



# Research on the Business Model Innovation in Online Tourism Services: A Case Study of Ctrip

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## ABSTRACT

With great potential, the industry of online travel services is an important product of Internet development and the diversification of the tourism market. Only through innovation in the business model can an online travel service company occupy a place on the online travel market. This paper analyzes in detail the organization and innovative ideas of the business model of online travel service companies by taking Ctrip as the object for the case study. Adopting the business model canvas to analyze its business model, the paper finally concludes four perspectives, namely concentration on differentiated development, establishment of a perfect service system, improvement on technological competence, multi-dimensional channels both online and offline and reinforce the establishment of key resources, which all contribute to a business model chain of the online travel service company, thus promoting the sound development of China's online travel service market.

## CCS Concepts

• Computing methodologies → Modeling and simulation

## Keywords

Online Tourism Services; Business model; Business model canvas; Ctrip; Business model innovation

## 1. INTRODUCTION

With the rapid development of information science technology and the Internet, informatization has had a significant impact on the tourism industry. As the integration of modern information technology and traditional tourism has created a variety of business models based on information services, the industry of online travel services is just one of such new business models of tourism services [1]. Online travel refers to the inquiry about, the booking of and the payment for tourism products provided by middlemen or agents, including in the meantime the tourism experience and information shared on the Internet [2]. Compared with the traditional tourism industry, online travel services have

integrated tourism resources around the world to the utmost extent, speeding up the flow of tourism information, making consumers get rid of the restrictions of transaction time and regions, reducing transaction costs and thus improving transaction efficiency and customers' autonomy.

According to CNNIC's "The 40th Statistical Report on China's Internet Development", up to June 2017, the scale of China's online travel booking users has reached 334 million person-time, which has increased by 34.41 million compared with that at the end of 2016, with the growth rate being 11.5%. At present, the online travel market continues to expand, stepping into the period of diversified development, and its business models are becoming more and more diversified [3]. The competition between modern service companies is the competition between business models, so the innovation in business models has become those companies' quest [4]. Therefore, the innovation in business models is an important way for online travel service companies to enhance their competitiveness.

Business model is a category of demand system to reinforce enterprises to meet the needs of consumers and meanwhile organize and manage various resources of the company, including finance, raw materials, human resources, information resources, business environment and so forth, which integrates both the internal and external factors to satisfy consumer's demands in a best way. Simultaneously, goods and services furnished by enterprises are characterized by the feature of not being indiscriminately imitated by others, which ensures the unique core competitiveness. In general, the business model is the combination of the value of target customer, the relationship with the relevant stakeholders and the key resources of the enterprise. Constant creation of values for customers is playing a pivotal role in the enlargement of market shares and promotion of enterprise competitiveness. To figure out new opportunities for growth and customer demands and preference, the innovation of business model has become the top concern for a number of corporations [5].

Component analysis of the business model is the mainstream method adopted by scholars for business model studies. Hamel (2000) observes that the business model includes four primary elements of, namely, customer interface, core strategies, strategic resources and value networks. Weill and Vitale (2001) insist that the business model should entail eight elements with strategic objectives, value propositions, revenue streams, success factors, channels, core competencies, customer segments, and IT infrastructure respectively. Afuah and Tucci (2003) argue that the business model is consisted of customer values, scope, pricing, revenue streams, associated activities, implementation, competencies and persistence. Zeng Tao (2006, 2008) believes

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that a business model is constituted by the value of the object, value proposition, value realization, internal structure, resource allocation and value potential. Qiao Weiguo (2009) proposes that a business model is composed of 9 elements, that is, products, target customers, customer relationships, channels, revenue ways, internal value chain, cost, core competencies and cooperative networks.

Although their views on the components of the business model vary from person to person, in general, scholars believe that products, partnerships, target customers, core strategic resources and costs are the core components of the business model, and that by improving the values of the components or changing the relationships between them will lead to the innovation in the business model. As suggested by Alexander Osterwalder, the innovation should be based on nine basic elements. In the meantime, the evaluation and improvement of each block should also be integrated to generate a satisfactory result [6]. Drawing on the idea of business model innovation, this paper studies the business model of online tourism services by starting with its business model components, taking Ctrip as the research object for the case study and making use of the business model canvas, thus attempting to put forward effective ways for online tourism service companies to make innovations in their business models.

## 2. RESEARCH METHODS

All at present, from the research results at home and abroad, the researches on online travel services and business model innovation are not mature, remaining at the preliminary stage.

The business model is the whole of a group of components and their relationships, and the components are in the relationship of mutual support and interaction, thus making the business model of a company unique in that its innovation is difficult to be imitated [7]. This paper chooses the most representative online tourism company as the research object, analyzes in detail its current development and business model, and clearly displays the components of this business model by means of the business model canvas.

In their Business Model Generation, Alexander Osterwalder and Yves Pigneur have stated that the components of the business model are customer segments, value proposition, key activities, key partnerships, revenue streams, channels, customer relationships, key resources, cost structures and so on, which can trigger the innovation in the business model [6]. And therein, “customer segments” describes a specific customer group the enterprise serves; “value proposition” contains the services and products created by unique customer segments of the enterprise; “key activities” pertains the most cardinal affairs the enterprise conducts in order to operate smoothly; “key partnerships” describes the required partners for company operating business model normally; “revenue streams” refers to the source of the revenue the enterprise gains from the consumers; the “channel” is the way and channel of communication between enterprises and customers; “customer relationships” means the relationship between enterprises and customers, “key resources” entails the necessary resources to maintain the normal operation of the business model and “cost structures” is about the cost of an enterprise for implementing the business model.

In this paper, the business model canvas developed by Alexander Osterwalder is adopted to analyze in depth the business model of the company and explore the innovation direction of the business model of online tourism service companies.

## 3. CASE SELECTION

In 2016, the transaction size of Ctrip reached 263.6 billion yuan with a market share of 35.7%, and the total market share that also includes Qunar and eLong was 55.7%. With strong trade representativeness, Ctrip is the representative of the fusion of the Internet and the traditional tourism industry and its development process can nearly reflect that of the online tourism market in China. Therefore, taking Ctrip as the research object is very typical and representative.

## 4. CASE ANALYSIS

### 4.1 Analysis of the Ctrip Revenue Structure

As presented by the financial statements of Ctrip, its income was mainly generated from the agency of accommodation reservation and transportation tickets purchase, business travel, tour package, advertising, and the application of website membership.

After the price war between E-businesses in 2014, the development of Ctrip has witnessed a steady increase since 2015 and has risen by over 60% during the four quarters in 2016, which can be largely credited to the financial statements and reports of Qunar Website drafted on December 31st, 2015.

Table 1. Ctrip’s Revenue Scale

Quarter	Operation Revenue(Million USD)	Year-on-year Growth Rate	Quarter-on-quarter Growth Rate
First quarter of 2016	639.74	72.45%	42.51%
Second quarter of 2016	671.40	64.74%	4.95%
Third quarter of 2016	835.67	65.83%	24.47%
Fourth quarter of 2016	737.80	64.36%	-11.71%
First quarter of 2017	883.38	38.08%	19.73%
Second quarter of 2017	935.09	39.27%	5.85%
Third quarter of 2017	1,184.22	41.71%	26.64%

The increase in the operation revenue during the first three quarters of 2017 was obvious and a drop has been expected in the last quarter according to the seasonal variation of tourism. In general, the annual revenue in 2017 will still achieve an desirable growth.

The income generated from accommodation reservation reached 1,069 billion dollars in 2016, comprising 37% of the total revenue with an increase by 58%. Due to the all-rounded ecological layout of hotels and their wider coverage, and the intimate relationship between two sides on after-sales service and exchange of big data, that business has been greatly promoted.

The transportation ticket revenue in 2016 reached 1.3 billion dollars, making up 45% of the total income with an increase by 92%. It was the first time for that sector to take the largest revenue proportion, which can be mainly attributed to the merger with Qunar Wetsite on December 31st, 2015. Besides, by strengthening

the cooperation with large airline companies and improving the globalization strategy, the air ticket business has been developing in a stable approach, and the popularization of G-series high-speed trains has also contributed to the prosperity of train ticket section.

**Table 2. Ctrip's Revenue Scale**

	Year	2014	2015	2016
<b>Accommodation Reservation</b>	Operation Revenue(million USD)	488	693	1,069
	Proportion	41%	40%	37%
<b>Transportation Ticketing</b>	Operation Revenue	452	676	1,300
	Proportion	38%	39%	45%
<b>Packaged-tour</b>	Operation Revenue	167	260	347
	Proportion	14%	15%	12%
<b>Corporate Travel</b>	Operation Revenue	60	69	87
	Proportion	5%	4%	3%
<b>Others</b>	Operation Revenue	24	35	87
	Proportion	2%	2%	3%

Packaged-tour and business travel have achieved a steady-state growth and reached 347 million and 87 million dollars in 2016 respectively, comprising 12% and 3% of the total revenue with an increase by 39% and 25% compared to last year. In that regard, the root reasons should be the prosperity of individual and group tourism, as well as the boosting business travel demands.

**Table 3. Gross Margin Changes**

Quarter	Gross profit (million USD)	Gross Margin	Year-on-year Growth Rate
First quarter of 2016	465.80	72.81%	80.51%
Second quarter of 2016	483.71	72.04%	66.90%
Third quarter of 2016	650.55	77.85%	75.82%
Fourth quarter of 2016	573.80	77.77%	74.04%
First quarter of 2017	710.72	80.45%	52.58%
Second quarter of 2017	771.26	82.48%	59.45%
Third quarter of 2017	988.82	83.50%	52.00%

Overall, Ctrip has been developing steadily in the recent years. Despite of the slight decline in the gross profit rate during the first and second quarters in 2016, a sharp increase was achieved in the

third quarter by 10.4 percentages and reached 83.5%, which may indicate its strong potential.

The blossom of Ctrip is mainly attributed to the globalization strategy and constant development of markets, while the former has been greatly improved through the acquisition of Skyscanner on December 2016 and the financial performance after the merger procedure on 31st. Furthermore, while the "direct reservation" model jointly developed Ctrip and Skyscanner attracted a number of customers home and abroad in 2017, the flourish of outbound tourism has provided Ctrip with more local traveling resources in hot sightseeing places. Therefore, to promote the customer experience for people at every corner of the world, a multi-language service team has been built to offer help in any cases.

In 2017, Ctrip will continue to penetrate into the markets of less-developed cities in China to achieve a wider product coverage, held effective publicity marketing activities, promote the service efficiency, and thus to get a higher proportion of market share.

## 4.2 Business Model Canvas

This paper analyzes the current business model of Ctrip in detail on the basis of the nine components of the business model canvas respectively.

### 4.2.1 Customer Segments

The main customers of Ctrip are high-end business members with high incomes and strong spending power. These business customers do not have obvious seasonal fluctuations in consumption but they are relatively demanding about products and services, so the revenue of Ctrip mainly comes from this segment of customers. At the same time, holiday tourists are also part of Ctrip's target market, accounting for 12% of its target customers. As mass tourism becomes the trend, the proportion of self-service travel and holiday products has been rising in Ctrip's products, and the proportion of holiday tourists continues to increase, too. In addition, hotels, airlines, attractions agents, travel agencies and so on are also part of Ctrip's target market [6].

### 4.2.2 Value Proposition

The value proposition of Ctrip is to establish an online travel supermarket and enhance the customer experience through professional management. In the travel supermarket built by Ctrip, customers are offered free choices of suitable hotels and air tickets according to their own needs; they can book cars, local foods and tour guides for their scheduled destinations; they are allowed to check and book travel activities and services for their own families or company teams; they are able to evaluate the qualities of the tourism products and share personal travel experience. Apart from being free to select and purchase their own travel products, on lvping.com, the virtual community owned by Ctrip, customers can also search the travel information of the destination, check the reviews of hotel service qualities and so on, and the information shared by other customers can help them make a better tourism program. Through the platform of the online travel supermarket, customers can get access to tourism products which are attractive both in price and quality in line with their own needs, maximizing the value offered by the platform to customers at the same time.

### 4.2.3 Channels

The establishment of tourism online supermarket is one of the value propositions of Ctrip, and in order to improve this value proposition, Ctrip has built its own web portal, Ctrip.com, its virtual travel community, lvping.com, and other websites. With

the popularity of smart phones, Ctrip has also designed a series of APPs so as to meet the needs of mobile users. In addition to the online channels mentioned above, Ctrip has its own service-liaison center, including telephone calls, fax, web pages, e-mails, text messages, online instant messaging and all the other means of services, which are very professional. As for its offline channels, Starway hotel provides Ctrip with a large number of hotel resources, and at the same time, Ctrip has been cooperating with the major airlines and more than 32,000 hotels in 138 countries and regions around the world.

#### 4.2.4 Customer Relationships

Ctrip has always been committed to enhancing the user experience, in which lies its important advantage that makes it different from its competitors. Ctrip offers customers enough autonomy and highly personalized services to improve the user satisfaction. Ctrip participates and provides services in every stage of customers' travel without affecting their autonomy, just playing the role of a guide. The websites taken over by Ctrip and Ctrip's offline service partners all possess their own customers and have been maintaining a cooperative relationship with Ctrip, thus developing together and seeking common profits.

#### 4.2.5 Key Resources

Ctrip has the largest tourism service-liaison center in the world with extremely rich human resources. It covers all the major airlines in the world and cooperates with more than 32,000 hotels in 138 countries and regions around the world, possessing abundant tourism resources. The advanced technology is another one of the key resources of Ctrip, in which lies the headspring of the company's innovation and development.

#### 4.2.6 Key Activities

The company's main business includes tourism products, tourism services and travel information. Ctrip provides a full range of travel products and services such as hotel reservations, ticket booking, tourist services, destination tourism management (ordering meals, car rental, tickets, etc. at the destinations), and it offers tourist information, evaluation and experience shared on lvping.com and other tourist information community websites owned by Ctrip.

#### 4.2.7 Key Partnerships

Air routes offered by Ctrip cover the world's major airlines, and more than 32,000 hotels and nearly 36 tourist offices in 138 countries and regions around the world are in the relationship of in-depth cooperation with the company. In terms of insurance, Ctrip has been collaborating with insurance companies with a large amount of tourism business which provides customers with a variety of tourism-related insurance products. In terms of product payment, Ctrip has been cooperating with WeChat payment, all kinds of bank savings cards, credit cards and online payment, Alipay and other companies to provide customers with multi-channel payment ways. Through the cooperation with other business units and a reasonable integration of online and offline resources, Ctrip achieves a reasonable allocation of resources.

#### 4.2.8 Revenue Streams

It can be learned from the key activities that Ctrip's main revenue comes from the agency fees of hotels, air tickets, train tickets and other business travel and holiday products, with a small part of the revenue from online advertising and Ctrip's VIP membership.

#### 4.2.9 Cost Structures

Ctrip's operating costs can be divided into four modules, namely marketing costs, human resource costs, construction costs of the booking service center and development costs of tourism resources. Marketing costs are important for Ctrip to attract and develop customers and partners. Human resource costs are used for the human resources of the company. Every year, Ctrip spends a large amount of money on the development of tourism products such as hotels, most of which is one-time investment, accounting for the majority of Ctrip's operating costs. The construction costs of the booking service center include the investment in the website, APP and other technical construction, and the costs of the booking service center building construction as well as equipment.

According to the above analysis of the nine modules, the business model canvas of Ctrip is obtained:

Value proposition			
Establish an online travel supermarket			
Enhance the customer experience			
Price moderate			
Key partnerships	Key activities	Customer relationships	Customer segments
Tourism resource supplier	Tourism product sales Tourism information provision	User experience Guide Cooperation	Business customers Self-service travel
Insurance company Bank Payment company	<b>Key resources</b> Tourist resources Advanced technique Human resources	<b>Channels</b> Intelligent network platform Service-liaison center	
<b>Revenue streams</b> Agency fees Revenue from online advertising Ctrip's VIP membership.		<b>Cost structures</b> Marketing costs Human resource costs Construction costs of the booking service center Development costs of tourism resources	

Figure 1. Ctrip's business model canvas

## 5. STRATEGIES FOR INNOVATION IN THE BUSINESS MODEL FOR ONLINE TRAVEL SERVICE COMPANIES

Through the analysis of Ctrip's current business model, it is found that Ctrip boasts great advantages in its key resources, customer relationships, key partnerships, channels and other aspects, and in the fierce market competition, Ctrip needs to maintain these advantages, look for reform approaches and innovation in its business model, and maintain as well as expand its market share. Based on the analysis of the above business model components, this paper puts forward five ways of innovation in the business model of online travel service companies.

### 5.1 Concentration on Differentiated Development

With the rapid development of China's Internet technology and the homogeneous phenomenon in online travel service products, companies are attracting customers with lower prices so as to seize the online travel service market and win a place in the "price

war”, ultimately leading to the phenomenon of vicious competition between different companies. As the economy grows, the customer demands are more and more diversified. The premise for companies to get a competitive advantage in the market lies in differentiated market positioning, and for online travel service companies, their differentiation is reflected in the use of information technology to achieve the differentiation in four aspects, namely products, services, brand images and emotional elements [8]. Nowadays, as the online travel service market is increasingly competitive, the business model innovation must be based on accurate market positioning. With the rise of free travel, online travel companies need to stand in users’ shoes to consider their business and product logic, including the selection of personalized demands and the reasonable arrangements of time and traffic. Start from this point, companies can refine their personalized custom services and exploit the personalized custom market.

## 5.2 Establishment of a Perfect Service System

Some scholars believe that a company’s service innovation is a key means to enhance its competitiveness. To offer one-stop dynamic and interconnected services is an important means for business model innovation and market competitiveness enhancement. Online travel service products basically include hotel reservations, ticket reservations, travel on holidays, business management, specially engaged merchants, tourism information and other modules, and to offer one-stop interconnected services is to remove the barriers between those modules, open up the information sharing channel and package the tourism products purchased by customers into one trip, thus dynamically allocating the time and traffic in logic, reducing communication costs and promoting customer experience. In addition, to provide 7\*24-hour services, one to one services and compensations for natural disasters encountered during the travel are also the measures to improve the service system.

## 5.3 Improvement on Technological Competence

Technological innovation is not only an important means to enhance the competitiveness of companies but also one of their key resources. Business model innovation is inseparable from technological supports. To use technology for business model innovation, companies need to strengthen the Internet platform construction, update the interactive interface of the Internet platform and enhance the efficiency of customer communication. The development of various types of intelligent systems such as intelligent search system, information security system, map navigation system, self-help evaluation system and so on makes the platform operate efficiently and safely. Artificial intelligence technology is a popular technology today, whose results are widely used in our life. Therefore, to enhance the competitiveness of technology requires to actively use artificial intelligence technology, such as artificial intelligence customer services, which can improve communication efficiency and reduce labor and communication costs. With the popularity of smart phones and other electronic devices, designing mobile travel service assistants is also a ways to enhance the competitiveness of technology. Company uses mobile travel service assistants to pay attention to consumers’ entire travel process and provide consumers with service support always and everywhere. Mobile travel service assistants can serve consumers more carefully. In addition, the use of large data, personal credit, intelligent facilities and so on are all ways to enhance the competitiveness of technology and achieve business innovation.

## 5.4 Multi-dimensional Channels Both Online and Offline

The development trend of online travel has always been the integration of online and offline channels. Online channels have a strong traffic advantage, which can break through temporal and geographical restrictions when providing services. The Internet has the characteristics of eliminating information asymmetry, intelligent responses and so on, which promotes the operation efficiency of a company and optimize its customer experience. Offline channels offer face to face communications with the customers, providing information with high degree of authenticity, and customers trust offline consumptions more. Therefore, the business model innovation needs to integrate online and offline channels, making the channels multi-dimensional and reducing the operating costs.

## 5.5 Reinforce the Establishment of Key Resources

The enterprise of C-trip is in possession with core resources that other online travel services companies are incapable of matching with. So as to carry out innovation of business model, it is a crucial way to build up core resources [8]. What’s more, it is also necessary to broaden the product chain of online tourism industry, to strengthen coordination with other enterprises and institutions, and to acquire hotels, other enterprises focusing on online travel services within its capacity. In addition, it is cardinal to maintain a keen insight, to seek out new technologies, resources and partners, to analyze its role rationally and then exploiting, to enrich the core resources of the enterprise, to strength the competitiveness of the enterprise and to push up the innovation of business model [9].

## 6. REFERENCES

- [1] Luhan Li, D.2014. Research on online travel service business model. University of Science and Technology of China.
- [2] Liang Zhao and Hong Sheng, J. 2013. A comparative study on business models of online travel industry in China. *Journal of Qingdao Technical College*, 65-67+71.
- [3] Beijing tourism development base, M. 2014. China Online Travel Research Report. Beijing Tourism Education Press.
- [4] Yue Zhang and Shukuan Zhao, J. 2014. Mechanism and path of business model innovation based on factor Perspective. *Finance and Trade Economics*.
- [5] Rahul B. Waghmare and Dr. Devidas Golhar, J. 2017. Knowledge Creation at Incubation for Business Model Innovation: The Conceptual Understanding. *Journal of Commerce & Management Thought* (Oct.2017), 673-683.
- [6] Alexander Osterwalder and Yves Pigneur, M. 2015. Business Model Generation. Beijing Machinery Industry Press.
- [7] Dong Li, D. 2011. Business model of Online Travel Service. Huaqiao University.
- [8] Wang Ying, D. 2017. Research on the influencing factors of business model innovation of Ctrip. Beijing Jiaotong University.
- [9] Xue Cong, Wu Manlin, J.2011. Comprehensive evaluation of business models of online travel enterprises. *Enterprise dynamics*, 15-18.