Application of Blue Ocean Strategy to Chinese 3G Mobile Telecom Industry

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Abstract

The purpose of this study was to apply “Blue Ocean” strategy to Chinese 3G mobile telecom industry. Chinese 3G mobile telecom industry is a rapidly growing multiple industry which served a lot of services to customers. The thesis tries to find whether all services are important to Chinese 3G operators’ competitiveness and how to create a blue ocean for Chinese 3G operators, help Chinese 3G operators to find their core service from the customers’ opinion and create a new blue ocean industry of mobile internet supplying for Chinese 3G operators.

Research methods such as questionnaire survey and Importance-Performance Analysis (IPA) were used in the thesis. Questionnaire survey was used to gather customers’ opinions of different 3G services. IPA was used to analyze the information got from questionnaire survey.

The authors first used Porter’s five competition forces to identify 10 factors which affecting Chinese 3G operators’ competitive. After a questionnaire survey, mobile internet supplying was found to be the service Chinese 3G subscribers most care. The authors suggested that the operators should create a mobile internet industry as their blue ocean in which they faced less competition and could capture customers from other industries. Finally, the authors recommended Chinese 3G operators to seize the new market as soon as possible.

Keywords: Porter’s five competition forces theory, Blue Ocean strategy, IPA
We dedicate this humble effort to our
beloved parents
who made it possible for us
to reach this far

谨以此文献给我们的父母
因为他们
我们走得更远
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Chapter 1 Introduction

1.1 Background

For many years, Chinese mobile communications market had been controlled by two huge state-owned companies, China Mobile and China Unicom. Separated by Changjiang River (a huge river separate China into two parts, South China and North China), China Mobile controlled South China and China Unicom controlled North China monopoly. After broken of the isolation, these two companies began to compete in the whole Chinese stage. As a result, China Mobile soon dominated Chinese mobile telecom industry in 2G times. Government also noticed the problems and decided to change this situation. Administration exchanged the leaders of two companies. After that, some new state-owned companies were set up, among which China Telecom once owned 93 million customers. These changes made competition in Chinese mobile telecom market more serious.

In the year of 2008, a new concept 3G (the third generation) was first introduced to China, which was described as a tending of mobile telecom industry. A new era is coming. With the opportunity of technology innovation, in January 2009 government made a further adjustment of China mobile telecom industry, three mobile telecom companies got different permission to operate new 3G business, among which China Mobile got TD-SCDMA issue, China Unicom got WCDMA issue and China Telecom got CDMA2000 issue. After that the 3G business of China mobile industry developed sharply.

As a survey from China information industrial portal www.iimedia.com, till December 2009 the total number of China mobile phone subscribers has reached 726 million, among which 522 million are China Mobile customers. However, in 3G area,

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1 In China, all mobile telecom corporate are state-owned companies and regulated by a special government department, Ministry of Information Industry (MII).
the number of China Mobile subscribers was 3.41 million, at the same time its main competitor China Unicom got a figure of 2.74 million. Compare with traditional 2G mobile telecom business, China Mobile hasn’t shown an obvious advantage in the new competition. In new China mobile phone subscribers, the proportion of 3G users had become higher and higher. In December 2009, the new China Mobile 3G mobile phone subscribers took 10% of all China Mobile new subscribers, the new China Unicom 3G mobile phone subscribers even was 1.5 times as its 2G business subscribers. Hu (2010), deputy director of Planning and Designing Institute for Telecommunications Research of China Ministry of Information Industry, forecasted that the period from 2009 to 2011 is the best time for the developing of China 3G business. Till 2011 the number of China mobile phone subscribers will reach 0.9 billion, most of which belongs to 3G mobile phone users.

Since original order in China mobile telecom industry has been broken, China mobile operators meet new challenges and opportunities in new technical environment. The development of technology brings more demand of improving management technology. Management innovation should be consistent with the pace of technological innovation. How to make strategies suitable for the competition in 3G times becomes the most serious challenge faced by Chinese 3G mobile operators.

Blue Ocean strategy is strategy that encourage companies go to a new market which customers are really interested in and avoid sharp competition in the existing market. Chan (2010) did case study of a mobile telecom company SK Telecom. He stated that by using its mobile industry infrastructure to deliver new services to customers, the company found a new market (blue ocean) which made them more profitable while saving lots of cost.

Chinese 3G mobile telecom is still a very young industry, in which companies crazy invest in purpose to get more market share under the cover of new concept of 3G, but don’t care much about the core service of 3G. It’s better for companies to pursue their
blue ocean when business starts. The early companies applies Blue Ocean Strategy, the more profits margin companies get. (Gorrell, 2005) Blue Ocean strategy can help Chinese 3G operators to find new market in which they can capture more customers while improving cost structure.

1.2 Motivation and Significance

1.2.1 Study Purpose

Kim and Mauborgne (2005) introduced a theory which leads corporate to a place where competition irrelevant by creating a new market without competitors, which they called “blue ocean”. Red oceans represent all the industries in existence today. Blue oceans denote all the industries not in existence today. Through applying blue ocean strategy, a company can get a total new opinion of old industry and find new chances. Later they (2005) applied their theory in US wine market and found that the most important interest for customers is not drinking but fun. They identified a new market avoid full of wine producers, fun market attracting other consumers from beer and cocktail market.

China mobile telecom market is facing restructuring from 2G to 3G. For many years, operators struggled for comparable advantages and differentiation in the old 2G. Now the new challenge of 3G supply them a new chance to re-positioning their target market. Kim and Mauborgne’s research shows that “fun” is the new market for US wine producers. Then what is the “fun market” for Chinese 3G mobile telecom operators?

1.2.2 Research object

The aim of this master's thesis is to make an application of Blue Ocean strategy for Chinese 3G mobile telecom industry. Chinese 3G mobile industry is a very young industry in which the competitors have only less than 2 years’ history. Commonly, the
competitors are still treated to be mobile telecom suppliers. Our research in this thesis is to find the core service brought by Chinese 3G operators from customers’ opinions. With the core service, we intend to establish a new market for Chinese 3G operator in which the operators can get more profit margins while adjusting cost structure.

We use Porter’s five forces model to identify which factors affects Chinese 3G competitive environment. The identified factors will be checked by customers through a questionnaire to get what are the most important factors impacting customers’ consuming. Blue Ocean strategy is applied to create a blue ocean to Chinese 3G operators. We also use Importance-Performance Analysis as a supplementary to blue ocean strategy to show what the operators should do at the present.

1.2.3 Significant

The results of this research would be beneficial for Chinese 3G operators understanding their competitive environment, considering application of Blue Ocean strategy in 3G times. The results would also contribute to the research of applying Porter’s five forces model and Blue Ocean strategy to analyze Chinese 3G competition environment and strategic management and thus increase the level of scientific knowledge in this area.

1.3 Limitation

Our research is an independent study for China mobile telecom market. Due to our academic ability and time constraints, there must be some limitations inside our thesis, which can be improved a lot in the future study. Firstly, there are more than 726 million mobile telephone subscribers in China so far. For time and ability reasons, we can just focus on the young generations, main 3G mobile telephone subscribers, who are often surfing on the internet, although they cannot stand for all different subscriber groups. Secondly, since the study of this thesis is based on an internet research, some natural disadvantages of online questionnaire cannot be avoided. Authenticity and
reliability of internet interview are variable that might lead some errors to our final results. Finally, telecom technology and mobile telecom market is developing rapidly today. Any quantitative analysis will lose its timeliness soon after. The research of the thesis can just give out strategic management innovation direction for China Mobile in qualitative analysis level.
Chapter 2 Theoretical Background

2.1 Strategic management

Strategic management is defined by Lamb (1984) as “an ongoing process that evaluates and controls the business and the industries in which the company is involved; assesses its competitors and sets goals and strategies to meet all existing and potential competitors; and then reassesses each strategy annually or quarterly [i.e. regularly] to determine how it has been implemented and whether it has succeeded or needs replacement by a new strategy to meet changed circumstances, new technology, new competitors, a new economic environment, or a new social, financial, or political environment.”

Chandler (1962), Selznick (1957), Ansoff (1965) and Drucker (1954) have proved that strategic management is a key resource to pursue competition advantages fifty years ago. Later some more scholars explained the importance of strategic management from their own angles. The first theory is gaining core competence. Hamel and Prahalad (1990) proposed that it is very important to know core competency of the company, get one or two key things that your company does better than the competition. Kay (1993) improved core competence with value chain. He believed that value adding is the central purpose of all business activities. Companies can seek for competitive advantages and value added by three ways: innovation, reputation, and organizational structure. Based on core competence and other scholars’ work, Ries and Trout (1981) clearly proposed the widespread accepted positioning theory. Strategies should not be defined by companies’ internal factors but their customers and competition environments. Several research methodologies such as Perceptual mapping, Multidimensional scaling, discriminant analysis, factor analysis, conjoint analysis, Preference regression can be used to identify the factors affecting company’s competitiveness and competition environment. Porter (1979) combined the core competence theory, value chain theory and position theory effectively. His five
forces analysis was widely used to describe competition environment.

2.2 Blue Ocean strategy

2.3.1 Concept of Blue Ocean strategy

Ever since strategic management was introduced to economy field, its main purpose is pursuing competitive advantage in the existence market. Blue Ocean strategy is a totally new strategy compare with old ones. Kim and Mauborgne (2005) divide the market universe into two parts: red oceans and blue oceans. “Red oceans” is described as all the industries in existence today which is the known market space. “Blue oceans” refers to all the industries not in existence today which is the unknown market space.

In red oceans, the market boundaries is clearly identified, the market space gets crowded, prospect for profits and growth are limited, competition in red oceans turns to be bloody. In contrast, blue oceans are defined as a new space in which market boundaries and industry structure are not given and can be reconstructed. In blue oceans, competition is irrelevant since the rules of the game haven’t been set. It is a new view of strategy before which all strategies belong to Red Ocean strategy.
To fundamentally shift the strategy canvas of an industry, a company must begin by reorienting its strategic focus from competitors to alternatives, and from customers to noncustomers of the industry. The strategy canvas contains two parts, a diagnostic and an action framework. The former one refers to the current state of play in the know market space. The latter one is a four action frameworks can be used to formulate a new blue ocean for companies in existing market.

Four action frameworks

First, eliminate factors should be eliminated well below the industry's standard. These factors are those the companies spent a lot costs to compete in for a long time but have less meaning for companies’ competitiveness and bring no profits.

Second, reduce factors should be reduced well below the industry's standard. These factors mainly refer to those products and services the companies overdesigned in the completion. They bring too much stress to companies’ cost structure that companies
can gain little from these overdesigned services.

Third, raise factors should be raised well above the industry's standard. These factors are those have important meaning for customers but ignore by companies in their competition. They commonly haven’t got enough inputs.

Fourth, create factors should be created that the industry has never offered. These factors refer to those factors which can create new demand for customers and new market for companies.

Finally, the Eliminate-Reduce-Raise-Create Grid can be applied to identify the new market- blue ocean. It is a supplementary analytic to the four actions which pushes companies to create a new value curve. It encourages companies not only focus on “eliminate” and “create” factors but also “reduce” and “raise” factors. The grid can be easily understood by managers and help companies find new market space more economical.

2.3.2 Previous study of Blue Ocean strategy

Blue ocean strategy has been treated by many scholars as a good strategy for companies to create uncontested market in which competition irrelevant. (Layton, 2005; Webber, 2005; Kehnen, 2006; McClenahen, 2005; Srinivasan, 2006; Sarfati, 2006; Kiley, 2005; Gordon, 2005; Scherer, 2007; Madan, 2007; Goldberg, Godwin and Cannon, 2006; Andersen & Strandskov, 2008; Azar, 2008). Dahl (2005) proves that blue ocean strategy is widely used by successful companies. Abraham (2006) suggests that correctly defining the market space of companies help companies find an industry they monopoly in. Madden (2009) compares blue ocean strategy and simply better approach and find blue ocean has advantage in identifying a more clearly market since simply better approach is lack of thinking of impacts from consumers’ demands. Sheehan and Vaidyanathan (2009) state that blue ocean strategy enable managers to
capture unique value for consumers.

Some researchers found that there is a mutually reinforcing relationship between Blue Ocean strategy and innovation. Colman and Buckley (2005) advise that companies create blue ocean through value innovation. Meyer (2005), Kim and Mauborgne (2005) finds that blue ocean strategy help organizations to innovate and bring new products to market. Leavy (2005) proves pursing blue ocean leads companies to create more value. Sushil (2006) proposes the existence of blue ocean force enterprises to change. Moyer (2006) finds refining and enhancing existing products keeps companies in the existing market. By innovating or even making small changes can bring companies to blue ocean where no one else is and build competitive advantages for companies. Morris (2007) demonstrates organizations using blue ocean strategy to meet the challenge of innovation will bring themselves substantially advantages with their innovation. Kim, Baik, Kazman and Han (2008) propose that many new techniques cannot help a lot for in current highly competitive markets but contribute much to those potential markets where competition doesn’t exist. Marcet (2008) discusses innovation and new technology could increase companies’ competitiveness better through creating new business in blue ocean. Kim, In and Baik (2008) study the case that Value-Innovative Requirements Engineering guide software development organizations in creating uncontested new market and satisfying new customers’ needs through applying blue ocean strategy. Côté (2005) describes the competitive space for organization to swim with blue ocean strategy and suggest organizations should re-invent their products to achieve their strategy.

Some studies of Blue Ocean strategy focus on its impacts on corporate supplying high quality services and products. Lewis (2005) uses blue ocean strategy to define industry and propose its contribution of the competition on the quality of products and services. Yang, Kim and Kim (2007) apply blue ocean strategy in Korean power market and develop the value added services successfully. Chang (2008) does a case study of Samsung Total and find Samsung apply their strategy by developing new
products to create new electronics markets in China.

Many scholars prove that applying Blue Ocean strategy can make corporate more profitable while improving cost structure. Snell (2008) studies the case of Anheuser-Busch using blue ocean strategy to save their costs. Wanless (2009) studies a case of a bank Pender Financial Group which uses blue ocean strategy to create a new market space and make it more profitable.

Some researchers have done some attempts to apply Blue Ocean strategy to some specific industries. Menon (2008) researches Indian software as Service business and suggests companies in the industries to make their services wider. His study contributes a lot to other businesses in the country. Motley (2008) applies blue ocean strategy to bank industry and finds they can reduce costs of operations and increase profits by entering different market segment without competitors. Savage and Brommels (2008) explore how to create a blue ocean for medical education in Sweden. Shen and Zhang (2008), Kim, Yang and Kim (2008) demonstrate that blue ocean strategy help third party logistics strengthen their core competitiveness and lower their costs.


2.3.2 Development of Blue Ocean strategy

As soon as Blue Ocean strategy was born, its theory of creating new demand from
unknown market space has become one of the most famous theories in business administration fields. At the same time, its authors haven’t stop improving their theory. Kim and Mauborgne (2004) propose that blue ocean strategy help companies to build brands and create brands equity that can be last for decades. Kim and Mauborgne (2005) explain demand in the blue ocean strategy; reason behind importance of the strategy in business; distinction between the strategy and innovation. Although blue ocean strategy is distinct with innovation, it is a good strategy to achieve value innovation (Kim and Mauborgne, 2005). Any company may use such strategy to get rid of the factors it competes upon and create something new for new market demands (Kim and Mauborgne, 2007). For diversified business in multiple industries, both competition environment and companies’ structure should be taken into consideration when designing companies’ strategies. (Kim and Mauborgne, 2009)

Blue ocean strategy is a totally new strategy which lead companies to leave current market and go into an unknown market to reduce their costs and capture new customers from other industries therefore enhance companies’ competitiveness. This new market actually existed before but ignored by most of the managers. Traditional strategies and theories artificially demarcate the border of industry and help a lot for companies’ competition in current market. However, the industry defined by old theory might be a fake one. The service and products which can bring companies most profits may be ignored by old industry. Obviously substitute products and other factors directly or indirectly affected competition in these industries but their roles are marginalized. In many industries especially in sunset industry, as the raising of the costs and reducing of profits, companies’ survival faces serious threats. It’s useless and meaningless to use traditional strategies to capture current limited market. It might be a good idea for companies from all existing market to search for a new market without competitors. Chinese 3G industry is a typical multiple industry whose operators have to compete not only with competitors inside the industry but also with their suppliers (such as internet charting tools) and substitute services producers. Traditional definition of the industry can no longer meet competition that Chinese 3G
operators need. To some degrees, only blue ocean strategy can provide them a real competitive environment and a broad competition space.

2.3 Porter’s Five Forces theory

2.2.1 Concept of five forces theory

The first step of drawing Blue Ocean strategy is capturing the current state of play in the know market space. Five forces analysis is a good tool to describe the structure of industry (Porter, 1979). The five competitive forces determine how profitable an industry is and impacted strategy formulation.

Porter’s model can be easily used to analyze the competition environment of a microeconomic organization, describe the attractiveness of a defined market, and help organization to make a competition strategy. The five forces are, bargaining power of suppliers, bargaining power of customers, threat of new entrants, threat of substitute products and competitive rivalry within an industry.

Source: “The five competitive forces that shape strategy” (Porter, 2008)

Figure 2 Porter’s five forces model
Porter (2008) improved his forces theory and completed more details to meet the demand of application in different industries.

**Threat of new entrants.** Barriers to entry contains:


**Bargaining power of suppliers.** A supplier group is powerful if:

1. It is more concentrated than the industry it sells to. 2. The supplier group does not depend heavily on the industry for its revenues. 3. Industry participants face switching costs in changing suppliers. 4. Suppliers offer products that are differentiated. 5. There is no substitute for what the supplier group provides. 6. The supplier group can credibly threaten to integrate forward into the industry.

**Bargaining power of customers.**

A customer group has negotiating leverage if:

1. There are few buyers, or each one purchases in volumes that are large relative to the size of a single vendor. 2. The industry’s products are standardized or undifferentiated.

Buyers face few switching costs in changing vendors. 3. Buyers can credibly threaten to integrate backward and produce the industry’s product themselves if vendors are too profitable.

A buyer group is price sensitive if:

1. The product it purchases from the industry represents a significant fraction of its cost structure or procurement budget. 2. The buyer group earns low profits, is strapped for cash, or is otherwise under pressure to trim its purchasing costs. 3. The quality of buyers’ products or services is little affected by the industry’s product. 4. The
industry’s product has little effect on the buyer’s other costs.

**Threat of substitute products.** The threat of a substitute is high if:
1. It offers an attractive price-performance trade-off to the industry’s product. 2. The buyer’s cost of switching to the substitute is low.

**Competitive rivalry within an industry.**
The intensity of rivalry is greatest if:
1. Competitors are numerous or are roughly equal in size and power. 2. Industry growth is slow. 3. Exit barriers are high. 4. Rivals are highly committed to the business and have aspirations for leadership, especially if they have goals that go beyond economic performance in the particular industry. 5. Firms cannot read each other’s signals well because of lack of familiarity with one another, diverse approaches to competing, or differing goals.

Price competition is most liable to occur if:
1. Products or services of rivals are nearly identical and there are few switching costs for buyers. 2. Fixed costs are high and marginal costs are low. 3. Capacity must be expanded in large increments to be efficient. 4. The product is perishable.

**2.2.2 Previous study of Five Forces theory**

Many scholars have applied Porter’s five forces theory to analyze the competition environment of some specific industries. Thachenkary (1992) applies Porter’s five forces theory to an independent electronic data interchange (EDI) network and finds that uniform network standard is essential to EDI market. Tenopir (1993) explore five forces to electronic information options. Ellis&Brockman (1993) and Breedveld et al. (2006) applied it in health care marketing. Boyle et al. (1993) redefined Porter’s five forces model of industry competition to illustrate the different situation of the voluntary sector. Bone-winkel (1994) applied Porter’s theory to Open-end property

2.2.3 Development of Five forces theory

Although this simple tool is very useful in analyzing competition environment, there are also many limitations together with its born. Technical innovation, new business model as well as customer loyalty haven’t been taken into Porter’s consideration. In purpose to solve these regrets, many scholars introduced new forces into five forces model and formed their own six forces model. A concept of complementors was introduced as the sixth force (Brandenburger et al., 1995; Grove,1996). Gordon(1997), Rugman&Verbeke(2000) and Karagiannopoulos et al. (2005) propose that the government not only has direct impact in the industry as the sixth force, but also has indirect impact on the other five forces. Goldsmith (1991) suggests that information engineering should be a supplementary of five forces in creating an IT strategy. Maybury and BElardo (1991) add the effects of industrial structure and the socioeconomic environment to five forces theory to get a better strategic simulation tool. Thurlby (1998) thinks that five forces are not only indicators affecting competition environment but also can be changed. Sadtler (1999) suggests that analyst
should consider in the past, present and future contexts. Burton (1995) and Karagiannopoulis et al. (2005) propose that IT is an important supplementary force to Porter’s theory. Narayanan and Fahey (2005) double that five forces framework ignored the institutional context in emerging economies. Grundy (2006) suggests that the five competitive forces model can be developed a lot further. Porter (2008) argues that since the attractiveness are not strong and reliable enough, items such as industry growth rate, technology and innovation, government and complementary products and services just are factors not forces.

Chinese 3G mobile telecom is a multiple market in which services are supplied by many engagers. The relationship among suppliers, substitutes and competitors in this industry is both cooperation and competition. Porter’s five forces model is a good tool used to identify the border of Chinese 3G telecom industry and describe telecom operators’ competition environment. Besides, some other factors such as government and innovation also have huge impacts on Chinese 3G mobile telecom industry at the present stage. In this thesis, we incorporate the Chinese 3G’s characteristics, combine Porter’s model with other theories, to create a new model which more suited to Chinese 3G mobile telecom industry.

However, Porter’s theory is built based on an old thinking of strategic management. It emphasis on five forces’ impacts on competitiveness of competitors inside the industry but ignore the direct competitors from other industries. As the developing of technology and innovation of management methods, the border among industries seems to be increasingly blurred. We would like to use Porter’s model to identify the factors which affects Chinese 3G mobile corporate’ competitiveness. After that, we will introduce Blue Ocean strategy which can define the real competitors while bringing more consumers for industry operators through breaking the border among industries.
2.4 The integrative of framework of theory

The framework of this thesis will be organized with Blue Ocean strategy canvas. Some new technologies will be added in this process. Porter’s five forces theory will be used to state out the situation of Chinese 3G mobile telecom market. Questionnaire will be designed to collect first-hand data from customers. Importance Performance Analysis (IPA) methodology will be applied to complement data analysis. After identifying new market, some new strategies might be designed to improve China Mobile competitiveness.

Figure 3 Comparable of Blue Ocean strategy canvas and its application in China 3G mobile telecom industry
Chapter 3 Research methodology

3.1 Research questions

What is the competitive environment Chinese 3G mobile telecom industry?
What is the most important factors impact Chinese 3G operators’ competitiveness from customers’ opinions?
How to apply Blue Ocean strategy for Chinese 3G mobile industry?

3.2 Research methodology

3.2.1 Questionnaire survey

Questionnaire survey is a kind of quantity research methodology to get specific information through a list of research questions answered by interviewees. It is a list of research or survey questions asked to respondents, and designed to extract specific information. (Business dictionary website, 2009) Questionnaire survey can be used to collect basic first-hand data, compare and analyze data getting from survey and finally get the information required by interviewers. The quality of questionnaire survey depends on the designing of the questions and the chosen of sample. It serves four basic purposes: to collect the appropriate data, make data comparable and amenable to analysis, minimize bias in formulating and asking question, and to make questions engaging and varied.

Yin and Song (2008) in their book stated the characters of questionnaire survey and proposed that compare with other survey methods, questionnaire survey has obvious advantages. Firstly, interviewees make their answers after consideration which improves the accuracy of the survey. Secondly, questionnaire is very easy to operate and can be widely used in different ways, such as on-line and by posting. Thirdly, questionnaire can be used to do quantitative Analysis. Figures from questionnaire can be analyzed by all kinds of methodologies to improve the scientific of survey result.
We followed the steps of the book *how to measure customer satisfaction* (Hill et al. 2003) to design our questionnaire. The book studied customer satisfaction and its impacts. It emphasized on methods which can be used to measure customer satisfaction, especially how to design questionnaire to measure customer satisfaction. There are two steps during the process of our questionnaire designing, content design and issue of questionnaire.

**Content design**

Content designing is based on the factors getting from Porter’s five competitive forces analysis. The questionnaire is made up of 20 questions and separated into two parts. The first part is ten indicators which are ten hypotheses we got from five forces analysis, network quality, network coverage, other network services, compatible to network software, compatible to network hardware, rating price of given quality, ease to use, traditional mobile phone functions, internet charting tools and internet suppliers. The second part refers to customers’ feeling about these indicators. According to our purpose of this thesis, we intend to survey two kinds of opinions of customers, importance and performance. Interviewees can give out their directly feelings towards these ten indicators by a five-point system. There are five options towards interviewees’ feelings of importance of ten indicators, “Not important at all”, “Not very important”, “Average”, “A little important” and “Very important”. Towards performance feeling, interviewees’ feelings are separated into “Unaccepted”, “Not good”, “Average”, “satisfied” and “Excellent”. Five answers stand for 1 to 5 points. We will calculate the final average scores of each indicator that will show us a visual impression of the importance and performance of the services supplied by Chinese 3G industry to customers.

**Issue of questionnaire**

We will issue our questionnaire through a professional China online survey website, [www.askform.cn](http://www.askform.cn). It will help us to complete our survey by handing out questionnaire.
through online charting tools such as msn, QQ\(^2\) and skype. Interviewees can also fill the questionnaire by clicking the link [http://www.askform.cn/71832-78151.aspx](http://www.askform.cn/71832-78151.aspx) themselves.

**Reliability**

Some natural disadvantages of online questionnaire cannot be avoided in our thesis. Response rate of online questionnaire is limited. (Sharp et al., 2002) Interviewees responding to online questionnaire are generally from younger generation. (Groves et al., 2004) Some interviewees don’t tend to finish online questionnaire. (Presser et al., 2004)

However, since our interviewees are mainly young generation who are the first group using Chinese 3G mobile telecom services, the online questionnaire is quite suitable for our survey. Finally, we got 135 copies of respondents from the website, all of which are completed, no excluded. The online survey reasonably avoid the shortcomings of the online questionnaire, our survey are effective and reliable.

### 3.2.2 Importance-performance analysis (IPA)

After identifying the scope of new industry, we also use importance-performance analysis (IPA) to analyze the figures getting from questionnaire survey. Importance-performance analysis is a model which is used for finding the means to improve enterprises’ competitiveness by analyzing customers’ feelings of the importance and performance of products and services supplied by providers. Slack (1991) suggests that the performance of products should be proportional to their importance. Barsky (1995), Abalo, Varela and Manzano (2007) states that lower importance ratings may have lower impacts on organizations’ competitiveness while higher importance ratings may have higher impacts on organizations’ competitiveness. Shieh and Wu (2009) use IPA to compare changes of industry.

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\(^2\) QQ is a very famous Chinese online charting tool which has more than half billion users around the world.
evaluating competitiveness of services (Park et al., 2009; Sethna, 1982) and strategy formulation (Burns, 1986). IPA can be used to improved efficiency in the process of organizations’ decision making. (Lai & To, 2010) The information got from IPA can be used to develop strategies of organizations (Ford et al., 1991).

Questionnaire interviewees access the degree of importance and performance of services or products. Information got from the questionnaire will be put into this two-dimensional matrix, in which, service indicator importance is depicted along the y-axis and service indicator performance is depicted along the x-axis. The property of different indicators is marked in two-dimensional space. The means of importance and performance will be divided into four quadrants with the mid-level as separator.

Based on location, indicators have different strength and weakness in importance-performance. Different quadrants have different meaning.

Quadrant A: Indicators located in quadrant A which means they have high importance meanwhile having low performance. These indicators should be improved firstly and

Source: Developed from “Revised importance–performance analysis: three-factor theory and benchmarking” (Deng et al., 2008)

Figure 4 Importance-Performance Analysis matrix

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have priority to get resources and capital supports.

Quadrant B: Indicators in quadrant B are low in both performance and importance. B indicators don’t need too much resource. They should be improved if there is no A indicators.

Quadrant C: Indicators located in quadrant C are high in both performance and importance. C indicators should be maintained.

Quadrant D: Indicators located in quadrant D have low importance meanwhile having high performance. D Indicators take too much resources which be moved to indicators in other quadrant, especially those in quadrant A.

Martilla and James (1977) suggest that indicators with high importance and low performance (in Quadrant A) should have top priority to be improved immediately. Lambert and Sharma (1990) propose indicators with both high performance and importance (in Quadrant D) should be maintained.

We use IPA as a supplementary for Blue Ocean strategy. We use blue ocean theory to outline a new “blue ocean” for Chinese 3G mobile telecom operators actually competing in. Different services have different importance in this blue ocean. Even those services with high importance have different performances, therefore, need to be treated differently. IPA helps us to build an order to improve different services supplied by Chinese telecom operators.

3.2.3 Literature review

A literature review refers to those texts being used to review the key points of current knowledge and methodological approaches on a particular topic. (Vikipedia, 2010)

We use literature review to collect secondary data from published report, journals and
even from online portal. We also review some classical theories and methods applying in our thesis such as Porter’s five competition forces theory, Kim’s Blue Ocean theory and IPA methodology to achieve the purpose of our thesis. In the final recommendation section, we will use literature review methods to apply new strategies in purpose to enhance Chinese 3G mobile telecom operators’ competitiveness in the “blue ocean”.
Chapter 4 Competition Environment Analysis

4.1 Situation of China mobile telecom market in 3G times

4.1.1 Operators in Chinese mobile telecommunication market

Nowadays, there are three mobile telecom operators in Chinese market, all of which belong to state-owned companies. They are,

China Mobile, which was founded in 2004. It has the world’s largest mobile network and the world’s largest mobile subscriber base. Its total number of customers is about five million subscribers, which is now increasing as a speed of 7 million per month. In 2008, its world rank in "The World’s 2000 Biggest Public Companies" by Forbes magazine is 99th.

China Unicom, which was established in 1994. It is only one in New York, Hong Kong and Shanghai-listed telecom companies, which had main operations in mobile telecom, long-distance telephone calls, local telephone calls, data communications (including Internet and IP telephone calls), telecommunication value-added services, wireless paging and other main business operations.

China Telecom, which was founded in 2002. It is Chinese largest basis network operators as well as the largest provider of comprehensive information, with the world's largest fixed telephone network. In October 2008, China Telecom has its initial entry in mobile telecom market. China Telecom only has 2.8 million subscribers so far.

4.1.2 Concepts of main operations

China Mobile is now operating in TD-SCDMA (Time Division-Synchronous Code Division Multiple Access). It is a channel access method that utilizes synchronous
spread spectrum across multiple time slots.

China Unicom is now operating in W-CDMA (Wideband Code Division Multiple Access). It is an air interface found in 3G mobile telecommunications networks. W-CDMA is the higher speed transmission protocol used in the Japanese FOMA system and in the UMTS system, a third generation follow-on to the 2G GSM networks deployed worldwide.

China Telecom is now operating in CDMA2000 (Code Division Multiple Access 2000). It is a hybrid 2.5G / 3G technology of mobile telecommunications standards that use CDMA, a multiple access scheme for digital radio, to send voice, data, and signalling data (such as a dialed telephone number) between mobile phones and cell sites. CDMA2000 1xRTT, CDMA2000 EV-DO are approved radio interfaces of CDMA2000 standards. CDMA2000 is considered a 2.5G technology in 1xRTT and a 3G technology in EVDO.

4.1.3 Subscribers

Although Chinese government issued 3G issues early in Jan 2009, the actual business in “3G” fields started much slower. China Mobile and China Telecom started their commercial “3G” networks in February and April 2009. China Unicom began even later, in October. Once the definition of 3G was applied in China, it developed sharply. As another data from [http://mobile.people.com.cn/GB/112952/10903648.html](http://mobile.people.com.cn/GB/112952/10903648.html), till the end of 2009, the number of China Mobile 3G business subscribers reached 5.5 million. China Unicom’s reached 2.7 million. China Telecom has the best performance in this field last year, 6.8 million. There are two kinds of subscribers in China, prepay-subscriber and contract-subscriber.

<table>
<thead>
<tr>
<th>company</th>
<th>Time of starting 3G business</th>
<th>Number of 3G Subscribers</th>
</tr>
</thead>
<tbody>
<tr>
<td>China Mobile</td>
<td>2009.02</td>
<td>5.5 million</td>
</tr>
<tr>
<td>China Unicom</td>
<td>2009.10</td>
<td>2.7 million</td>
</tr>
</tbody>
</table>
Prepay-subscriber. Customers have to buy a prepay mobile phone card or a charging card before they use their mobile phone. Mobile telecom operators will only charge subscribers fees after they use this card successfully.

Contract-subscriber. Subscribers have to make a contract with mobile telecom operators before they can use mobile phone. The contract provides rights and obligations for subscribers and companies.

In China, contract subscribers are mostly from government or corporate officers from which can use this kind of mobile phone freely. To some degree, in contract-subscriber market, consumers are organizations while users are individual that leads this market to be a non-free market. To meet free market economy rules, the research of this thesis will be based on prepay-subscriber market.

4.2 Application of Blue Ocean strategy

In this chapter, we will use Porter’s five forces theory to analyze the competition environment of the current Chinese 3G mobile telecom market. After identifying factors which affecting competition environment, we also give out our hypotheses of Chinese 3G mobile telecom market for Blue Ocean strategy’s application.

4.2.1 Threat of new entrants

New competitors’ entering will greatly break the order of current industry since they lead to more competition among current competitors for the raw materials and make market share more intense. (Porter, 1979) Chinese 3G industry is actually controlled by the country. Government decides industry standard for entrants and the issuance of 3G licenses. Since all of existing operators are state-own companies, it’s not excessive
to describe Chinese 3G mobile telecom market as monopoly market. Although China offered many preferential policies for foreign investors since it entered WTO (World Trade Organization), foreign mobile telecom operators are not allowed to enter Chinese market so far. Supplying service directly from foreign countries to China will foreign competitors lots of resources and capital. Foreign 3G mobile telecom operators cannot achieve enough profits while affording such a huge capital requirement. On the other hand, due to high switching costs and heavy service fees, few consumers in China have willingness to enjoy services from broad. Hence, there are low threats of new entrants in the current Chinese 3G industry so far.

4.2.2 Competitive rivalry within an industry

Competition between different companies in the same industry has a direct threat to the survival of enterprises. Different enterprises not only compete with each other, but also have same interests. (Porter, 1979) Competition within Chinese 3G mobile telecom industry has double characters.

On one hand, there is a huge potential of the development in this industry. According to a survey from Chinese official mobile information website www.mobile.people.com.cn, there are more than 740 mobile telecom subscribers in China till the end of 2009 while less than 15 million are 3G mobile phone users. China Ministry of Information Industry forecasted that the period from 2009 to 2011 is the best time for the developing of China 3G business. Till 2011 the number of China mobile phone subscribers will reach 0.9 billion, most of which belongs to 3G mobile phone users. So far, 3G in China has only less than one year’s history, all three 3G mobile telecom operators situate in a quick developing period. Another data from Forbes Magazine (April 22th, 2010) shows that China market is one of the most profitable mobile telecom market in the world. Three 3G mobile telecom operators from China, China Mobil, China Unicom and China Telecom situate in 38th, 145th and 473rd in the selection of global corporate top 2000. Among them, China Mobile is the
largest mobile telecom operator in the world. To some degrees, the fast growth rate and considerable profits in Chinese 3G mobile telecom industry offer operators a relaxed competition environment.

On the other hand, due to lack of history, three 3G mobile telecom operators are similar in their size and power. There is no leader in this industry. No specific operator has a clearly better performance and comparable advantages than the others. Similar size, no leader and advantages lead China mobile telecom industry to a state of disorderly parallel competition environment. The biggest difference among mobile telecom operators is their mobile telecom networks, TD-SCDMA of China Mobile, W-CDMA of China Unicom and CDMA2000 of China Telecom. Network quality, network coverage and other network services play important roles in their competition.

The fast growth rate and considerable profits bring existing Chinese 3G mobile telecom operators a relaxed competition environment. The nearly identical of size and performances of different competitors make operators’ competition more disorderly parallel. Network quality, network coverage and other network services are essential to competitors in this industry.

_Hypothesis 1~3: “Network quality, network coverage and other network services” are factors affecting Chinese 3G telecom operators’ competitiveness_

**4.2.3 Bargaining power of suppliers**

Supplier power mainly refers to suppliers have impacts on profitability and competitiveness of the enterprises by price and quality of unit value they supplied. (Porter, 1979) Suppliers of 3G telecom industry are mainly from network software suppliers and network hardware suppliers.

Network software suppliers refer to those network software producers such as on-line
game suppliers, interphone suppliers and some other suppliers such as network software-downloading sites. In China, there are all kinds of network software suppliers for consumers to choose. Commonly, network software suppliers supply their services to all network users, but some special ones are fixed to specific network operators. People can just get their services through specific networks. In another word, every network operator has their own specific network software suppliers to keep their core competitiveness. There are plenty of network software suppliers in the market. Telecom operators are more powerful when they make contracts with network software suppliers. However, since the quality of network software directly affects Chinese 3G services, compatibility of networks to specific network software and quality of network software are essential to Chinese 3G telecom operators’ competitiveness.

Hypothesis 4: “Compatible to network software” is one factor affecting Chinese 3G telecom operators’ competitiveness.

Network hardware suppliers refer to those hardware producers such as mobile phone producers and other hardware producers. Iphone is one of the most famous hardware for 3G telecom industry. Same as software producers, some hardware suppliers are fixed with specific network operators in China. Most hardware is available for Chinese network operators. Chinese 3G telecom operators have enough autonomy to hardware suppliers. However, the compatibility of networks to specific hardware and the compatibility of network hardware to specific network software directly affect Chinese 3G telecom operators’ services therefore affect their competitiveness.

Hypothesis 5: “Compatible to network hardware” is one factor affecting Chinese 3G telecom operators’ competitiveness.

4.2.4 Bargaining power of customers

Buyer power affects profitability of enterprises in the industry by depressing prices or asking high quality. (Porter, 1979) Buyer power is the only force without impacts
from government in Chinese mobile telecom market. Its existence leads this three state-owned corporate controlled industry looks more like a free market. 3G mobile phone subscribers’ preference directly decides which service they want to buy therefore affects 3G mobile telecom operators’ competitiveness.

We concluded two main factors which can affect consumer preference in Chinese 3G mobile telecom industry, rating price of given quality and Ease of using. Rating price of given quality refers to those directly feelings subscribers get during their consumption process, such as cost of service, quality of service, switching cost, service updating cost and so on. Ease of using refers to those indirectly feeling subscribers get during their consumption process, such as ease to get service, service quality in service center, value added service and so on.

*Hypothesis 6~7*: “Rating price of given quality, Ease of using” are factors affecting Chinese 3G telecom operators’ competitiveness.

### 4.2.5 Threat of substitute products

Enterprises from different industries will compete with each other if their products substitute. (Porter, 2009) Sometimes as the developing of technology, it seems harder and harder to recognize the differences among industries. The significant advantage of 3G mobile telecom industry compare with 2G is the using of internet, which leads mobile phone access some features of personal computer. 3G mobile telecom performed as a combination of traditional telephone and wireless internet suppliers. These software and hardware functions are features of 3G network industry while playing as their suppliers as well. Since internet charting tools balance functions of both wireless internet and traditional phones, it is so meaningful for 3G mobile phone users that we have to point it out alone from other internet functions. 3G mobile telecom operators have to compete with traditional 2G mobile phone, internet charting tools and cable internet suppliers because it violates other industries’ territory ever since it’s born.
Hypothesis 8–10: “traditional mobile phone functions, internet charting tools and serving as mobile internet suppliers” are factors affecting Chinese 3G telecom operators’ competitiveness.

4.3 Other factors

Government
The government is of course the most important factors affecting all aspects of Chinese economy. Government policies keep Chinese 3G mobile telecom industry as a stable state. No new foreign and native competitors will enter this industry. Situation of three state-owned companies controlling this industry will last in a foreseeable period.

Innovation and technology
Cabral (1998, 2003) proves that innovation will change the transaction among elements in an economic network as soon as it was introduced to. Innovation of management and application of new technology will bring Chinese 3G industry a more widen scope. New technology will bring keener competition inside current market as well as affecting competitors’ relationship with suppliers and buyers. Hardware and software suppliers’ innovation will help telecom operators better to serve their customers but also enhance their supplier power. Substitute products’ innovation and improvement will lead substitute producers squeeze more market share of current industries. Capability of accessing to innovation determines competitors’ competitiveness in the tech-developing environment. Together with more functions getting from innovation, 3G industry will violate new industries’ territory and face more competition from new substitutes.

4.4 Conclusion

In this chapter, we applied Porter’s five forces theory to analyze the competition environment of Chinese 3G mobile telecom industry. There is low threat of new
entrants in current industry. The competitive rivalry within this industry has double
characters. The fast growth rate supplies a huge potential for competitors. At the same
time, no essential differences make competition disorderly. Suppliers situate in a weak
position in their contracts with 3G industry operators but have impacts on operators’
competitiveness. Operators need to choose network software and network hardware
suppliers carefully. Consumers have absolute power in this industry. The products and
services should care for consumers’ directly and indirectly feelings. Since the natural
multiple function of 3G networks, operators have to compete with many substitute
products suppliers in new industries. Other factors such as government and innovation
also have indirectly impacts on 3G industry. Government stops new competitors
entering existing industry. Innovation makes the industry’s development more
complex.

After analysis, we got ten factors affecting Chinese 3G mobile telecom industry,
network quality, network coverage, other network services, compatible to network
software, compatible to network hardware, rating price of given quality, ease to use,
traditional mobile phone functions, internet charting tools and serving as mobile
internet suppliers. We suppose which factor has the most meaning for operators’
competitiveness in this industry. In the following chapters, we will use a questionnaire
to survey the importance of these factors from consumers’ opinions.
Figure 5 Competition environment of current Chinese 3G mobile telecom industry

- Rivalry among Existing Competitors
  - Network Quality, Coverage and other services
  - Threat of New Entrants
    - Low threat
  - Bargaining Power of Suppliers
    - Compatible to network software
    - Compatible to network hardware
  - Bargaining Power of Buyers
    - Rating price of given quality
    - Ease of using
  - Threat of Substitute products or services
    - Internet suppliers
    - Traditional mobilephone functions
    - Internet charting tools

Protected by China Government

Affected by Innovation
Chapter 5 Strategy Discussion and Data Analysis

5.1 Findings from questionnaire survey

We assume that different answers from interviewees have different points. Towards customers’ feelings of importance of ten indicators, “Not important at all=1 point”, “Not very important=2 points”, “Average=3 points”, “A little important=3 points” and “Very important=5 points”. Towards performance feeling, “Unaccepted=1 point”, “Not good=2 points”, “Average=3 points”, “satisfied=4 points” and “Excellent=5 points”. The result of questionnaire survey is shown in Table 1.

<table>
<thead>
<tr>
<th>Importance</th>
<th>Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Network quality</td>
<td>4.01</td>
</tr>
<tr>
<td>Network coverage</td>
<td>4.3</td>
</tr>
<tr>
<td>Network service</td>
<td>4.27</td>
</tr>
<tr>
<td>Compatible to network software</td>
<td>4.13</td>
</tr>
<tr>
<td>Compatible to network hardware</td>
<td>4.01</td>
</tr>
<tr>
<td>Rating price of given quality</td>
<td>4.2</td>
</tr>
<tr>
<td>Ease to use</td>
<td>4.3</td>
</tr>
<tr>
<td>Traditional mobile phone functions</td>
<td>3.76</td>
</tr>
<tr>
<td>Internet charting tools</td>
<td>4</td>
</tr>
<tr>
<td>Serve as “mobile internet suppliers”</td>
<td>4.5</td>
</tr>
</tbody>
</table>

Table 2 Result of Questionnaire Survey

5.2 Blue Ocean discussion

5.2.1 The new market canvas and four actions

With the figures got from questionnaire survey, we draw a new canvas for Chinese 3G mobile operators.
We find most services supplied by Chinese 3G operators have importance degree of around 4 that means these services are important from customers’ opinion. Among them “serving as mobile internet suppliers” is the most important factor from customers’ view and can be seen as the “blue ocean” for Chinese 3G mobile telecom operators.

Since most of the services get 4 points (a little important) except traditional mobile phone functions, to some degrees the importance and unimportance of different service is relevant. All services above 4 points cannot be ignored by operators.

**Create**

As we analyzed with Porter’s five competition forces, internet is treated as substitute product for Chinese 3G telecom companies. It is treated as forces affecting the
companies’ competitiveness. However, Figure 6 shows that “serving as mobile internet suppliers” is not only a force but also the most important service the customers think Chinese 3G mobile telecom operators should supply. We think that “serving as mobile internet suppliers” can be considered to be the “blue ocean” for the companies and rethink the traditional Chinese 3G mobile telecom industry, find that “serving as mobile internet suppliers” can update the old industry structure and bring companies to a new market which Chinese 3G mobile companies have unique competitive advantages. Going to the market of mobile internet supplying will lead the companies capture new customers from other industries, such as fixed internet subscribers, mobile phone users, customers of internet cafes and even non-internet potential customers. In the new market, mobile internet supplying is the core service of participates.

Eliminate

The figure shows that “Traditional mobile phone functions” is not very important for Chinese 3G mobile subscribers and can be ignored by suppliers. This mainly because the traditional 2G mobile telecom technology has been popularized in China, customers can get 2G telecom services easily without high charges. The purpose of Chinese customers use 3G mobile is not for phone functions.

Reduce

“Internet charting tools”, “Network quality” and “Compatible to network hardware” seem not very important to Chinese 3G mobile users. There are plenty of internet charting tools which are widely used by Chinese young generation. However, it is not a general communication tool. Users of internet charting tools cannot be online all the time. It doesn’t meet the “on time” and “official” need of mobile subscribers. So far, Chinese 3G mobile telecom services are only supplied in some modern capital cities in China. Facilities and infrastructures in these cities are built well. Network quality is not big problem for local 3G subscribers. On the other hand, Chinese customers are used to using other telecommunications tools instead of mobile phones since it costs
too much to use mobile phone in different cities. In another word, network quality is not unimportant but expensive to achieve. Network hardware suppliers are plenty in China. There are also special companies which are mainly operating in debugging hardware to meet different networks even it is officially forbidden. In China, it is called “prison break”. Chinese 3G mobile telecom operators can reduce their inputs in these services at the present stage.

**Raise**

Figure of “Compatible to network software”, “Network services” and “Ease to use” shows that the customers are still not very satisfied with services toward networks. To some degrees, these three services all affect the quality of mobile internet supplying services. To compete with each other, operators in China offer personalized services. Customers choose different operators, while also select different network services. Different networks don’t compatible with each other. Customers of one operator cannot enjoy the personalized service supplied by another one. The company with the compatibility to best network software suppliers, has the best network services has most comparable competitiveness among the operators. In China, these three services are mainly outsourced by operators. Choose good partners to supply better services can promote the core service.

“Network coverage” is another important service for Chinese 3G operators. So far, Chinese 3G networks are only available in some modern cities but not popular in countryside. What’s more, the base stations which are used to transmit mobile telecom signals are owned by each company individually. Although all 3G operators are state-owned companies, the networks cannot be exchanged to each other. That means which company has the more network coverage, which companies can seize the market quicker than the others. 3G mobile telecom is now in its infancy in China, strengthen the network construction should be an important strategy for Chinese mobile telecom operators. Our questionnaire is for those who are already 3G subscribers. The results have not fully demonstrated the needs of non-3G users.
Figure of “Rating price of given quality” shows that the service is not as good as the price shows. Chinese telecom operators should detail and transparent price for services of different grade, at the same time enhance quality of their services. All in all, operators should input more resources to enhance their work on the above service fields.

5.2.2 Mobile internet industry discussion

As we find in the survey, the real service customers need from Chinese 3G mobile telecom is mobile internet. Operators can position their competitive environment from mobile telecom industry to mobile internet industry.

Chinese 3G industry has only less than 2 years’ history. Operators are still focusing on traditional mobile telecom industry. A typical sign of this is that some advertisements of 3G mobile still promote their price advantages and being used in different cities with the same price. Since 3G is not available in all cities in China, the latter one obviously refers to traditional 2G mobile telecom service which doesn’t affect Chinese 3G mobile telecom operators’ competitiveness much at the present stage. To attract more customers, operators should put more attention on their core service, mobile internet supplying.

China has the most internet subscribers all around the world. According to figures from China internet network information center, there are more than 384 million internet users in China, among which nearly 100 million through mobile telephone to get in touch with the internet. However, most of the mobile internet subscribers only use internet charting tools and read news through internet. What’s more, these internet subscribers often switch from mobile internet to local wifi to get cheaper and quicker internet services. This phenomenon partly dues to the price of 3G mobile internet and the delay of hardware (such as mobile phone with less functions), but also dues to the
unsatisfactory internet services supplied by 3G operators. We can call it charting tools 3G or fake 3G which can also be achieved by traditional 2G mobile telecom services. In another word, most mobile subscribers are using fake mobile internet services which cannot fulfill the needs of customers.

On the other hand, beside 3G mobile telecom corporate, there are other internet suppliers in China, fixed cable internet suppliers, wifi suppliers and net café. Although the companies and suppliers are different, the internet are controlled and supplied by countries. And they are not allowed to enter the mobile internet fields so far.

Compare with traditional internet suppliers, mobile internet has huge advantages in using flexibility. Mobile internet can supply users without the limitation of time and location. Go into the mobile internet industry can bring Chinese 3G mobile telecom operators a widen market. Operators can capture more than 384 million internet users while avoid bidding prices with each other in the old 3G industry.
5.2.3 Eliminate-Reduce-Raise>Create grid

Figure 7 Grid for Chinese 3G mobile telecom industry

The grid can be easily understood by managers of operators that increases the efficiency of blue ocean strategy’s application. It shows that “serving as mobile internet suppliers” is the blue ocean of Chinese 3G operators that will bring more market space for them without sharp competition. It also supplies information that putting more attention to services such as “Compatible to network software”, “Network services”, “Network coverage”, “Rating price of given quality” and “Ease to use” will increase their competitiveness. Services of “Internet charting tools”, “Network quality” and “Compatible to network hardware” are over-concerned by them. Reducing resources putting in these services can increase operators cost structure. “Traditional mobile phone functions” doesn’t need to be improved at all.
The Eliminate-Reduce-Raise-CREATE grid is the last step of applying blue ocean strategy. It supplies Chinese 3G mobile telecom operators a visual impression of what they can do to create a new value curve. Blue Ocean strategy is not only creating a new industry or market, but also a four-step integration strategy. The actions of eliminate, reduce and raise actions can effectively help action of create. By applying this grid, operators can improve their efficiencies, raise their competitiveness, reducing competition in the new market environment, save costs and focus more on their real core services.

5.3 Importance-performance analysis

We use IPA method as a supplementary to blue ocean strategy. Since the blue ocean strategy only brings Chinese 3G operator information about what they should to create a “blue ocean”, it doesn’t take the performances of different services into consideration. Maybe Chinese 3G operators have done enough in some of their services which do not need to be improved at all. Some other may need more attentions. We use IPA to search what they need to do in this section.

![Importance-Performance Analysis of Chinese 3G mobile telecom industry](image-url)
Figure 8 IPA of Chinese 3G mobile telecom industry

Figure 8 also shows “Serving as mobile internet suppliers” is the most important service of Chinese 3G mobile operators. However, its performance is far away from customers’ requirement. Improving this service should be the priority task of Chinese 3G operators in the future. Services of “Network services”, “Network coverage” and “Rating price of given quality” have high importance but low performance. Operators need to put more resources in these services. “Compatible to network software” and “Ease to use” are services with both high importance and performance that need to be maintained. “Internet charting tools”, “Network quality” services have low little meaning to operators’ competitiveness but take a lot of resources which should be reduced. “Compatible to network hardware” service has both low importance and low performance that also need to be maintained at present. “Traditional mobile phone functions” is the most unimportant service of Chinese 3G industry but has highest performance. Operators should remove resources putting in this service to other important services.

Comprehensive blue ocean strategy and IPA, to implement blue ocean strategy to Chinese 3G mobile telecom industry, operators need to put more resources into services of “Network services”, “Network coverage” and “Rating price of given quality” and reduce those the resources putting in “Internet charting tools”, “Network quality”. “Traditional mobile phone functions” service seems that does not need more input at the present stage. These initiatives help operators improve their competitiveness at the same time reducing costs. What is the most important, Chinese 3G operators need to create a new mobile internet market as their “blue ocean”. In this market, they should take “serving as internet suppliers” as their core competitiveness and invest more resources to improve this service as soon as possible.

5.4 Recommendation

We find mobile internet is a new “blue ocean” for Chinese mobile telecom operators
and the “serving as mobile internet suppliers” is also the service which should be improved firstly. As the “blue ocean” is a new market for the operators, they may need new strategies in this new market. Our suggestion is a simple but practical approach, “snowball” expansion strategy.

“Snowball effect” comes from the snowball game. Put a small stone in the snow and roll it a few. It will become bigger quickly. When the snowball is big enough, it can roll itself and cannot be stopped easily. If rolling several different size snowballs in one field, the biggest one will always bigger the others. “Snowball effect” has been applied to many fields. Brezis and Verdier (2003) find when a country’s political system becomes more democratic, neighboring countries will have the same changes. Chang (2003) applied it in biotechnical fields. “Snowball effect” can also be used for cost structure control. (Larsson et al., 2003) McKeown and Seila (1983) even use “snowball effect” to help presidential candidates plan their financial problems. Goodman (1995) discusses the “snowball effect” of legalization of gambling in the United States.

We define our snowball expansion strategy as that Chinese 3G operators should go to seize the mobile internet market as soon as possible. The mobile internet market is now empty. The first entrant will get many competitive advantages such as setting up market rules, forming buying habits and so on. There are also other potential competitors that have capability to go inside this market, such as fixed cable internet suppliers and alliances of wifi (wireless local area network) providers. Anyone of them enters this market before Chinese 3G operators will cause pressures to the latter ones. Chinese operators should try to be the first one reaching the market since if all the operators have willingness to go into the new market, the first one will get the first and biggest “snowball”.
Chapter 6 Conclusion and Further Research

6.1 Conclusion

The purpose of this thesis is to apply “Blue Ocean” strategy to Chinese 3G mobile telecom industry. Firstly, we use Porter’s five competition forces model to analyze the competition environment of the industry and identify 11 factors affecting Chinese 3G mobile telecom operators’ competitiveness. These factors are network quality, network coverage, other network services, compatible to network software, compatible to network hardware, rating price of given quality, ease to use, traditional mobile phone functions, internet charting tools and serving as mobile internet suppliers. Secondly, we use a questionnaire to survey which factors has the most important meaning for Chinese 3G subscribers and find serving as internet suppliers is the core services the customers need. Thirdly, we use blue ocean four actions to create a new market of mobile internet. This new market strategy will help Chinese mobile operators enhance their competitiveness in the old market and capture new customers from other industry such as fixed cable internet users and net café customers. We use IPA as a supplementary to blue ocean strategy to analyze what Chinese 3G mobile operators need to do at the present stage. We find they should adjust their seven services to meet the requirement of blue ocean strategy, putting mobile internet supplying as their core business, enhancing services such as network services, network coverage and rating price of given quality, reducing investment in services such as internet charting tools, network quality and removing resource of traditional mobile phone functions to other fields. Finally, since the mobile internet market is a new empty market, we suggest Chinese 3G operators use snowball expansion strategy to seize market as soon as possible.

6.2 Further research

We use Five Forces competition analysis for our diagnostic part. Different methods used to review the market may get different result in the final Blue Ocean strategy
application. There are also other options in this part, such as SWOT, systematical analysis and comparative analysis. Five forces analysis make our findings of blue ocean a little shallow. The future research can be focused on this part which may bring researchers a more clear and broad definition of blue ocean for Chinese 3G operators. Our study is based on an online questionnaire survey respondents of which are from mainly young generation. Customers of Chinese 3G come from different income group and age. Situation of different customer groups may have different purchasing preferences. Considering needs from different consumers can help operators apply blue ocean strategy better. It can be done in the future. We just simply proposed Chinese 3G operators can use snowball expansion strategy to capture the new mobile internet market. Details work of its application also need to be researched in the future.
Appendix 1

Chinese 3G mobile telecom market survey
Here is a questionnaire about Chinese 3G mobile telecom services. Please choose your opinion of different service telecom operators supplied. Thank you very much for your cooperation.

A. Network quality
How do you think about its importance?

1. not important at all 2. not very important 3. average 4. a little important 5. very important

Are you satisfied with this service?
1. unaccepted 2. not good 3. average 4. satisfied 5. excellent

B. Network coverage
How do you think about its importance?

1. not important at all 2. not very important 3. average 4. a little important 5. very important

Are you satisfied with this service?
1. unaccepted 2. not good 3. average 4. satisfied 5. excellent

C. Other network services
How do you think about its importance?

1. not important at all 2. not very important 3. average 4. a little important 5. very important

Are you satisfied with this service?
1. unaccepted 2. not good 3. average 4. satisfied 5. excellent

D. Rating price of given quality
How do you think about its importance?

1. not important at all 2. not very important 3. average 4. a little important 5. very important

Are you satisfied with this service?
1. unaccepted 2. not good 3. average 4. satisfied 5. excellent

E. Ease of using
How do you think about its importance?

1. not important at all 2. not very important 3. average 4. a little important 5. very important

Are you satisfied with this service?
1. unaccepted 2. not good 3. average 4. satisfied 5. excellent

F. Compatible to network software
How do you think about its importance?

1. not important at all 2. not very important 3. average 4. a little important 5. very important

Are you satisfied with this service?
1. unaccepted 2. not good 3. average 4. satisfied 5. excellent
G. Compatible to network hardware
How do you think about its importance?

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Are you satisfied with this service?

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H. Traditional mobile phone functions
How do you think about its importance?

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I. Internet charting tools functions
How do you think about its importance?

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J. Acting as “Mobile Internet suppliers”
How do you think about its importance?

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Thank you very much for your contribution to the survey. Have a nice day.
### Appendix 2

Number of respondents is 135.

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References


Gordon, R. M. 2005. Blue ocean strategy: how to create uncontested market space


Conference on Hybrid Intelligent Systems. 959-960.


Menon, J.S. 2008. Saas enter the blue ocean. Siliconindia. 11. 34-38.


Mohamed, Z. A. 2009. Analysis of the use of the blue ocean strategy; on 14 different agencies strategy; case study an. Integration & Dissemination. 4. 28-35.

Morris, Peter. 2007. Value Judgement. BRW. 29 . 64-64.


