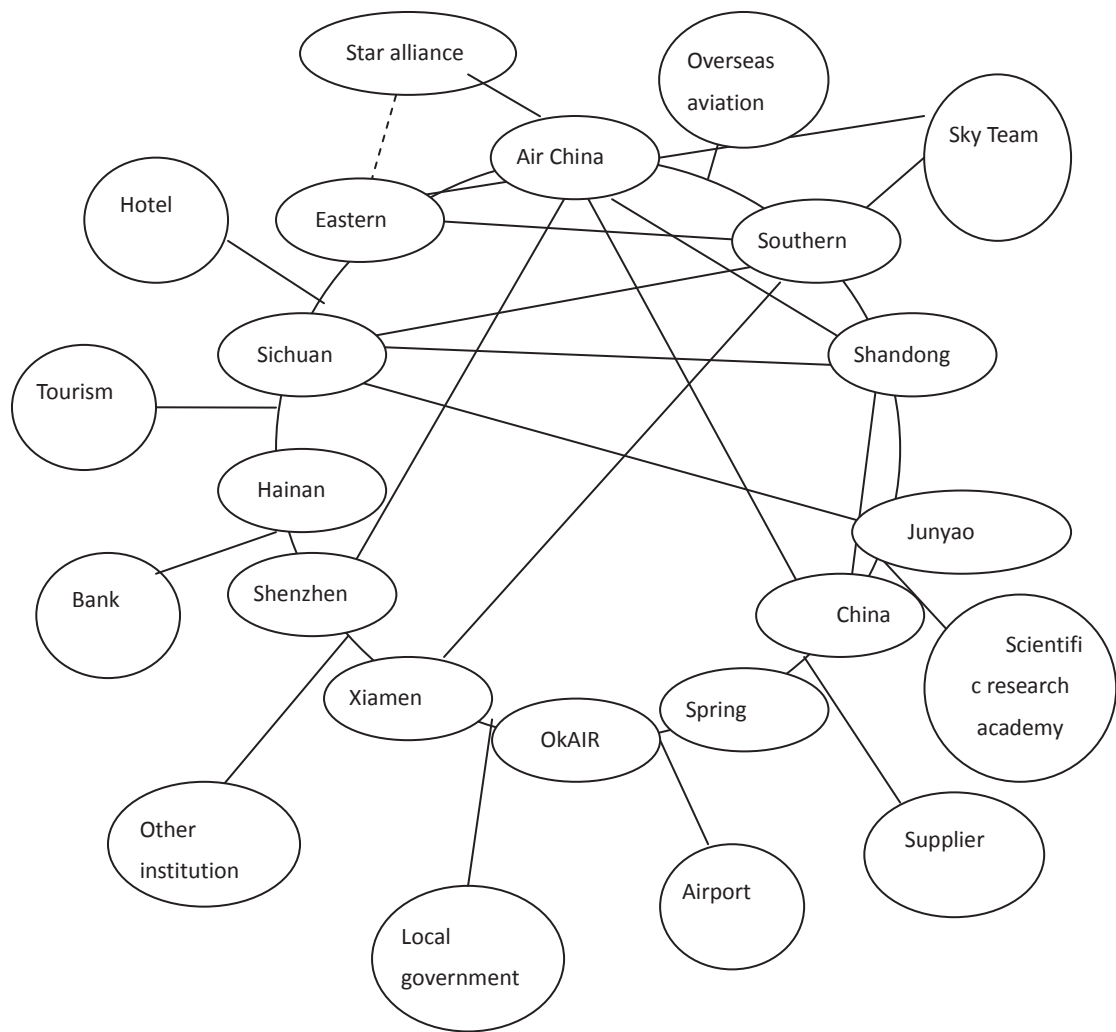


Figure 5.4: The alliance figure of domestic airlines

According to the division of business model, most airlines are network-based airline. OKAIR, China Express and Junyao airlines are the regional airline mainly operating in the local air transport. Relying on other large aviation branch to form larger network operators and in recent years low-cost is popular in international market, currently only Spring Airlines is low-cost in domestic market.

Although airlines are low-profit industry, but in order to finance, large airlines have opted for listing. Air China listed in Hong Kong, London and Shanghai, Eastern Airlines and Eastern Airlines listed in Hong Kong, New York and Shanghai. Hainan Airlines and Shandong Airlines chose the Mainland of China. With the increase of competitiveness and development of the industry, there are other airlines listed.

In terms of scale, China's four private small airlines (Spring Airlines, OkAIR, Junyao airlines, China Express) obviously occupy a very small share. They have a gap with large networks airlines from the route and quantity. Besides, for the reason of strength and age, private airlines also concentrate on core business in aviation, while other major airlines have opted for diversification. They have invested in hotel, tourism, advertising and other related industries to expand to achieve its scale and scope. It is worth mentioning that Hainan Airlines and China Eastern Airlines. These two airlines

involved in diverse industries, including culture, logistics, advertising, tourism, real estate, hotels, import and export.

### 5.3.2 The strategic risk evaluation of airlines.

For different companies, the specific strategic risk levels are different. In order to study the differences about strategic risk, this paper uses expert judgments by asking five independent experts who are executives from different airline enterprises. But the description from experts about each major strategic risk indicators is ambiguity and uncertainty. So this paper to express them as triangular fuzzy numbers for fuzzy weighted average. Assume important degree of the indicators by the seven levels (very low, slightly low, low, medium, high, very high, extremely high) to describe the linguistic variables. And the triangular fuzzy weights are as follows:  $\{W_1^*, W_2^*, W_3^*, W_4^*, W_5^*, W_6^*, W_7^*\}$ , while  $W_1^* = (0,0,0.2)$ ,  $W_2^* = (0,0.2,0.4)$ ,  $W_3^* = (0.2,0.35,0.5)$ ,  $W_4^* = (0.3,0.5,0.7)$ ,  $W_5^* = (0.5,0.65,0.8)$ ,  $W_6^* = (0.6,0.8,1)$ ,  $W_7^* = (0.8,1,1)$ . Triangular fuzzy membership function was shown in Figure 5.5. the questionnaire is in appendix three.

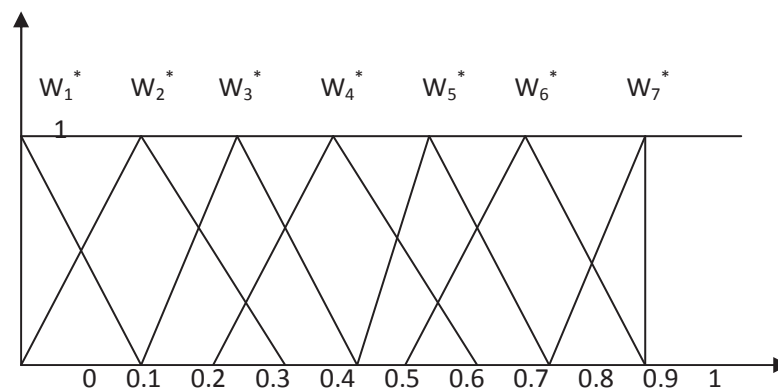


Figure 5.4 The triangular fuzzy membership function of seven level

Denoting the five experts as; I1, I2, I3, I4, I5, and judge the sixteen strategic risk indicators from twelve airlines. The designs of the questionnaire are shown in Table 5.5.

Table 5.5: The strategic risk estimation from experts to airlines

	I1	I2	I3	I4	I5	De-fuzzy
R11						
R12						
...						
...						
R34						

For example, the strategic risk evaluation form five experts to international airlines can be seen in Table 5.6.

Table 5.6: The strategic risk evaluation value of international airlines

	I1	I2	I3	I4	I5	De-fuzzy
R11	W4*	W5*	W4*	W5*	W6*	0.62
R12	W4*	W5*	W4*	W3*	W2*	0.44
R13	W3*	W2*	W5*	W3*	W4*	0.41
R14	W4*	W2*	W4*	W3*	W5*	0.44
R21	W4*	W4*	W2*	W5*	W3*	0.44
R22	W5*	W4*	W5*	W4*	W6*	0.62
R23	W2*	W3*	W2*	W2*	W3*	0.26
R24	W2*	W2*	W2*	W3*	W3*	0.26
R25	W3*	W6*	W5*	W2*	W3*	0.47
R26	W3*	W3*	W3*	W2*	W3*	0.32
R27	W2*	W3*	W3*	W3*	W3*	0.32
R28	W2*	W3*	W3*	W3*	W3*	0.32
R31	W2*	W2*	W3*	W3*	W3*	0.29
R32	W3*	W3*	W2*	W3*	W3*	0.32
R33	W4*	W5*	W4*	W4*	W5*	0.56
R34	W2*	W2*	W3*	W3*	W3*	0.29

According to strategic risk assessment of twelve airlines from experts, De-fuzzing the collected data, then combined with the overall strategic weighted to obtain the value of each airline's strategic risks. The final step is to sort airlines according to strategic risk value, as shown in Table 5.7.

Table 5.7 The strategic risk sorting between airlines

Airline corporate	Risk value	Sorting
Shangdong airlines	0.573915	7
China Eastern	0.604738	6
Air China	0.430191	12
China Southern	0.530385	10
Hainan airlines	0.467754	11
Shenzhen airlines	0.618306	5
Sichuan airlines	0.554226	8
Xiamen airlines	0.551635	9
OkAIR	0.732763	1
Spring airlines	0.64111	3
China Express	0.644721	2
Junyao airlines	0.636595	4

### 5.3.3 The comparison analysis of strategic risk

After combining the characteristic and attribution of airline enterprises (Table 5.8) can obtain the following conclusion.

Table 5.8: The comparison between basic information and strategic risk about

## airlines

Airlines	Strategic risk value	Sorting	type	Nature of enterprises	Scale		
					Basis	Airplanes	lines
Air China	0.430191	12	International network	State-owned	7	256	250
Hainan airlines	0.467754	11	International network	Joint-venture	9	148	500
China Southern	0.530385	10	International network	State-owned	9	350	600
Sichuan airlines	0.554226	8	International network	State-holding	2	51	130
Xiamen airlines	0.551635	9	International network	State-holding	7	69	140
Shandong airlines	0.573915	7	International network	State-holding	3	60	110
China Eastern	0.604738	6	International network	State-owned	10	207	500
Shenzhen airlines	0.618306	5	International network	Private-holding	6	150	300
Junyao airlines	0.636595	4	Regional	Private	2		30
Spring airlines	0.64111	3	Low-cost network	Private	2	15	40
China Express	0.644721	2	Regional	Joint-venture	3	30	25
OKAIR	0.732763	1	Regional	Private	1	11	20

(1) The strategic risk of state-owned airline is less than private ones.

The four biggest strategic risk airlines are all private. This is mainly due to the characteristics and development history of the air transport industry. Compared with the private airlines, state-owned airline has a long development history, strong state financial support, preferential government policies, business resources and other advantages.

(2) The relationship between scale of Airlines and strategic risk is inversely proportional

We can see from the table that the strategic risk of large airlines is relatively small. The main reason is that the larger the company, the scale economic is more obvious. They have scale advantage in the procurement and cost, and they can spread a part of risk through diversification. While several private airlines are very small, usually has small number of aircraft, routes and personnel. These are disadvantages in the jet fuel procurement, aircraft procurement, management experience; therefore they are at greater risk. Because of their size limitations and diversification, they can not diversify risk in a limited range.

### (3) Special airline

From the table, we can see that the strategic risk of state-owned airlines is small, but China Eastern's strategic risk was significantly greater. This paper will analyze the reason in part of case study, hoping to find the reason why the strategic risk of Eastern is higher and take measures to resolve this problem.

## 5.4 Conclusion

Through interviews with experts in this chapter, processing data and applying them to the network-level analysis to obtain the weight ordering of strategic risk of Chinese aviation industry. On the basis of this, according to the judgment of strategic risk from experts to obtain the absolute strategic value of twelve airlines through weighted sum, we can compare the strategic risk between airlines. By airline strategic risk difference analysis, we can have a specific and clear understanding of strategic risk.

At the same time, the strategic risk assessment is time-sensitive, business need continuity in evaluating the strategic risk of industry and it own company for the right business decisions.

## Charter 6 Strategic Risk Control and Decision

### 6.1 Strategic risk control

On the basis of Strategic risk identification, analysis and evaluation, is mainly strategic risk that can control the risk by strategic risk evaluation. Generally, there are many means to control risk, such as risk adverse risk reduction, risk-sharing, risk acceptance, risk transfer, risk compensation and risk control. China's SASAC promulgated the "central enterprise-wide risk management guidelines" will be such a risk management program called the 'risk management strategy'. It stipulates that according to its own conditions and the external environment, the company define risk appetite, risk tolerance and the effective risk management standards. Then choosing risk management tools such as risk selection, risk avoidance, risk transfer, risk transformation, risk hedging, risk compensation, risk control to realize the insurance of human and financial resources for risk management.

Australia's risk management scholars have put forth an integrated risk management framework, including avoids diversity, control, share, transfer and accepts. Some domestic enterprises adopt "Ts" approach to manage risk, including terminate, tolerate, transfer, treat, tell someone, take advantage of, talk about, test the water and trend analysis, while the insurance is one of the risk management program[90].

According to the study of risk response plan, the development and strategic management of Chinese air transport enterprises; this paper identified five strategic risk response plans. They are risk avoid, reduce, transfer, acceptance and use, and the category of this five strategic risk response plan can be reflected by Figure 6.1.

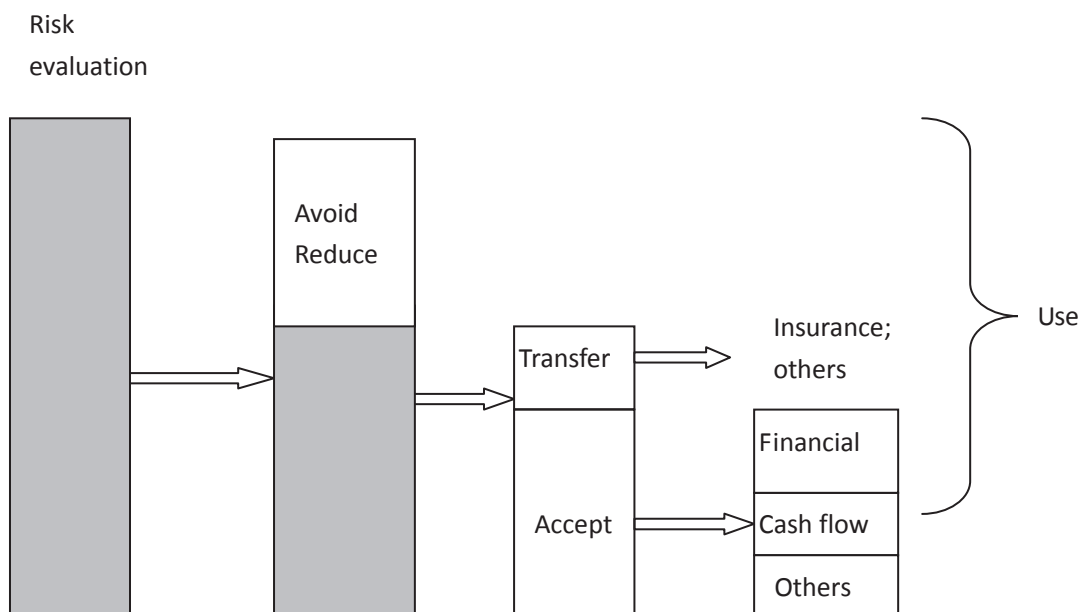


Figure 6.1 The process of strategic risk control

### 6.1.1 The strategic risk avoidance

Risk aversion is one of the accepted the options to deal with risks, but many studies used different names. Australian risk managers David Mc Name (1999) considered that risk aversion is a mean which based on reducing overall risk and redesign to deal with special risk<sup>[93]</sup>. "3C framework" proposed that risk aversion is to predict the likelihood risk in advance, analysis and determine the conditions and the impact of the risk. For those risk that has exceeds the tolerance and it is difficult to grasp, the company should adapt risk aversion. In short, it is a strategy that eliminating the threats of risk and attempt to make the risk probability to zero<sup>[93]</sup>. In this paper, it uses the point of "3C framework", and there are three forms of risk aversion.

(1) Completely avoid. The company refused to take a risk. In risk decision-making, choose less risky or no risk program as far as possible, which actually reduces the likelihood of the risk and risk of loss.

(2) Change conditions. It mainly refers to the change in the nature of production and, production processes or work methods.

(3) Give up. Companies terminate to take a certain risk initiatives. This risk aversion usually associated with large changes in the environment and related changes in risk factors. After balance, if the corporate think the risk and cost is too much, then they will choose to give up.

In strategic risk response program, risk aversion is also the basic strategy to tackle the risk in the process of strategy management. And its purpose is to ensure to realize the corporate strategic goals. This paper argues that there are following conditions for risk aversion.

(1) When the strategic risk may result in loss, bring high loss rate, strategic risks are not manageable, then selecting risk aversion.

(2) Strategic risk aversion should be compared with other strategies, and then decide whether to implement the program.

(3) Not all of the strategic risk can avoid, and some can not avoid.

(4) Strategy risk aversion has a certain degree and scope. Adapting risk aversion excessively is not appropriate. On the one hand it will increase the cost, on the other hand, it is too simple, and enterprises will loss the advantages of strategy management.

### 6.1.2 The strategic risk reduction

Risk Reeducating is the design action that to stop, check the adverse events and support the specific results. Different from risk aversion, risk control is the active measures that to change the risk characteristics, mainly for the feasibility of risk.

There are three types of strategic risk control in this paper.

(1) Reduce losses strategy, reducing the project scale to low the risk relatively; controlling the development speed of projects, supervising and dealing with marginal risk.

(2) Reduction strategy to avoid loss. Providing effective training for strategic risk evaluation and risk tolerance ability, make preventive action for higher risks to reduce the risks to an acceptable level. Possible options are to change or modify the sources of

risk, to change the risk environment.

(3) Reduce loss strategy to minimize the severity of potential losses which is implementing only after the emergence. Once the strategic risks occur, it must minimize losses. At this time, the crisis contingency plans, backup, analysis and isolation are all good methods.

#### 6.1.3 The strategic risk transfer

Risk transfer is to shift the loss burden and responsibility to other persons or bodies, and this can reach the aim to reduce the frequency of risk loss. Risk transfer means transferring the risk from a company to other parties. Compared with risk aversion, risk transfer is aim at seeking methods to transfer risk instead of giving up, and terminating methods. The purpose of risk aversion has no body to burden the main risk.

Generally, the approaches of strategic risk transfer are mainly three categories.

(1) Non-insurance transfer controlling type. By contracting, it can transfer the loss of financial burden and legal responsibility to others to escape the threat of their own risk. The usually means are outsourcing, leasing and sale, etc

(2) Financial-type of non-insurance transfer. This is the use of economic means such as guarantee, reassurance, securities, shares etc to transfer financial risks.

(3) Insurance. Strategic risk insurance is an essential element of the transfer.

#### 6.1.4 The strategic risk acceptance

Risk acceptance means that companies accept the risk and impact. This is not a strategies risk of inaction. When adapting this strategy, enterprises can cope with the risk in a positive attitude. The overall risk must be the tolerance level of enterprises, and companies take strategic risk after weighing the costs. There are positive and passive acceptance risks, and they can also be divided into full and partial acceptances.

For strategic risk management, the content of acceptance policy is to determine the main elements of risk, and whether companies can ensure that strategic objectives are not affected.

#### 6.1.5 The use strategic risk.

The strategic risk use is a way of thinking, according to the uncertainty risk research of Knight, due to the presence of uncertainty because of the presence of uncertainty, companies can survive and develop. So companies can not exist risk is impossible. Strategic risk is an opportunity but not all are considered negative. Facing the same objective conditions some people choose to avoid while some one accepts it then the risk use is regarded as a competition tool. The aviation of jet fuel brings great risk to China's present air transport. While Air China has established risk regulatory mechanisms to deal with the changing price of fuel.

## 6.2 The decision-making of strategic risk in China's air transport enterprises

### 6.2.1 The concept of strategic risk decision-making.

Decision-making means selecting a program from a number of options. Nobel Prize winner Simon's famous saying is that management is the decision-making, indicating that the core of management is decision-making. The objective of this paper is to make ultimate decision-making for corporate through the identification, analysis, evaluation of strategic risk. Then, it is to establish objective and clear understanding of strategic risk and the decision-makers to make decision. Therefore, corporate select a program from the alternative programs according to their own strategic risk level.

Strategic risk decision-making is consists of four basic elements.

- ✓ The decision-making process on information. To collect and evaluate the data which is about strategic risk.
- ✓ The planning process of program. To determine the content of each program.
- ✓ Program selecting. According to the objectives and related restrictions, the enterprises to make program selection.
- ✓ Evaluating the program about strategic risk management.

#### (1) The characteristics of strategic risk decision-making

A strategic risk decision is based on reaching the strategic goals of corporate by using various scientific methods and means. Strategic risk decision-making has the following characteristics.

- (a) The object of strategic risk decision-making is the potential losses of strategic risk. According to the principle of comparative costs and benefits, corporate choose the lowest cost and most effective security program.
- (b) Strategic risk decision-making is both a science and an art. Strategic risk assessment and determine needs the help of mathematical methods and scientific fund. Besides, the characteristics of policy-makers such as the ability, experience, quality, attitude, decision-making mode of subjective judgments will also affect the program options.
- (c) Timeliness. Strategic risk decision-making has certain timeliness. Strategic risk is the evaluation which is at a particular time and conditions. The decision of the decision-makers is for the specific strategic risks. When the conditions of strategic risks occurrence have changed, the strategic risk decision-making should be done again. Therefore the strategic risk decision-making is highly time-sensitive.
- (d) The delay effects of strategic risk decision-making. Due to the comprehensive, long-term and the importance, the effect of strategic risk decision-making can not be immediately reflected in the short term. Usually the importance of strategic risk decision-making can be reflect after the risk occurring.

#### (2) The principles of strategic risk decision-making

Strategic risk decision-making should be guided by the following two principles.

- (a) The objective principles of strategic. The target of strategic risk response program selecting is to ensure the realization of the corporate goal, and the small targets in decision-making process must be consistent with corporate strategic goals.
- (b) The principles of objective. Strategic analysis is a uncertain decision-making. In the

process of decision-making, the corporate will encounter a lot of uncertainty about risk variables, and this requires decision makers to analyze the strategic risk variables objectively.

## 6.2.2 Strategic risk decision model

It has already been expound the meaning of strategic risk decision, characteristics and principle. Objective evaluation of risk factors is the basis of Strategic risk decision. Based on evaluation, Combined with enterprise itself situation to establish alternative solutions and then Decision makers of enterprises makers choose the finial plan. The decision-making process is also influenced by many other conditions such as enterprise development stage, the quality of their own decision-makers, etc.

Combining with the strategic management theory, risk management theory and decision theory, this research establishes China's air transport enterprise strategic risk decision model. (As shown in figure 6.2)



Figure 6.2 strategic risk decision model

In this model, the input condition has two, one is the evaluation of China air transport strategic risk, and the other is a strategic risk for the solutions.

The results of the enterprise determination are to confirm a strategic risk of solutions, and decompose into specific measures.

The decision influence by three factors: one is decision-makers own factors, such as the decision maker's risk preference, ability, motivation, etc.; the second is decision-making ways of enterprises, some enterprise is the boss who make decisions only, some enterprises have set up a set of complete decision-making procedure, different ways of decision-making will have an important impact on decision-making. The third is resources the enterprise has which restricting enterprise strategic risk decision, enterprise different financial, ability and competition advantage will inevitably brings different decision results.

### 6.2.3 The input conditions Strategic risk decision

#### (1) Strategic risk evaluation results

According to the results from chapter 4 and chapter 5, China air transport enterprises face strategic risk factors including the first class risk factors and second class risk factors; through the strategic risk assessment of the overall air transport enterprises get risk weight and obtain the sort results of 12 domestic air transport enterprise strategic risk. The evaluation results are table 6.1.

Table 6.1 China air transport enterprise strategic risk assessment

China's air transport strategic risk evaluation results	
Strategic risk factors identification	Three first class risk factors 16 second-class risk factors A lot of third class risk factors
Strategic risk factor analysis	the conditions of Strategic risk factors transform to strategic risk
Strategic risk assessment	The weight of second-class risk factors
	The difference among 12 home air transport enterprise strategic risk

#### (2) Alternatives

According to the front, we have five solutions to deal with strategy risk: avoid, reduce (control), transfer, and accept and utilization. In view of the different strategic risk, the enterprise needs to choose suitable one from the five kinds of schemes.

### 6.2.4 Strategic risk response options and recommendations

Based on strategic risk Decision-making model, the choice of response options of strategic risk must take the quality of corporate decision-makers, corporate decision-making ways and corporate resources into account. These are not the contents of this study. In the case of do not consider these factors, this paper start from the overall air transport industry and it recommend to take appropriate strategic response to risk, as shown in Table 6.2.

Table 6.2 Strategic risk solutions

		avoid	reduce	transfer	accept	utilize
Strategy or Strategy positioning	environment	☆	☆	☆	☆	☆
	Strategy ability		☆		☆	☆
	Expectation and target		☆		☆	
	Strategy assumptions	☆	☆		☆	☆
Strategy choice	Development direction and choice		☆		☆	☆
	international		☆	☆	☆	☆
	diversity	☆	☆	☆	☆	☆
	Stakeholders strategy		☆		☆	☆
	Strategic alliance		☆	☆	☆	☆
	mergers and acquisition	☆	☆	☆	☆	☆
	Cheap strategy	☆	☆	☆	☆	☆
	competition		☆	☆	☆	☆
Strategy implementation	Resources matching		☆	☆	☆	☆
	Organization structure		☆		☆	☆
	Strategic change		☆		☆	☆
	Enterprise culture		☆		☆	☆

According to the table 6.2, ☆ means feasible choice. Every Specific strategic risk solutions and measures as follows

#### (1) environment

Air transport industry is deeply influenced by exterior environment such as political, economic, social, natural and legal environment. In view of the different environmental impact, the enterprise can take different project. For example certain political unstable country, the enterprise may cancel the route through ways will avoid risk; By improving the performance of plane and technology to reduce safety risk; Through the contract with insurance company can transfer a part of the natural disaster risk; as to the strong and sudden natural disasters, only can receive that ; Different strategic risk solutions will produce a different competitive advantage, enterprises can also join competition by the influence of the environment.

## (2) Strategy ability

Strategic capacity means enterprises' ability of obtaining, integrating resources and the formation and implementation of strategy. When enterprise strategy ability disabilities or is not enough, the firm is facing a great strategic risk management. This is a long-term, recessive strategic risk; the enterprise needs to control such risk through various means and methods. Such as establish special strategic ability enhance plan, or through the establishment of strategic management department to strengthen the ability of the enterprise related ability

## (3) Expectation and target

When Enterprises' expectation and target can't achieve enterprise strategic requirement, the airline needs to take measures to reduce or control such risk. For example sichuan Airlines Company set up special stakeholders strategy to promote the enterprise's social responsibility.

So Airlines Company can reduce related risks by build stakeholder strategy which can balance the interests of all parties.

## (4) Strategy assumptions

All of the strategy is based on a certain assumptions; mistake assuming must lead to wrong strategic direction, and then lead to enterprise failure. To set up correct enterprise nature hypothesis can help enterprise to circumvent relevant risk. State-owned airlines' nature is take national interest as the core, and private airlines can be set up to protect the economic benefit maximization, social benefit maximization and so on many of the target of the system.

Meanwhile, development trend assumptions which closely related with air transport are also very important, for example, airlines companies can build scientific tools to the development of population, geographic location, economic trends and other aspects of the assumptions for the airline's strategy to provide the basis for success. China's urbanization process will definitely lead to the development of medium and small cities in central and western, as soon as possible under this assumption to establish a national aviation network layout of the strategic assumptions can reduce the risk of errors; Hainan Airlines Company has expended fly network to Shanxi, Yunnan, Tianjin and other provinces in recent years. It is based on the assumption that the development of other cities in China.

## (5) Development direction and choice

Strategic direction error will bring great risk, while not feasible or not feasible strategic choice for enterprises are also fatal. Eastern Airlines chose to quit when need to expand international routes made it great loss.

## (6) Internationalization

Internationalization is the strategy of each airline must be considered, without regard the internationalization risk, the failure of implementation of international strategy will bring business great risks. Thus reducing the international strategy includes the following:

Establish an international perspective. Regardless of whether the airlines companies have international routes, the strategic management of business must have an international perspective, because the management of airline operations require knowledge of aircraft procurement, fuel, financial management are all international.

Internationalization primary consideration is the international routes of different trends, such as China has deepen economic cooperation with Brazil so that the development of China to South America routes upward trend, then you can consider China - Brazil's flight as first plan, and for other political instability, uncertainty developed countries, you can be prepared to wait the time is ripe.

#### ( 7) Diversity

Now most domestic airlines companies have adopted a diversification strategy, and are concentrated in related diversification. Airlines can choose not to diversify to avoid risk. The choice of a wide range of airlines, you can create enterprise's core competitiveness, highlighting the scale and other measures to reduce the risk diversification, but also with other airline-related businesses to invest in the company to establish relationships, partnerships to share and transfer risk.

#### ( 8) Stakeholders strategy

Stakeholder strategy cannot be circumvented, the airline must be related to different stakeholders with common interests and to build and balance the relationship between the parties is very important. If company cannot deal with these relationships well will bring great risk. Figure 6.3 shows the airline stakeholder analysis model is an effective tool to help airlines build relationships with different stakeholders

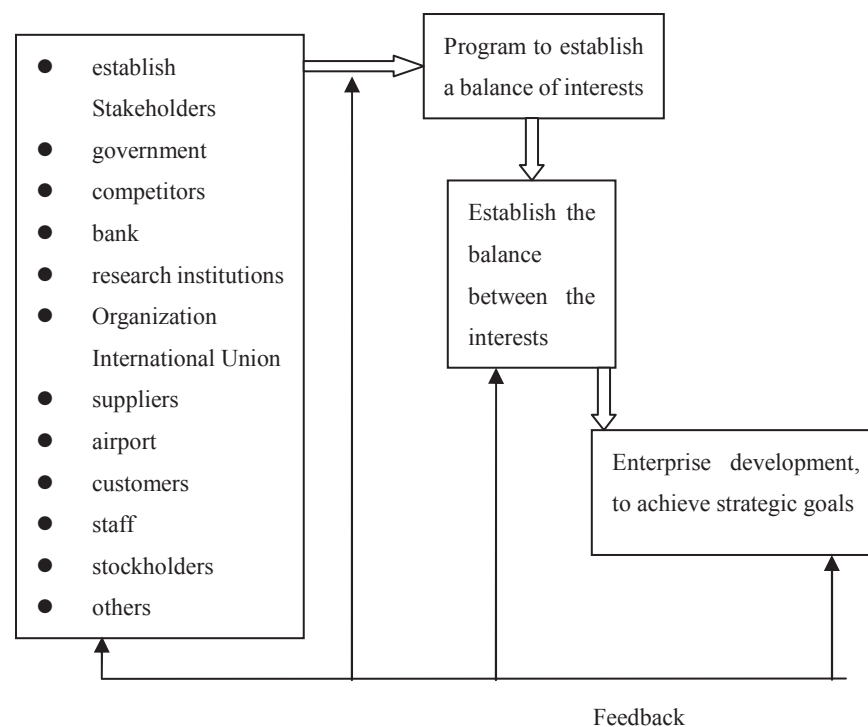


Figure 6.3 Stakeholders analysis model

#### (9) Strategic Alliance

For strategic alliances, strategic alliances can be accessed through the use of the model (Figure 6.4) to reduce, transfer and acceptance associated risks. Whether an airline to join airline alliances or not for strategic choices, and priority is to assess the feasibility of joining the alliance, the model for China's airlines are very useful.

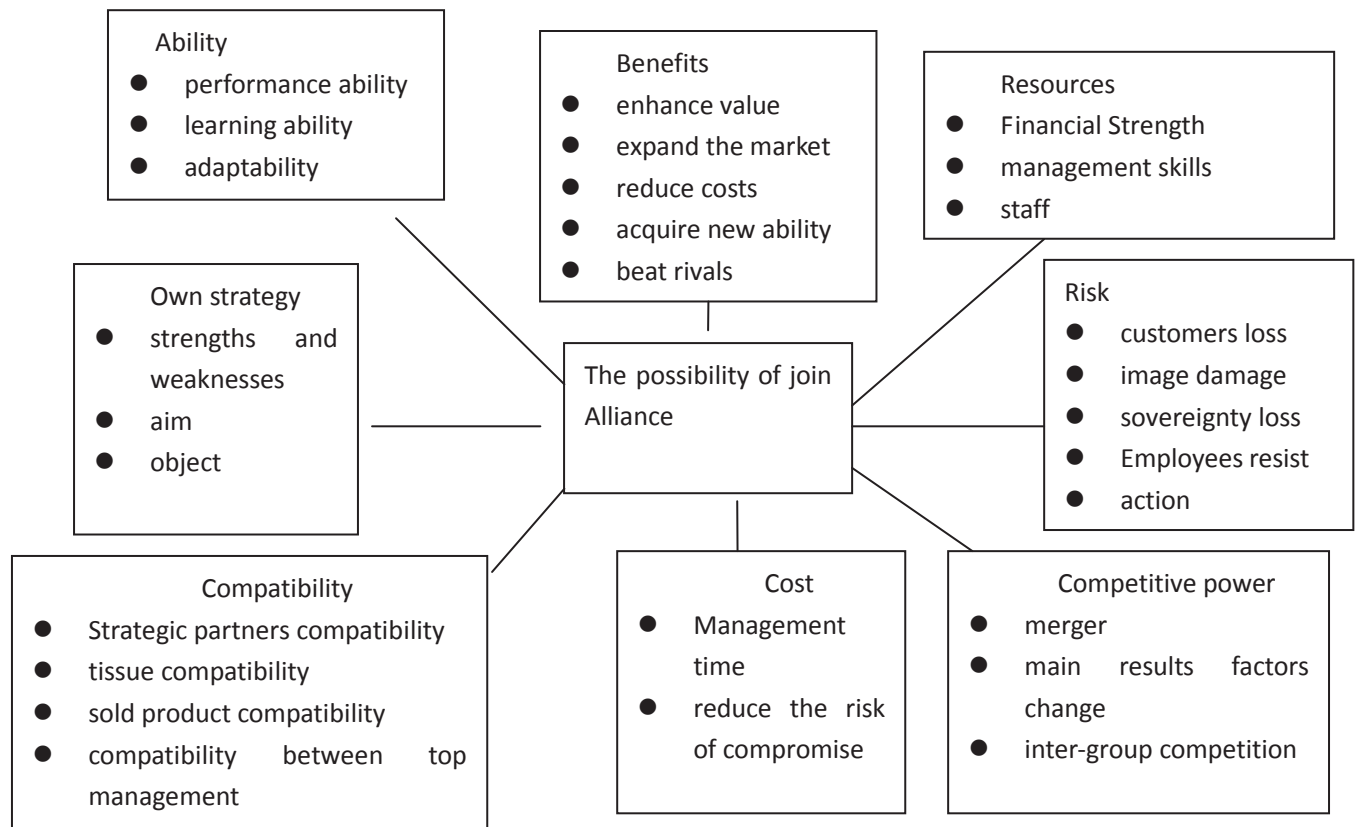


Figure 6.4 Evaluation model to join the alliance

This model will help the air transport enterprises in China to join international or regional alliances to evaluate the trade-off by a variety of factors to decide whether to join, and the current reality is that China's airlines is still in a weak position, we reach the conditions can not join, so the use of this model the effect diminished, but still the risk of a strategic alliance to provide processing methods and ideas.

#### ( 10) M & A

Some airlines will be free to choose whether mergers and acquisitions, or whether by merger and reorganization, mergers and acquisitions when the airline can avoid the risk. And some airlines can not decide on their own M & A strategy, in the country, airlines are government-led, government action in the role of airline mergers and acquisitions significantly. Therefore, in this case, airlines companies can complete merger and reorganization process under the guidance of government, which can reduce and transfer the risk of implementation of M & A strategy

#### ( 11) low-cost strategy

Airlines can choose not to implement low-cost strategies to avoid the risk of low-cost strategy, but other airlines cheap airline implementation of the strategy will have an impact. On the one hand, for low-cost airlines, focusing on low cost can enhance the core competitiveness and outstanding low-cost advantage. On the other hand, for the airline companies do not implement low-cost strategy, to avoid the target population or to take appropriate competitive strategy, the price war is not desirable

#### ( 12) competition

Airlines can not avoid the risk of competition; each airline will face competition within the airline, airlines and other modes of competition. For the competition between airlines, you can focus on the route resources, time resources, management, cost advantages, etc., and for competition between airlines and high-speed rail, this paper think the win-win cooperation is more important than direct competition, the establishment of the airline and high-speed rail between the three-dimensional integrated transport system is more effective than direct competition. Sichuan Airlines canceled flights from Chengdu to Chongqing, Zhengzhou to Xi'an to cancel the route; these measures can actually save air resources

#### ( 13) resources match

In order to meet the requirements to achieve corporate strategic goals, companies must have the necessary resources. Each airline companies have the problem how to match the resources; the risk can not be circumvented. Therefore, only by actively seeking resources to airlines, integration of resources, use of resources to reduce, transfer and acceptance of risk, the lack of enterprise resource companies can be reduced to an acceptable level

#### ( 14) organizational structure

Organizational structure risk is an important risk in implementation of the strategy, the following measures will help reduce and accept the risks.

Firstly, the strategic need to regulate the structure and stability. When the market, competition and the external environment is relatively stable, the enterprises adopt stable strategy, and then you need stable, standardized organizational structures, such as the implementation of centralized decision-making, the development of very formal rules and regulations, narrow span of control.

Secondly, the dynamic structure of the strategic need to be adjusted. When strategy is established, it has certain stability, but the world is complex, change fast, has lots of uncertainty, with the customer needs, market conditions, competition, and social and environmental change, strategic must also be adjusted accordingly. The retreat of Yucheng high-speed rail is according to organizational structure, when the Chengdu-Chongqing high-speed rail became the first choice for customer, aviation has been unprofitable, Sichuan Airlines only can shrink routes time, the transfer of aircraft, adjust the organizational structure of the region.

Thirdly, the combination strategy requires multiple structures. Corporate strategy is often a combination, and less likely to be single, the current airlines are adopting

low-cost strategies, but also to take a strategic alliance, Hainan Airlines, Spring and Autumn and other companies successfully implemented diversification strategy. Strategy combination refers to a organization implement two or more strategy according to their resources and market conditions. The company's organizational structure must be varied so as to meet all of the strategy. Of course, this refers to a combination of corporate strategy is a combination of corporate middle division, the company's overall strategic level can not be combined.

The fourthly is the importance of innovation structure. American management expert Robbins said, "Innovation can become a competitive advantage." Here's organizational structure should belong to professor Liu Yuan Zhang's "institutional innovation, technological innovation and management innovation" in the management of innovation. In the fierce competitive environment, in addition to make good use of various existing organizational structure, we must create a number of flexible and efficient organizational structure to meet the needs for the implementation of these strategies. For example, the "virtual organization", "boundary less organization", "no physical office", which are the innovations of organizational structure? These innovations break down departmental boundaries, level flat, decentralized decision-making, to promote cooperation and self-management, in order to replace the authority of knowledge and information to achieve cross-functional cooperation, communication network, stressed that coherence and so on.

Therefore, to ensure the successful implementation of the strategy, organizational structure must be addressed from the organizational structure of the rigid risk, delay risk, highlighting the organizational structure and strategic interaction and coordination.

#### ( 15) Strategic change

Strategic change risk can not be avoid, is it the first strategic risk of air transport industry, strategic risk assessment is considered to be the first weights in the risk. For strategic change risks, this paper thinks that the most important thing is to establish strategic flexibility or strategic flexibility and timely according to business needs and changes of strategy adjustment. According to the airline business development needs and the external environment changes in a timely adjustment strategies is very important. China Eastern Airlines Yunnan in accordance with national development plans and strategies to deepen China Eastern Airlines Yunnan route is an example of adaptive

At the same time, strategic change has important other risks, such as internal rigidity for strategic change, inertia and so on. Therefore, overcoming the rigid strategies measures are very important for reducing the risk of strategic change.

#### (16) Corporate culture

Corporate culture building is a long process of accumulation, companies need to experience a variety of crises and risks, thus reducing the risk of corporate culture, the primary measure is through a long period of development, and second is the use of corporate culture building strategic.

### **6.3 chapter summary**

Based on airline strategic risk identification, analysis and evaluation this chapter has a preliminary study on the strategic risk decision-making. By understanding the meaning of strategic risk decision-making, combined with the first few chapters established a strategic risk decision-making model. Airline strategic risk decision-making process is affected by many factors. This paper's core context is not strategic risk decision-making, so this chapter discusses strategic risk decision-making without business decision-makers. Chapter 5 airlines strategic risk assessment and risk response plans as two input variables in strategic decision-making model, through the corporate strategic risk decision-making, response options as the output variable. The purpose of the strategic risk decision-making airline is to select and determine a program, and to determine the specific measures to deal with strategic risks. The paper concludes with recommendations and related measures.

## **Chapter 7 The Empirical Study of China Eastern Airlines**

For enterprises, strategic risk managements are more important. In the previous chapter, we provide decision support of risk response strategies based on empirical research on China Eastern Airlines. This paper chose Eastern Airlines because of the following three aspects. □ in the strategic risk assessment, Eastern Airlines is the highest in the four major airlines. □Not only China Eastern Airlines is the one of the three major domestic airlines, but in the past development process, China Eastern Airlines has experienced significant mergers and acquisitions, large fluctuations in corporate profits, major adjustments of company executives ,and the change of joining a global alliance soon. In the process of restructuring Shanghai Airlines, joining the other major global alliance, the identification and evaluation of Strategic risks they are facing do good to the achievement of their strategic objectives as well as providing ideas and guidance for other airlines. □After a high-level changes and restructuring, China Eastern Airlines proposed five Strategies, Hub, Brand synergy, Cost control, Information and fining. Based on the five strategies, identification and evaluation of their risk strategy are undoubtedly important prerequisites for success.

The data of China Eastern Airlines used in this chapter is from the literature and the other is through the deep interviews with executives, confidential contents in this article shall be Shield.

### **7.1 China Eastern Air Holding Company**

#### **7.1.1 Basic situation**

China Eastern Air Holding Company was established on October 11, 2002.which is the merger of eastern airlines, northwest China airlines and Yunnan airline. It is the backbone of China's three major air transport groups. China Eastern Airlines Group based in Shanghai, as of December 2009 its operation assets has reached more than 150 billion Yuan after the restructuring with medium-sized aircraft 331, 151 shipping points. This can navigate in New York, Los Angeles, Paris, Frankfurt and other major cities worldwide. There are 45 offices in china and 43 Foreign Office in all over the world. Eastern Air Group operations includes public transportations, the production and sale of related products (including duty free) of general aviation and air transport operations, maintenance of aviation equipment, aviation passenger and ground handling, aircraft leasing, aviation training ,consulting business and other businesses allowed by the state.

Eastern Group, the core business of China Eastern Airlines Co., Ltd. was established in June 1988 whose major business are aviation passengers, cargo, mail, baggage transport operations, aircraft maintenance, agents and other extension services. Shanghai as the composite hub of, Xi'an, Kunming as the regional hub and it builds a gateway to the world's aviation network. China Eastern is the first listed company in the aviation industry which is listed in New York, Hong Kong and Shanghai Stock Exchange in 1997. In 2006, China Eastern Airlines turns into the 2010 Shanghai World

Expo global partner.

7.1.2 China Eastern Airlines Strategic Management

China Eastern Airlines corporate level strategy has eight aspects overall development strategy, strategic alliances, mergers and restructuring, exit strategy, international strategy, investment strategy, diversification strategy, cultural strategy. But in details are cost control strategy, information strategy, brand strategy, aviation hub port strategy, competitive strategy, service strategy and so on.

( 1) Strategic Alliance

Eastern has wide range of strategic alliance partners, not only within the international aviation airline alliance, domestic and foreign airlines, but also banking, telecommunications, tourism, universities, institutions and the World Expo. Therefore, for the strategic alliances of different types of institutions and organizations, the risk is different. Figure 7.1 shows the different types of Eastern Strategic Alliance Partner

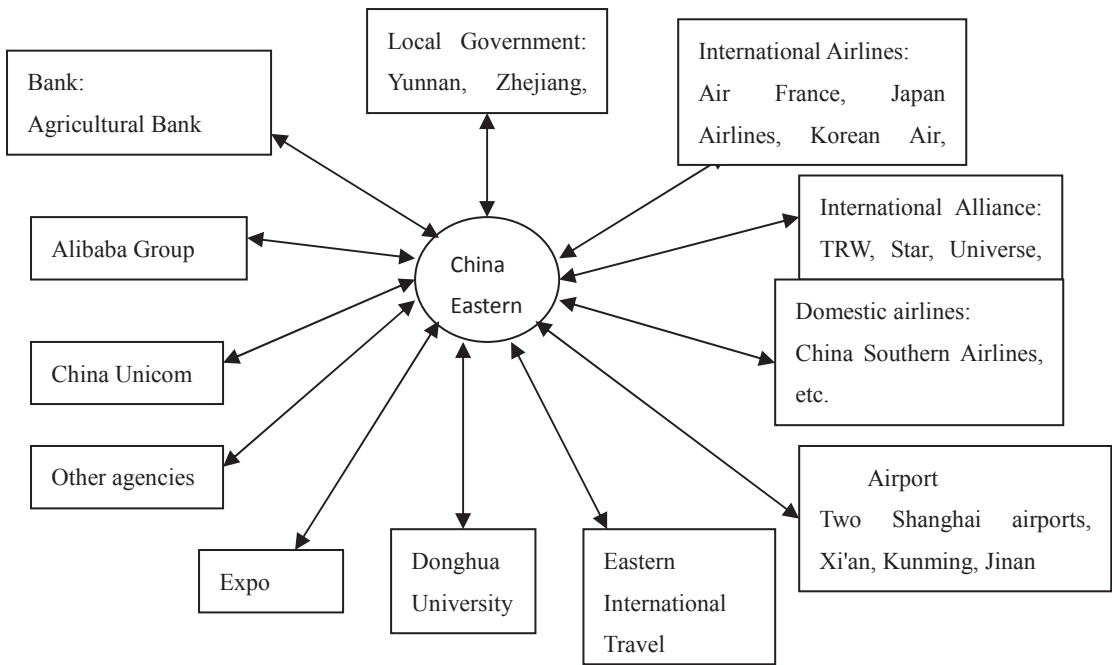


Figure 7.1 Eastern Strategic Alliance Partner

( 2) Merger and restructuring strategies

From the history of Eastern Airlines, it has several major mergers and acquisitions. The merger occurred in 2009 is the largest and this is an important opportunity for the strategic development of China Eastern Airlines .The details are that China Eastern Airlines will issue new shares in accordance with the ratio of 1:1.3. After completion of reorganization of Eastern Airlines .The aviation assets, liabilities, operations and personnel of the original Shanghai Airlines will be fully into a wholly owned subsidiary of China Eastern Airlines - Shanghai Airlines Co., Ltd. Shanghai Airlines brand will be retained to maintain the business continuity management.

Table 7.1 M&A parties of China Eastern Airline

Time	M & A parties	Dominant
Dec. 1997	China General Aviation	Government
2001	Merger great Wall Airlines	Enterprise
2001	Form Ningbo Eastern Airlines Corporation	Enterprise
2002	Acquire 40% stake of Wuhan Airlines	Government
2005	Yunnan Airlines, Northwest Airlines	Government
2009	Shanghai Airlines	Government
2009	Set up Yunnan Eastern Airlines with Yunnan provincial government	Enterprise and Government

Seen from Table 7.1, China Eastern Airlines has experienced a number of significant mergers and restructuring. Most of them are government-led strategic acquisitions. Only Merger great Wall Airlines and Form Ningbo Eastern Airlines Corporation are led by enterprise.

### (3) International strategy

The main goal of China Eastern Airlines Group is that implement the core hub strategic development plan; constructing a fishbone network operating mode which take Shanghai as the center. Shanghai as the passenger, cargo hub, Kunming, Xi'an, Wuhan and as a regional hub. North America, South America, Europe, Central Asia, South Asia, Southeast Asia, North Africa, South Africa and Australia and other regions are all in control. And its international partner airlines (code sharing), including Japan Airlines (JL), Korean Air (KE), Asiana Airlines (OZ), American Airlines (AA), Air France (AF), Qantas (QF), Thai Airways (TG) with its international flights to 43 cities. Before the listing China Eastern Airlines is the largest domestic airline with international routes, more than 60% income are from international routes Listed, the CEA strategy appears transformation in the international strategic, abolish some international routes, thus causing the cost to restore access to international routes very large.

### (4) Investment strategy

The main area of investment of China Eastern Airlines is to invest in oil futures, hedging on jet fuel. From 2003 to 2007 it has good investment performance but with the 2008 global economic crisis and increased volatility in international oil prices, it loose badly in the hedging in 2008

### (5) Diversification strategy

Eastern diversification involves empty food, import and export, financial futures, media advertising, travel ticketing, hotel groups, airport investment and other areas, and basically related to diversity, its goal is the pursuit of economies of scale and scope economies.

### (6) Eastern way of strategies

In China Eastern corporate level strategy, M & A strategy is based on government policy, and other major strategic development is generated by corporate executives.

## **7.2 China Eastern Airlines strategic risk identification**

According to this Chapter5, strategic risk is China Airlines are from strategic positioning, strategic choice and strategic implementation three areas and this chapter on China Eastern Airlines strategic risk analysis is based on these three areas. Based on research and literature, its strategic risk factors can be summarized as follows.

### **7.2.1 China Eastern Airlines' risk identification of strategic positioning**

#### **(1) Environmental**

The environment China Eastern Airlines is facing are the same to all air transport, but same environmental factors for different airlines its size, the risk of loss and its uncontrollable is different. According to China Eastern actual operations, the main environmental risks are fluctuations in fuel prices, natural disasters, economic fluctuations and competition in the industry

#### **(2) Strategic capability**

China Eastern strategic capabilities include enterprise resource status and core competencies, China Eastern Airlines has enough adequate funding, personnel, technology and other resource conditions, but its core is relatively weak.

#### **(3) Expectations and targets**

As the history of the development, high-level changes, changes in corporate strategy and other reasons, China Eastern Airlines did not form a complete, continuous vision framework, so the goal is less stable.

#### **(4) Strategic assumptions**

China Eastern Airlines and development strategies are based on assumptions of environmental development once the environmental development is different from expected the corresponding strategy will need to change. At the same time strategic assumptions also include how China Eastern Airlines to establish their own business, how to balance economic indicators, social indicators, internal interests.

### **7.2.2 Strategic choice of China Eastern Airlines Risk Identification**

#### **(1) Development and selection**

China Eastern Airlines is the nature of state-owned enterprises, mainly depends on the direction of its development-oriented government, and therefore the choice of the type of strategies is also more to consider social and governmental factors.

#### **(2) International**

China Eastern international strategy through the development, stagnation, and the stage of re-development .China Eastern Airlines select and implement an international strategy. In the process of internationalization it faces a number of risks, such as international competition, the choice of international flights, international and cultural fusion.

#### **(3) Diversification**

Almost all airlines have opted for diversification strategy; to the CEA non-diversification is associated with great risk.

#### (4) Stakeholder strategy

Eastern has not established stakeholder strategy, which itself has a certain degree of risk, balance the various stakeholders and the relationship is very important.

#### (5) Strategic Alliance

China Eastern Airlines has established a strategic alliance with many businesses and organizations Strategic alliance partner selection has some risks, the establishment of cooperative alliance has certain risks, alliance stability and continuity are of great uncertainty. Especially after the merger of China Eastern Airlines and Shanghai Airlines, the strategic alliances between new China Eastern Airlines and Star Alliance are with more uncertainty.

#### (6) M & A

The largest mergers of China Eastern Airlines are with Shanghai Airlines in 2009. Whether it is the merger of motivation, the way the merger, the combined integration, there is greater uncertainty and risk. Meanwhile, China Eastern Airlines also face the chance of other airline mergers and acquisitions; each acquisition has a certain degree of risk

#### (7) Low-cost strategy

According to this understanding of low-cost strategy, low-cost strategy is targeted at low-cost airline's customer base, through management, simplifying services; stop means simple terminal and other methods to maintain its competitive position Eastern doesn't take low-cost strategy currently, so it's less risk

#### (8) Competition

The main risk factors of Eastern include competition between airlines and other modes of transport More prominent is the rapid development of urban high-speed rail in recent years, to the part of Eastern route it may cause some impact.

### 7.2.3 China Eastern Airlines strategic implementation of risk identification

#### (1) Resource matching

After developing and selecting strategy, it need for implementation of the strategy, however, new strategies need to match appropriate resources. The lack of manpower, technology, capital and other resources will bring some risks to the implementation of the strategy.

#### (2) Organizational structure

China Eastern Airlines and Shanghai Airlines have just completed the merger. Its organizational structure is in the process of integration .So organizational structure can cause a great impact on the implementation of the strategy, organizational structure at higher risk.

#### (3) Strategic change

Changes in the external environment and industry will bring strategic change to Eastern. At the same time, for their own strategic development needs, China Eastern Airlines will sometimes seek strategic change. This two will all bring risks to the Eastern. Strategic change will bring changes in stakeholder relations, organizational structure changes, and it will hit corporate inertia, rigidity and other factors of exclusion. Thus, China Eastern strategy is a very important strategic change in risk factors.

#### (4) Corporate Culture

According to research, China Eastern Airlines has formed its own corporate culture, according to this understanding corporate culture is a long-term accumulation and development. The miss of corporate culture or wrong corporate culture will lead to its failure. Meanwhile, the corporate culture is one of the guarantees of corporate strategy development and implementation.

### 7.3 China Eastern Airlines strategic risk assessment

Chapter5 has already evaluated strategic risks of China Eastern Airlines China .Eastern's strategic risk factors were evaluated by five experts, the evaluation method using three fuzzy numbers, with very low and slightly low, low, medium, high, high, very high to indicate. Predefined set of triangular fuzzy weights:  $\{W1^*, W2^*, W3^*, W4^*, W5^*, W6^*, W7^*\}$ ,  $W1^*=(0, 0, 0.2)$ ,  $W2^*=(0, 0.2, 0.4)$ ,  $W3^*=(0.2, 0.35, 0.5)$ ,  $W4^*=(0.3, 0.5, 0.7)$ ,  $W5^*=(0.5, 0.65, 0.8)$ ,  $W6^*=(0.6, 0.8, 1)$ ,  $W7^*=(0.8, 1, 1)$ .

Table 7.2 Eastern strategic risk assessment

	I1	I2	I3	I4	I5	Defuzzification	Sort
R11	W6*	W5*	W6*	W6*	W5*	0.74	2
R12	W4*	W5*	W4*	W4*	W6*	0.59	7
R13	W4*	W6*	W5*	W4*	W5*	0.62	6
R14	W5*	W4*	W5*	W4*	W6*	0.62	6
R21	W6*	W5*	W5*	W4*	W6*	0.68	4
R22	W6*	W5*	W5*	W5*	W6*	0.71	3
R23	W3*	W3*	W3*	W2*	W3*	0.32	12
R24	W3*	W3*	W5*	W3*	W4*	0.44	10
R25	W6*	W6*	W5*	W5*	W4*	0.68	4
R26	W3*	W4*	W5*	W3*	W4*	0.47	9
R27	W3*	W6*	W5*	W2*	W3*	0.47	9
R28	W5*	W4*	W5*	W5*	W6*	0.65	5
R31	W3*	W4*	W3*	W2*	W4*	0.38	11
R32	W4*	W5*	W4*	W2*	W3*	0.44	10
R33	W6*	W5*	W7*	W6*	W5*	0.77	1
R34	W3*	W5*	W5*	W3*	W4*	0.5	8

As can be seen from Table 7.2

The importance is strategic change, environment, international, development and selection (strategic alliances), competition, expectations and objectives (strategic assumptions), strategic capabilities, corporate culture, mergers and acquisitions (low-cost strategy), organizational structure (strategic stakeholders), resource matching, diversification

In accordance with Chapter 5, strategic risk factors can be divided into strict control

level strategic risk and interest level strategic risk. In China Eastern 16 strategic risk factors, based on triangular fuzzy number fuzzy comprehensive evaluation, scores above 0.5 are strategic change, environment, international, development and selection (strategic alliances), competition, expectations and objectives (strategic assumptions), strategic capabilities, and corporate culture. Meanwhile, according to Chapter 5 strategic risk assessment results on 12 of the domestic airlines. Private airlines strategic risk is significantly higher than the state-owned airline.

However the strategic risk in China Eastern Airlines is the highest in four airlines (Air China, China Southern Airlines, Hainan Airlines, China Eastern Airlines), and its position in the market do not match it. Especially compared with Air China and China Southern Airlines, strategic risk is significantly higher. This paper argues that the main reason is China Eastern Airlines was forced to change strategy, which includes 3 aspects. First, the environmental impact, in the course of development of China Eastern Airlines, it is greatly influenced by the economic environment and fuel price fluctuations. And thus causes severe economic losses in 2008. Second, China Eastern Airlines frequent high-level changes, the company's strategy cannot be sustained and effectively implemented. Third, the government-led mergers and acquisitions, because of the merger of China Eastern Airlines and Shanghai Airlines Eastern had to develop and implement strategies.

#### **7.4 Eastern Air Strategic Risk Analysis**

Strategic risk assessment under Chapter 6, CEA's strategic risk in the 12 airlines ranked sixth. As one company of the three biggest airlines, CEA's market position and its level of risk are inconsistent. According to earlier in this chapter the overall development of the Eastern and strategic management, we find that China Eastern Airlines is facing a high risk strategy, particularly its strategic change risks

##### **7.4.1 Assumption of risk**

###### **(1) The nature of business assumptions**

China Eastern Airlines is the state-owned enterprises, and therefore there is a definition of corporate performance, business development goals, profit and other assumptions

The performance of state-owned airline is an integrated system, rather than from the single indicators to measure. For example, the paper argues that the target system, including Eastern definition of corporate profits, state-owned assets, social development and stability and other factors. Foundation of corporate strategic objectives is based on the assumption of Eastern Enterprises. Therefore, strategic planning established by China Eastern Airlines, strategy implementation process should be based on the nature of the enterprise to avoid understanding error of the nature which led to corporate strategy fail..

###### **(2) The assumption of the strategic environment**

Every business strategy is based on the assumption of the strategic environment. For

China Eastern Airlines, its strategic environment covers a very broad assumption, the analysis here focus on a few fertility assumptions

For the airline transport companies the demographic factors have a great influence on their customers and future earnings. As China Eastern international strategy, all routes should be assumed that demographic factors, on a global scale, the American and European countries have high-profit international routes, customer focus, but it has become saturated. Speaking from demographic factors, many developed cities have negative growth of population. To the domestic terms, the growth rate assumptions also directly determine the success or failure of the route.

Disposable income.. In the country, air transport for most people is a high-end consumer, at present, domestic education, health care spending accounted for most of the residents and other income, the disposable income of residents is relatively small, therefore, the country's economic development, social welfare system cause direct impact on people's disposable income, and thus would have an impact on air consumption.

#### Definition of performance

Based on CEA's growth history, state-owned background and the three listed factors China Eastern' performance should be an integrated target system covering the main objectives of the stable development of society (state-owned assets), profit targets (listed companies requirements), international (national construction of civil power requirements) and other indicators. Otherwise, a single definition of performance indicators will cause great risk. Eastern strategic environment assumptions include a number of factors, macro-economic, geographical distribution, demographic factors, technological development, etc. China Eastern Airlines merger Shanghai Airlines, establish of Shanghai-based airline's network, the basic assumption is based on Shanghai's position and the advantages in the air transport industry. Shanghai is located in Asia-North America Europe Asia triangular route endpoints, long and short range routes are moderate, unique geographical location. Meanwhile, Shanghai Hongqiao and Pudong Airport two hours of air flight circle are very rich in resources. 80% of China's cities among the top 100, 54% of the land and resources and 90% of the population, 93% of GDP output places, as well as Japan, South Korea, most of the region are located in Shanghai two-hour flight circles airport . Whether in domestic or international flights, Shanghai airports have resources advantages. And not only Shanghai is China's most economically developed cities, backed by the Shanghai Yangtze River Delta economic hinterland, but also cargo areas provided a powerful support on its passenger.

#### 7.4.2 The risk of strategic choice

For Eastern, the most important strategic international strategies are strategic alliances, mergers and acquisitions strategy, diversification strategy but no stakeholder relations strategy.

##### (1) Development and selection

As one of three state-owned airlines, China Eastern Airlines and its strategic direction of development is more often oriented government directives Government

can has important implications action on the development of China Eastern Airlines For example, China Eastern Airlines acquisition strategy, international strategy. Such as competitive strategy, market strategy and other functional strategies are often carried out by the CEA

## (2) The risk of international strategy

China Eastern Airlines and Shanghai Airlines all have international flights; therefore, the current risk they are facing is integration risk. Before the listing China Eastern Airlines is the largest domestic airlines with international flights, international revenues accounted for 60% of total revenue, especially Hong Kong and Macao, Japan, the gold route. After listing, its international strategy had shifted .China Eastern Airlines cut some international routes in 2002 and then recovery will have to pay a high price.

As the world economic development is not balanced, uneven population distribution, national and regional cultural differences and other factors

China Eastern international strategy must be specific to the development of routes for different strategies in different countries. For example, for such a long distance such as Brazil, closer economic and trade ties with China, economic growth, populous country, it should devote greater efforts in advance. Develop an independent international development strategy. As for competitive international routes it will have to develop a relatively conservative internationalization strategy. Also, pay attention to the process of internationalization and integration of cultural differences

## (3) The risk of strategic alliances

Eastern did not join an international alliance. The Air China joins the Star Alliance with Shanghai Airlines. From the perspective of national interests and resources, Air China has joined the Star Alliance, so China Eastern can choose One World or Sky Team; this will not result in duplication and waste of resources. Eastern is currently not a member of an international alliance, therefore The current risk identification for strategic alliance with China Eastern Airlines are more important reference and use valuable The key consideration, including the risk of adding the cost of risk, the risk of alliance dependence, risk of loss of autonomy risk of lack of flexibility, the risks of instability. System integration risk, lack of shared vision risks.

For the second type of Strategic alliance with other organizations and institutions, bilateral or trilateral strategic alliance, the above also applies to risk identification But in the bilateral strategic alliance, it is easier to reach a win-win result The risk is relatively small.

For example, the Shanghai World Expo as a strategic alliance partner, to a greater extent is win-win for both sides

## (4) M & A strategic risk

### □ Motive risk

Motivation of merger between Eastern Airlines and Shanghai Airlines is based on government policy. According to relevant literature and research, mergers and acquisitions there are several motivations

First, the World Expo as an opportunity to establish a national strategy Shanghai port hub, to form a strong base for Shanghai Airlines, accelerate the construction of Shanghai international shipping center

M & A front, two in Shanghai Hongqiao and Pudong airports, Eastern market share of nearly 32%, 17% on Airlines, Air China and China Southern Airlines accounted for about 10%. The remaining shares are divided by dozens of airlines. Shanghai's lack of a "leader" status based airline, Shanghai Airport flight arrangements are difficult to form the "backbone" constraints route network and also limits the airport's transit efficiency.

Second, the two airlines are serious losses, mergers and acquisitions of complementary advantages, to reshuffle the cards, stronger, enhance the core competitiveness are the effective measures. Eastern Airlines will have a significant synergies after restructuring and will help companies to improve resource efficiency, reduce operating costs, enhance profitability, and effective return to shareholders; help the company to further expand and optimize the route network, has better coverage and stability, so as to provide better passenger route transit services, products and products to accelerate and promote the construction of Shanghai international aviation hub, to better serve the World Expo 2010 Shanghai China.

Third, the civil aviation industry "points deep restructuring" is different from the past "the breadth of the surface restructuring", in line with national strategic planning for the construction of air power. Prior to the acquisition, China Eastern Airlines 2008 net loss of up to 13.928 billion Yuan, 11.065 billion Yuan up insolvent. According to audited financial statements as of March 31, 2009. ST Eastern asset-liability ratio as high as 115.1%. After the issuance of 7 billion Yuan, ST China Eastern Airlines is still negative net assets, assets and liabilities was 105.0%. The weakness of the aircraft, before the government subsidy, \* ST on aviation assets and liabilities rate 91.35% (consolidated statements), 90% of the asset-liability ratio is considered to be the airline's warning

As can be seen from Table 7.1, China Eastern major M & A and restructuring strategies. Great Wall Airlines is the only mergers between enterprises. The other major mergers and acquisitions are government-led. Government guidance and even participate in mergers and acquisitions and restructuring strategy must have its potential risks need to be overcome.

#### ☐ Integrated Risk

The risk of merger between China Eastern Airlines and Shanghai Airlines are primarily in the following aspects.

##### Cultural integration

Eastern part of state-owned enterprises, enterprises with central cultural background, and Shanghai Airlines are typical of local enterprises, typical culture of Shanghai, Two kinds of integration between corporate cultures is one of the risks. After the acquisition of Shanghai Airlines, Shanghai's brand will stand alone, personnel and re-positioning of posts and is a necessary process, Staff conflict; governance structure, rationality, etc. are all potential risks

##### Model integration

There is a huge difference between China Eastern Airlines and Shanghai's fleet building. Aircraft is one of the most important assets in the airline; different models bring different pilots different maintenance different routes. Therefore, the difference between the models is difficult to make both companies to achieve economies of scale

in the models

Table 7.3 the plane model of original China Eastern Airlines and Shanghai Airlines

original China Eastern Airlines	Shanghai Airlines
<a href="#">airbusA319-100</a> : 15	• <a href="#">boeing 737-700</a> : 6
<a href="#">airbusA320-200</a> : 84	<a href="#">boeing 737-800</a> :31
<a href="#">airbusA321-200</a> : 15	<a href="#">boeing 787</a>
<a href="#">airbusA330-200</a> : 5	<a href="#">boeing 757-200</a> : 11
<a href="#">airbusA330-300</a> : 15	• <a href="#">boeing 767-300</a> : 7
<a href="#">airbusA340-300</a> : 5	<a href="#">ARJ21</a> :5
<a href="#">airbusA340-600</a> : 5	airbusA321 :1
<a href="#">boeing737-300</a> : 18 架	Raytheon HAWKER :1
<a href="#">boeing 737-700</a> : 39架	Boeing 757—200F: 2
<a href="#">boeing 737-800</a> : 13架	McDonnellMD-11F: 3
<a href="#">boeing 767-300ER</a> : 3架	•BombardierCRJ200

#### Integration of air time resources

Flight time is in a particular airport, make the aircraft take off and land on a particular date so as to obtain or distribution into the scheduled time of arrival and departure. Therefore, in the situation capacity and airspace capacity unchanged, any airport flight time per day is fixed. After the merger, the new Eastern greatest achievement may have been valuable in Shanghai flight schedule information.

However, the civil aviation authorities recently released some of the signals seem to indicate that the new Eastern Time advantage probably will not be subject to special protection. Therefore, the dominance of aviation resources is not always as good as expected.

#### □ The risk of government action.

As the airline business, more use market means to compete in the market to survive, government action has its inherent bureaucracy, cannot operate according to market forces and other disadvantages, the function of government is more guidance and standards, the supervisor and the rule makers of market behavior, not participants. China Eastern two major mergers and acquisitions are carried out by the governments therefore; potential risks cannot be ignored under the government action.

#### (4) Risk of diversification strategy

Diversification strategy is mainly based on risk diversification and economies of scale and scope economies, take full advantage of the learning process of diversification effects and synergies. Although to the airlines currently diversification is basically successful. The scale and scope economies relative to other industries are more easily achieved. However, for different companies, the risk still exists. For example, the lack of competitive advantage core business risk, the risk of a lack of

learning ability, increased management costs risk. Eastern is currently involved in diversified hotel, tourism, import and export, food, advertising and other industries. These industries to some extent form a complete value chain with the air transport industry. However, the biggest risk is when the air transport industry, Depression, other industries will also be affected, cannot achieve the purpose of risk diversification.

#### (5) Strategic risk of interests

Overall, Eastern stakeholder strategy is not in the past history, the China Eastern Airlines saw a number of stakeholders in a conflict of interest with the event, in June 2006, Eastern Shandong's a captain and five deputy driving resignation; November 2006, China Eastern Airlines Jiangsu company 10 captain resignation There are more security incidents in Eastern history. China Eastern Airlines, Yunnan's provincial government on the issue of conflict on international routes etc.

China Eastern Airlines with employees, customers, government and other not on the basis of shared interests to achieve win-win benefits So for China Eastern Airlines, the most important thing is to develop in line with its strategic stakeholders, and through rational scientific management structure for implementation.

#### 7.4.3 The risk of implementation of the strategy

Implementation of the strategy is a crucial stage of strategic management According to previous literature, the risk of implementation of the strategy includes matching resources; organizational structure, strategy and corporate culture change four factors. For China Eastern Airlines a core risk of implementation of the strategy is strategic change which also involves the matching of resources, organizational structure and corporate culture

Since 2003, China Eastern Airlines Northwest Airlines and Yunnan Airlines merger began, China Eastern Airlines entered a long period of consolidation. June 1997 to December 2008, China Eastern Airlines has changed leadership 7th, 5 chairman, general manager 6, the average general manager at any time for only one year (see table 7.4) based on China Eastern Airlines, the strategic management process will produce a corresponding risk strategy formulation, strategy implementation and strategic control risk, China Eastern corporate strategy is formulated by the senior staff. The frequent changes of the Chairman and general manager led directly to the intermittent and unsystematic. The strategy cannot be implemented.. A strategic planning often takes time to develop, longer implementation, frequent high-level strategic change is a serious impediment to the development, implementation and control. According to Chapter 3, entrepreneurs play a crucial role in the development of an enterprise

Table 7.4 Changes in CEA I

Chairman of the board	Term of office	General manager	Term of office
A	1997.6—1999.10	B	1998.1---1999.12
B	1999.10---2001.6	C	1999.12---2000.12
D	2001/6-2004/10	E	2000/12-2002/1
F	2004.10---2008.12	F	2002.1---2004.9
E	2008.12-now	G	2004.9---2008.12
		H	2008.12-now

Thus, due to restructuring between China Eastern Airlines Shanghai Airlines need to re-establish a new organizational structure, re-adjustment of resources and equipment. Their enterprise culture needs integration. The changes of high-level also bring new strategic direction and change so the implementation of China Eastern Airlines is facing the risk of major strategic.

#### 7.4.4 Strategic management recommendations

To ensure that strategic objectives, strategic management must be transparency, continuity and efficiency. Transparency refers to the strategy formulation and implementation must be full participation within the enterprise, from corporate executives to junior staff must have a consistent understanding of strategy and understanding, so as to make the strategy effectively implemented.

The inheritance of strategic management has two meanings, one refers to the consistency of strategic management formulation and implementation the second refers to the enterprise through the process of change, the same strategy can be implemented,. When corporate executives, changes in Eastern occurs after the merger and restructuring inheritance strategy cannot be reflected. Strategic management is to ensure strategic objectives, strategic goals also mean that companies produce the expected benefits; here benefits are divided into economic and social benefits. As a state-owned enterprise, it must reflect the corporate contribution to the country, while creating economic value

Under the principles of transparency, inheritance and effectiveness, China Eastern Airlines needs to analysis and evaluation co-brand, cost control, information technology refinement of the five major strategic.. Determine the positioning of each strategy. Make a risk-based decision for each program.

## **Chapter 8 Summary and Conclusion**

### **8.1 The main conclusions of this paper and research results**

Currently , China's enterprises are lack of general understanding of the strategic risks of the system, and there are few existing research paper on the strategic risk of the system. Through the strategic management theory, risk theory and strategic analysis of domestic and international system, from the strategic management process and business operations, this paper summarized the strategic risk generation mechanism and applied risk management to air transport business. Through strategic risk identification, analysis and evaluation on Chinese air transport enterprises, this paper provide decision support for air transport companies, thus help the companies to achieve their corporate strategic goals. China Eastern Airlines strategic risk identification and analysis also provides businesses with a specific decision support, which has an important significance guiding China Eastern Airlines' change and development. The main findings and conclusions of this paper are as follows:

(1) Through study on corporate strategy and strategic management theory, this paper believes that the essence of strategy is human's understanding of the relationship between business and environment. The root reason why various schools of strategic management thinking create is neither strategic management thinking itself nor the perspective which researcher stand but the changes of business environment in different historical periods. It is said all strategic management thinking is correct in the specific historical context. For example, in China's planned economy time, the government plan, and the corporate management is implemented, we can say that strategic management is to implement government directives, and with the deepening of China's foreign development, Chinese companies have joined the global competition, At this time the business need determine their own strategy under the considering environment and resources.

(2) Based on the study about literature, this paper established strategy which is the same concept as strategic management, business strategy is a process infinite close to business goal the that includes strategic positioning, strategic choice and strategy implementation, and the role of the three interaction.

(3) Risk in different areas, different angles have different interpretations, most of the risk study are focused on financial sector and safety product areas. This paper according to the literature research, determine risk is the effect of uncertainty on objectives. This is the definition of international standards ISO 31000 "Guidelines for the implementation of risk management and implement principles"

(4) Strategic risks are currently no uniform definition and understanding in the theory and practice. This paper identifies a common understanding; of the applicability of the strategic risks are some uncertainty which have an impact on achievement business strategic objectives and vision. It is said that strategic management is inherently uncertain, the impact on achieving business goals, assumption of risk such as

strategic, strategic environmental risks, the risks of implementation of the strategy, corporate level strategy development risks.

(5) An important result of literature review is that the current theory, the lack of strategic management from the strategic risks of the enterprise itself, on the one hand because of the lack of risk theory and strategic management research, on the other hand, in practice, Chinese firm's strategic management has only just begun, for the strategic positioning, strategic choice, implementation of the strategy are still in its infancy, so the lack of understanding of the strategic management risks.

(6) For Chinese air transport enterprises, strategic risk resulting in two dimensions, one is based on strategic management itself; one is based on the enterprise running. This article focuses on strategic management by analyzing the behavior of its own strategic risks.

(7) Corporate strategic risk research can not be divorced from the industry and corporate business analysis, the developed world air transport industry has become mature, such as the U.S. Southwest Airlines, Singapore Airlines, Lufthansa, have already occupied an important position in the international market, while China's air transport industry is in growing step, competitiveness of enterprises is weak, so China has proposed to enhance air power. China's air transport enterprises in strategic management, risk management, and network-based international airline have a big gap with international companies, especially in strategic alliances, international strategy, competitive strategy, diversification strategy, stakeholder strategies, etc.

By research on air transport industry and enterprise, this paper corrected the mistake which current paper think low cost airline was; propose the difference between low price airline and low cost airline

(8) Based on the analysis of air transport enterprise strategic management process, combined with expert interviews, use work breakdown approach, this paper summarized the strategic risk identification model, which includes three first level strategic risk indicators (strategic positioning, strategic choice and strategy implementation), 16 second-level indicators (environment, expectations and goals, etc.) and many third level indicators and divided second-level indicators into strict control layer, control layer and attention level, through the analysis of those risk factors, we can grasp the air transport corporate strategic risk management. In addition, this paper also analyzed the conditions strategic risk factors transform to the strategic risk. This provides a guideline to prevent and control strategic risk.

(9) This paper use network analysis, through interviews with experts in the field of aviation to obtain data on the air transport industry, do a assessment on strategic risk, descending 16 second level strategic risk factors in order, base on second level strategic risk factors weight comparison, use a triangular fuzzy number to compare 12 air transport enterprises' strategic risk, china air's strategic risk is the smallest, Okay Airways strategic risk is the largest, Shenzhen Airlines and China Eastern Airlines strategic risks are apparent inconsistency with their position in the market.

(10) Strategic risk identification and evaluation is intended to control and avoid risk, this paper established a model of strategic risk decision-making, corporate strategic risk management objective is to develop appropriate programs and measures for each

strategy risk factors to, avoid, reduce, transfer, accept or use of risk. Without considering the quality of business decision-makers, decision-making under conditions and other factors, this paper presents strategies and measures for each second level risk factor.

(11) Through the strategic risk assessment, China Eastern Airlines strategic risk is apparent inconsistency with its market position, as one of the three major state-owned airline company, its strategic risk is significantly high, so it is very important to do a case study about China Eastern Airlines. Through case studies, because of administrative factors, high-level frequent changes, strategic change frequently and other reasons, China Eastern Airlines has a high risk strategy.

## **8.2 Innovation of this paper**

### **(1) application innovation**

The application innovation of this paper is reflected in two aspects; one is applying strategic risk theory to China's air transport industry, and has the whole industry a strategic risk research. On the other hand is applied strategic risk to a specific enterprise risk strategy, that is, the application of China Eastern Airlines

### **(2) Innovative research methods**

This paper has a comprehensive analysis of variety corporate strategic risk assessment methods. This paper combined network analysis with fuzzy evaluation according to air industry characteristics and combined quantitative analysis with qualitative analysis which make up for the lack of some single method, achieve methods complementary. Use network analysis to assess strategic air transport enterprise risk, through evaluation to determine the strategic risk factors weight, and divided strategic risk factors into strict control layer, control layer and the attention layer, and then combine with the triangular fuzzy numbers method to rank strategic risk of 12 strategic air transport enterprises.

(3)Based on air transport industry analysis, this paper propose that the generation of corporate strategy risk is based on the enterprise strategy management process and corporate running, the paper made side analysis on this two dimensions is an innovative research on corporate strategic risk analysis.

(4) Strategic risk identification is an important work, the innovation of this part is combining literature review, expert interviews and work breakdown method to identify the strategic risks, build a recognition model, and analyze the conditions strategic risk factors change into the strategic risk. This paper proposes two core elements strategy of risk identification, risk factors that identify strategic risks and strategic risks into the conversion conditions to identify.

## **8.3 Limitations and shortcomings of this paper**

Firstly, to ensure corporate strategic goals and business success, enterprise risk management strategy must experience identification, analysis, evaluation,

decision-making and control procedures, this paper just try to identify, evaluate and analyze strategic risk of air transport companies in China. The lack of this paper is that there is no study on control and warn the strategy risk.

Secondly, in the strategic risk assessment, because of my ability, resource constraints, this paper selected five interviews with relevant experts within the field, so that the collected data has a certain error.

In the method, this paper use ANP evaluation to analyze strategic risk, whereas the strategic risk assessment has many other methods, such as the Monte Carlo method, neural networks, etc., using a variety of ways to do the same study evaluation, and then compare the results of the evaluation may be better.

In the timeliness, industry and business are changing, this paper obtained data and the results may change with the external environment.

Furthermore, in the strategic risk decision-making, corporate strategic risk decision-making affected by many factors, but also affect the different degrees, this is only in business decision-makers ignore their own conditions and decision-making is provided under the decision-making.

#### **8.4 Prospect for further study.**

Strategic management is an important area of enterprise management. Domestic business and strategic management of risk awareness and research is still in the initial stage of trying, so in the following areas need further research.

(1) Strategic risk identification method and depth can be further extended.

(2) Can use more assessment methods to assess strategic risk.

(3) Strategic risk identification and evaluation can be extended from the time dimension, such as the industry or the enterprise's annual strategic risk identification and evaluation, then the historical data for comparison and analysis.

(4) Strategic risk decision-making can be study as important research content, the risk preferences of decision makers and attitudes affect the results of strategic decisions. Or establish an integrated enterprise decision support model for strategic risks, covering industry conditions, business factors, policy makers and other factors and external environmental factors.

(5) For China Eastern Airlines, evidence of its strategic risk research strategy can be developed from the way China Eastern Airlines make strategy plan, strategy implementation effectiveness; strategic decision-making in different aspects of risk research can also be made for the China Eastern Airlines five basic strategy for research.

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## Appendix

### Appendix one: Questionnaire on the strategy management and risk of Chinese airlines

Please chose “√”on the right position and fill in the questions

#### One: basic information

1. Company name:

2. Funded in:

3. Scale:

Lines number: -----domestic lines-----international lines ----; air craft number-----;

base number:

4. Company belongs to:

☐state-own; ☐private; ☐joint venture between state and private, and the state is in holding position; ☐joint venture between state and private, and the private is in holding position; ☐joint venture with abroad.

5. Group : ☐yes; ☐No

6. Listed: ☐no; ☐yes, listed on:-----

7. Business field : ☐domestic passenger; ☐domestic air cargo; ☐international passenger; ☐international air cargo

8. Diversificationon: ☐realestate; ☐hotel; ☐tourism; ☐finance; ☐airport; ☐advertisement; ☐others-----

9. Alliance: ☐Star alliance; ☐Sky Team; ☐One World; ☐others-----

10. Main business model:

☐network airlines; ☐low cost airlines; ☐regional airlines; ☐charter airlines

## Appendix Two: Interview on strategic risks

Please use the number to show the importance between two factors, “1” means the importance between factor i and factor j is at the same level; “3” means factor i is little more important than factor j; “5” means factor i is obvious important than factor j; “7” means factor i is very important than factor j; “9” means factor i is absolutely important than factor j; and “2、4、6、8” individually means the importance as showed.

	Probability	Loss	Uncontrollability
Probability			
Loss			
Uncontrollability			

	Strategy positioning	Strategy choice	Strategy implementation
Strategy positioning			
Strategy choice			
Strategy implementation			

	environment																Culture
environment																	
Strategic capability																	
Expectations and goals																	
Strategic assumptions																	
Development and selection																	
Internationalization																	
Diversification																	
Stakeholder strategy																	
Strategic																	

Alliance																	
M & A																	
Cheap																	
Competition																	
Resources to match																	
Organizational structure																	
Strategic change																	
Culture																	

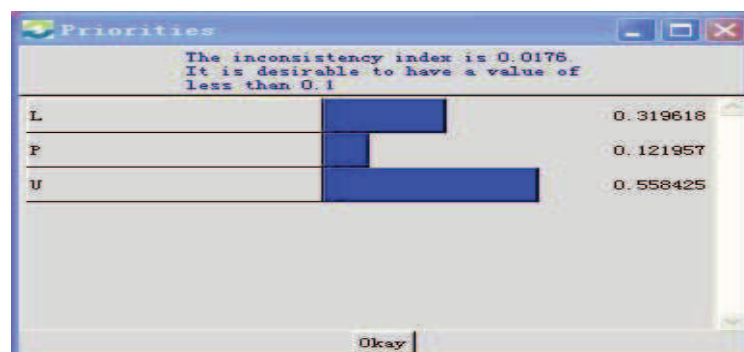
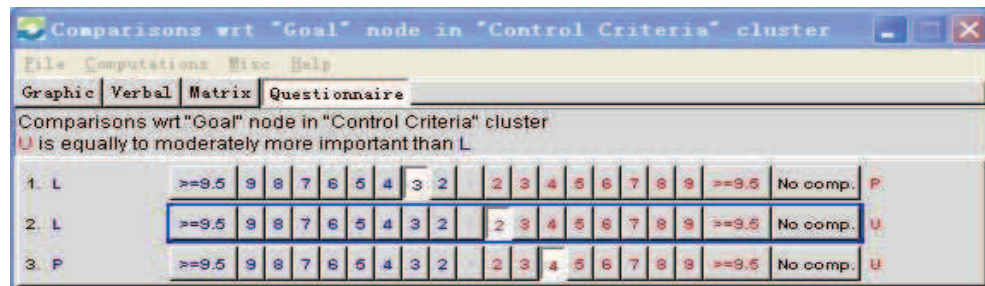
Please judge the strategic risks for the airlines in the following table using W1\*, W2\*, W3\*, W4\*, W5\*, W6\* and W7\*, W1\* means that the risk is very low, and W7\* means the risk is very high.

		Mu	CA	CZ	HU	SC	ZH	3U	MF	BK	9C	G5	HO
Strategy positioning	environment												
	Strategic capability												
	Expectations and goals												
	Strategic assumptions												
Strategy Choice	Development and selection												
	Internationalization												
	Diversification												
	Stakeholder strategy												
	Strategic Alliance												
	M & A												
	Cheap												
	Competition												
Strategy implementation	Resources to match												
	Organizational structure												
	Strategic change												
	Culture												

## Appendix Three: strategy risk assessment process

### 1. The weight of criteria

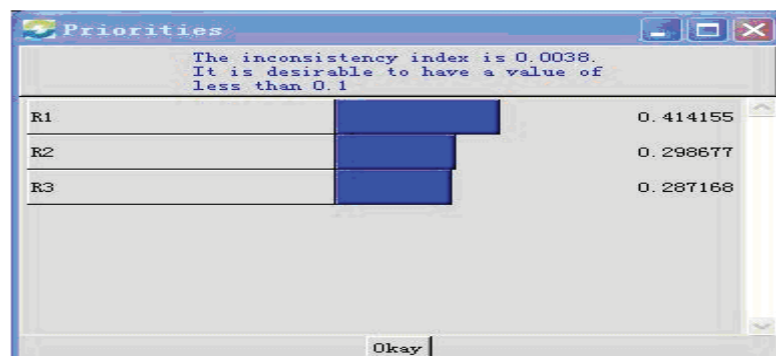
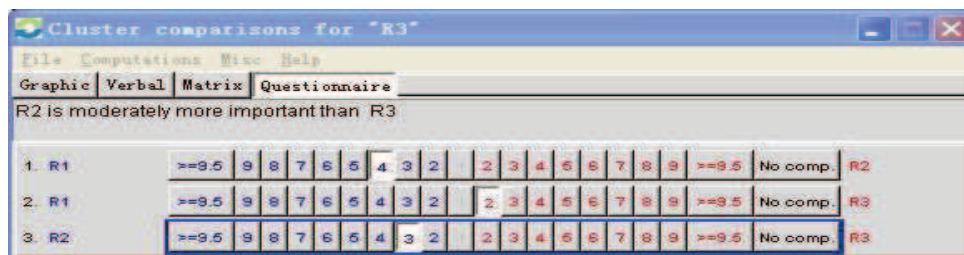
Comparison among P, L and U.



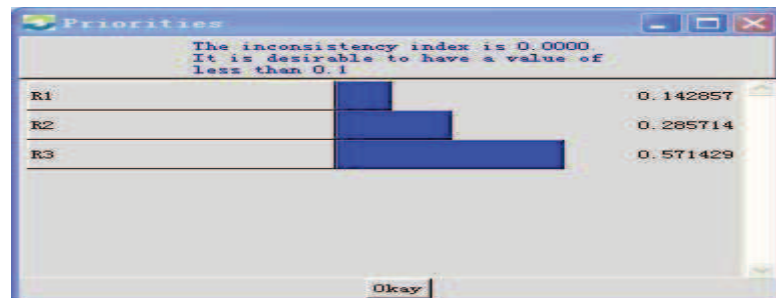
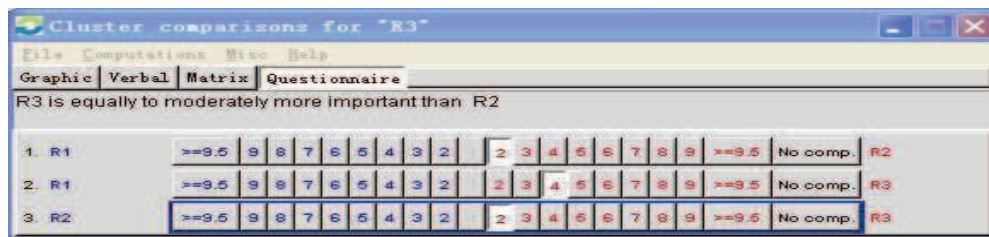
After test, CR=0.0176, less than 0.1, it is consistent and satisfied.

### 2. First layer strategic risk under criteria

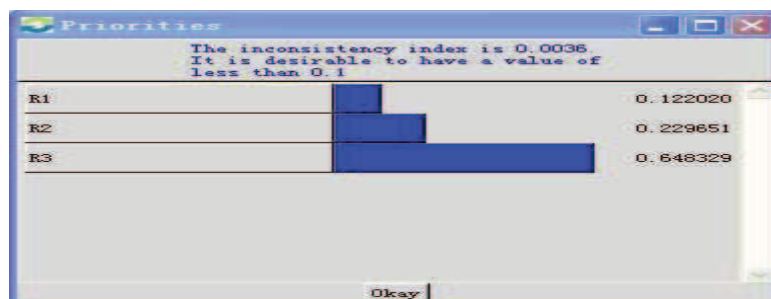
Under P



Under L

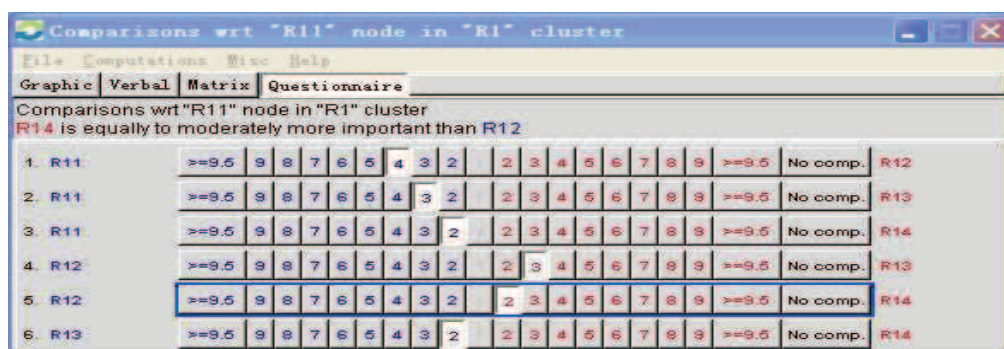


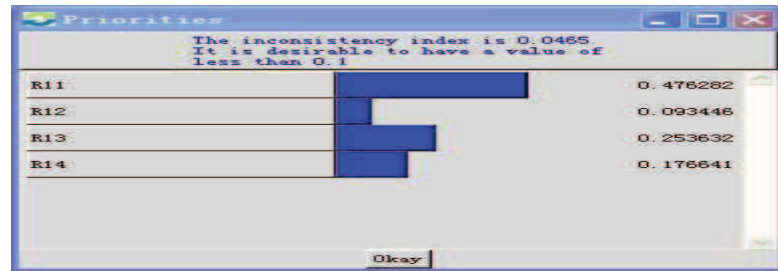
Under U



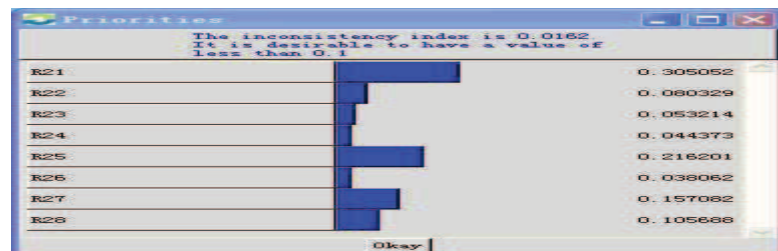
3. The second layer matrix

Judging matrix under R1

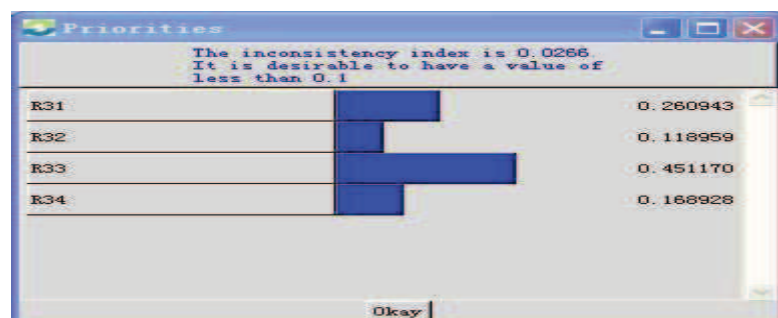
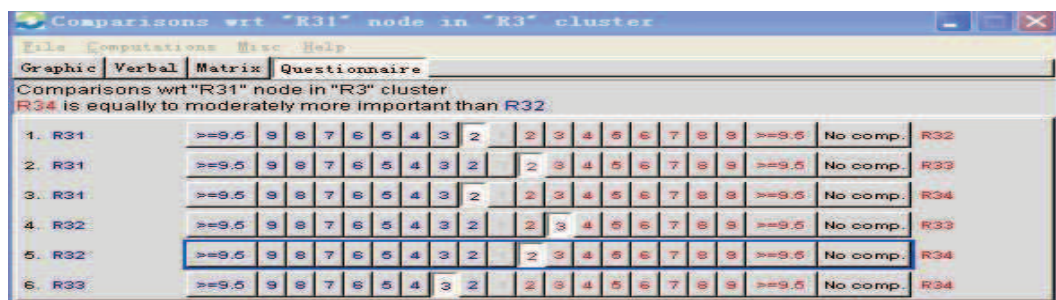




Judging matrix under R2



Judging matrix under R3



( 4 ) weight of all the strategic risks

According to Superdecisions, the final result is as the following

Super Decisions Main Window: risk1.mod: Priorities

Here are the priorities.

Icon	Name	Normalized by Cluster	Limiting
No Icon	L	0.00000	0.000000
No Icon	P	0.00000	0.000000
No Icon	U	0.00000	0.000000
No Icon	Goal	0.00000	0.000000
No Icon	R11	0.34198	0.083045
No Icon	R12	0.18838	0.045255
No Icon	R13	0.25148	0.061067
No Icon	R14	0.22018	0.053468
No Icon	R21	0.26750	0.077289
No Icon	R22	0.19605	0.056644
No Icon	R23	0.01692	0.004889
No Icon	R24	0.18462	0.053341
No Icon	R25	0.06874	0.019862
No Icon	R26	0.01210	0.003497
No Icon	R27	0.22045	0.063695
No Icon	R28	0.03360	0.009709
No Icon	R31	0.25649	0.120098
No Icon	R32	0.17229	0.080675
No Icon	R33	0.36929	0.172916
No Icon	R34	0.20193	0.094549

Okay Copy Values

#### Appendix Four: Chinese airlines

log	c	Name	website	note
	C	China Air	<a href="http://www.airchina.com.cn">http://www.airchina.com.cn</a>	1
	M	China Eastern	<a href="http://www.ce-air.com">http://www.ce-air.com</a>	2
	C	China Southern	<a href="http://www.csair.com/cn/">http://www.csair.com/cn/</a>	3
	H	Hai Nan airlines	<a href="http://www.hnair.com">http://www.hnair.com</a>	44 4
	S	Shandong	<a href="http://www.shandongair.com.cn">http://www.shandongair.com.cn</a>	5
	Z	Shenzhen airlines	<a href="http://www.shenzhenair.com">http://www.shenzhenair.com</a>	6
	3	Sichuan airlines	<a href="http://scal.com.cn">http://scal.com.cn</a>	7
	M	Xiamen airlines	<a href="http://www.xiamenair.com.cn">http://www.xiamenair.com.cn</a>	8
	B	OKAIR	<a href="http://www.okair.net/">http://www.okair.net/</a>	9
	9	Spring Airlines	<a href="http://www.china-sss.com/">http://www.china-sss.com/</a>	10
	G	China Express	<a href="http://www.chinaexpressair.com/">http://www.chinaexpressair.com/</a>	11
	H	Jun Yao airlines	<a href="http://www.juneyaoairlines.com/">http://www.juneyaoairlines.com/</a>	12
	E	United Eagle	<a href="http://www.ueair.com/">http://www.ueair.com/</a>	Cheng
	K	China united	<a href="http://www.cu-air.com/">http://www.cu-air.com/</a>	MU
	8	Lucky airlines	<a href="http://www.luckyair.net/">http://www.luckyair.net/</a>	HU
	J	Deer Jet	<a href="http://www.deerjet.com/">http://www.deerjet.com/</a>	HU
	G	Tianjin airlines	<a href="http://www.tianjin-air.com/">http://www.tianjin-air.com/</a>	HU
	P	Western airlines	<a href="http://www.chinawestair.com/">http://www.chinawestair.com/</a>	HU
	F	Shanghai	<a href="http://www.shanghai-air.com">http://www.shanghai-air.com</a>	MU

## **Résumé :**

Aujourd'hui, les entreprises font face à des changements plus, les incertitudes, mais les compagnies aériennes font face aux plus grands défis. Il n'y a pas de recherches systématiques et complètes sur le risque de stratégie dans l'industrie aérienne. Ainsi cet article étudie principalement la stratégie de gestion des risques du point de vue. Il ya trois parties principales. Tout d'abord, cet article a proposé une stratégie d'identification des risques facteurs système pour les compagnies aériennes chinoises à partir de la position de la stratégie, choix de la stratégie et de la mise en œuvre de stratégie. Travail d'analyse des risques et interview ont été utilisés pour extraire 16 Risques de stratégie, puis les conditions de transformation des facteurs de risque de la stratégie à risques stratégiques ont été analysés.

Dans la deuxième partie, l'ANP a été utilisée pour obtenir les poids pour 16 risques stratégiques, puis les niveaux de risque de l'industrie des compagnies aériennes stratégiques ont été évaluées dans trois couches, une couche, couche contrôle strict contrôle et la couche de regarder. Combiné avec la méthode d'évaluation floue, cet article évalué les risques de la stratégie de 12 compagnies aériennes chinoises et ont analysé leurs différences. Basé sur l'identification et l'évaluation, un modèle décisionnel a été proposé.

Dans la troisième partie, l'étude de mise en œuvre de la recherche empirique dans l'étude de cas, c'est-à Eastern Airline chinois Le niveau de risque évalué la stratégie et les risques stratégiques ont été analysés..

Cet article a innové dans les domaines suivants. Cette recherche a appliqué la théorie du risque dans la stratégie de transport aérien et de l'étude de cas. Deuxièmement, il combine la méthode qualitative avec la méthode quantitative, en utilisant des méthodes d'évaluation ANP et floue. Troisièmement, les deux dimensions fondamentales d'identification des facteurs de risque (stratégie identification et analyse de l'état de transformation) ont été proposées. d'après les résultats de l'évaluation, les risques de la stratégie des compagnies aériennes chinoises ont été classés en trois couches, et les risques de la stratégie des différentes compagnies aériennes analysées.

## **Mots-clés :**

Stratégie, Le risque stratégique, L'identification des risques et l'évaluation stratégiques, compagnies aériennes

## **Abstract:**

Nowadays, enterprises are facing more changes, uncertainties but airlines companies are facing the greatest challenges. There is no systemic and comprehensive researches on the strategy risk in airline industry. Thus this article mainly studies strategy management from the risk perspective

There are three main parts. Firstly, this article proposed one strategy risk factors identification system for Chinese airlines companies based on the strategy position, strategy choice and strategy implementation. Work-risk analysis and expert interview were used to extract 16 strategy risks, and then the transformation conditions from strategy risk factors to strategy risks were analyzed.

In the second part, ANP was used to get the weights for 16 strategy risks, and then the airline industry strategy risk levels were evaluated in three layers, strict control layer, control layer and watching layer. Combined with fuzzy evaluation method, this article evaluated the strategy risks of 12 Chinese airlines companies and analyzed their differences. Based on the identification and evaluation, one decision model was proposed.

In the third part, the study implemented the empirical research in the case study; i.e. on Chinese Eastern Airline. The strategy risk level evaluated and the strategy risks were analyzed.

This article innovated in the following aspects. This research applied the strategy risk theory into airline industry and the case study. Secondly it combined the qualitative method with quantitative method, using ANP and fuzzy evaluation methods. Thirdly, two core identification dimensions (strategy risk factors identification and transformation condition analysis) were proposed. According to the evaluation results, the Chinese airline strategy risks were categorized into three layers, and strategy risks of different airlines analyzed.

## **Key words:**

Strategy, Strategic Risk, Strategic risk identification and evaluation, Airline companies.