

# **Comparative study of proprietary products of OTA platform under Nvivo--Take Tongcheng and Ctrip for example**

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**ABSTRACT:** *With the continuous development of the Internet, the tourism market has undergone great changes. OTA (Online Travel Agency), as an important part of the tourism market, is becoming increasingly important in the industry. OTA platforms represented by Ctrip and Tongcheng actively carry out self-run business and promote the development of the e-commerce model combining online and offline. In this paper, we conduct a comparative study on some self-operated products of Ctrip and Tongcheng OTA platforms, analyze the differences in the evaluation of some self-operated products of Tongcheng and Ctrip platforms, and find that compared with Ctrip, there are certain differences in service quality and price, and corresponding suggestions are put forward.*

**KEYWORDS-** *big data, content analysis, Nvivo, OTA platform*

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## **I. INTRODUCTION**

With the continuous development of Internet technology, the demands of consumers are becoming more and more diversified. The traditional offline service mode of providing air tickets, hotels and hotels is gradually unable to meet the needs of consumers. In the environment of the rapid development of the Internet and information technology, the derivative service of "Internet +" arises at the historic moment, which makes OTA rise rapidly in the market<sup>[1]</sup>. OTA quickly occupies the market with the characteristics of convenience, high response and personalization<sup>[2]</sup>. Self-management of the e-commerce platform refers to that the merchants are the main body providing products or services on the e-commerce platform, and the merchants carry out the production, processing, distribution, sales and other links. In self-run businesses, consumers can directly place orders to buy products or services, and then OTA platform provides delivery and other services, realizing the e-commerce model combining online and offline. In this paper through the comparative study with Tongcheng and Ctrip, found that with Tongcheng and Ctrip in service quality and product pricing are certain differences, so this paper will focus on the aspects of product pricing and service quality evaluation with Tongcheng and Ctrip, in order to find the problems existing in the process of development and put forward the corresponding countermeasures and suggestions so as to promote better development of Tongcheng and Ctrip.

## **II. THE DEVELOPMENT STATUS OF OTA PLATFORM**

The OTA platform has grown rapidly because it has revolutionized the traditional tourism business process and brought great operation convenience to it. OTA breaks through the supply chain model of traditional travel agency suppliers, wholesalers, distributors, agents and retailers. In terms of suppliers, OTA and customers, OTA not only reduces intermediate links and operating costs, but also realizes unlimited extension to other Internet application fields, realizing a win-win situation for supply chain enterprises<sup>[3]</sup>.

Twenty years ago, traditional travel agencies mainly relied on TV, newspapers, radio and other media to publicize the route. When tourists were willing to travel, they would contact the travel agencies to ask for the price. The travel staff will contact the supplier to verify the number, standards and vacancies, and then quote to the tourists. If the tourists accept it, they will pay and sign a paper contract. The whole transaction is not completed until the end of the tourist trip. The traditional operation mode relies on telephone or fax, which is not efficient and highly dependent on personnel operation. If the fax is not sent correctly or the supplier is not confirmed, the tourist's trip may be affected. The modern OTA platform has completely changed the way consumers operate. Visitors can browse travel products through their mobile phones or computers, including

group trips, air tickets, hotels or customized routes online, quickly obtain information through instant messaging software, and place orders according to their needs. Users can complete the payment through the software, and the order is generated immediately. This mode of operation eliminates the reception staff, telephone, fax and cash, so it is favored by modern consumers, especially the young and middle-aged groups. The OTA platform has a rich variety of products, which can meet the personalized needs of tourists, which is also one of the important reasons for its popularity. Ctrip and Tongcheng are the two most well-known OTA platforms.

Tongcheng Travel is a national high enterprise and one of the first e-commerce demonstration enterprises of the Ministry of Commerce. Tongcheng Travel has been selected as one of the "Top 20 China Tourism Groups" for three consecutive years. In 2023, the company achieved revenue of 11.896 billion yuan, up 80.7% year on year, and an adjusted net profit of 2.199 billion yuan. Among them, the revenue of Tongcheng travel accommodation business was 3.9 billion, up 61.5% year on year, up 65.4% compared with the same period in 2019; the revenue of transportation business was 6.03 billion, up 78.5% year on year, up 33.5% compared with the same period in 2019.

Ctrip is the current scale of the tourism OTA platform. For the whole year of 2023, Ctrip's net operating income was 44.5 billion yuan, up 122% year on year; its returnee net profit was about 9.9 billion yuan, up about 607% year on year. Among them, the accommodation booking revenue was 17.3 billion yuan, transportation ticket revenue was 18.4 billion yuan, tourism and vacation business revenue was 3.1 billion yuan, and business travel management business revenue was 2.3 billion yuan, with year-on-year growth of 133%, 123%, 294% and 109% respectively.

The profit model of these OTA platforms mainly includes: (1) charging advertising fees from suppliers; (2) making price difference by lowering the settlement price of suppliers (including air tickets, accommodation, attractions, fleets, travel agencies, etc.); (3) attracting or indirectly encouraging tourists to make secondary or additional consumption, such as insurance, transportation services, etc., although this consumption has become freely optional items for consumers<sup>[4]</sup>.

### III. RESEARCH ON TOURISM PRODUCTS

#### 3.1 DATA ACQUISITION AND PREPROCESSING

In this paper, houyi collector is used to climb the "domestic tour" on the same journey travel official website and the home page of Ctrip official website respectively, and the flow chart mode is used to crawl the data. In order to reduce data errors, the starting point is Shanghai, mainly considering that both companies are located in eastern China, and Shanghai has the largest number of products among many destinations in eastern China. After data cleaning and excluding invalid reviews, Ctrip has 10 products with 98 reviews; and 10 products with 87 reviews.

#### 3.2 PRODUCT REPUTATION ANALYSIS

This paper mainly uses Nvivo to analyze the word frequency and emotion in the evaluation text.

This paper using qualitative analysis software Nvivo with program and Ctrip proprietary products word frequency analysis, the minimum text length is set to 2, the text word frequency, and remove remove degree adverb, respectively ranked in the highest number of the top 30 keywords, get high frequency word statistics table and word cloud contrast figure.

In the evaluation of Ctrip, there are more tourism elements of the vocabulary: "tour guide" 107 times, "journey" 77 times, "arrange" 53 times, "attractions" 39 times, "hotel" 39 times. For Ctrip proprietary products, consumers is the most concerned guide, itinerary, attractions, hotels, especially the guide, frequency is much higher than other products, thus, for Ctrip proprietary products, the guide's word of mouth for the product reputation, so you need to focus on the quality of the tour guide. At the same time, the itinerary arrangement, the standard of the hotel and the quality of the scenic spots also have a significant impact on the reputation of the products.

Table 1 High-frequency word statistical table-Ctrip

Keywords-Ctrip	count	Keywords-Ctrip	count
tour guide	107	select	22
journey	77	be worth	21

arrange	53	whole	21
attractions	39	travel	21
hotel	39	special	20
time	38	specialty	18
correct	37	stay	18
serve	37	great master	18
explain	36	amuse oneself	18
Putuo	31	rational	17
driver	29	hour	17
one	27	Lishui	16
satisfactory	26	master worker	16
learn through practice	25	a great many	16
not have	25	sense perception	16
visitor	25	scenic spot	16
tour	24	supernatural being	16
satisfied	23	patience	16
scenery	23	whole journey	15
compare	22	breakfast	15

In the evaluation of the Tongcheng, the first place was the "journey", with 85 times, and the second place was "tour guide". Thus, for the products of Tongcheng, "journey" is the key to reputation; "tour guide", "hotel", "service" and "arrangement" also occupy the top of high-frequency words, also have a crucial impact on reputation.

Table 2 High-frequency word statistical table-Tongcheng

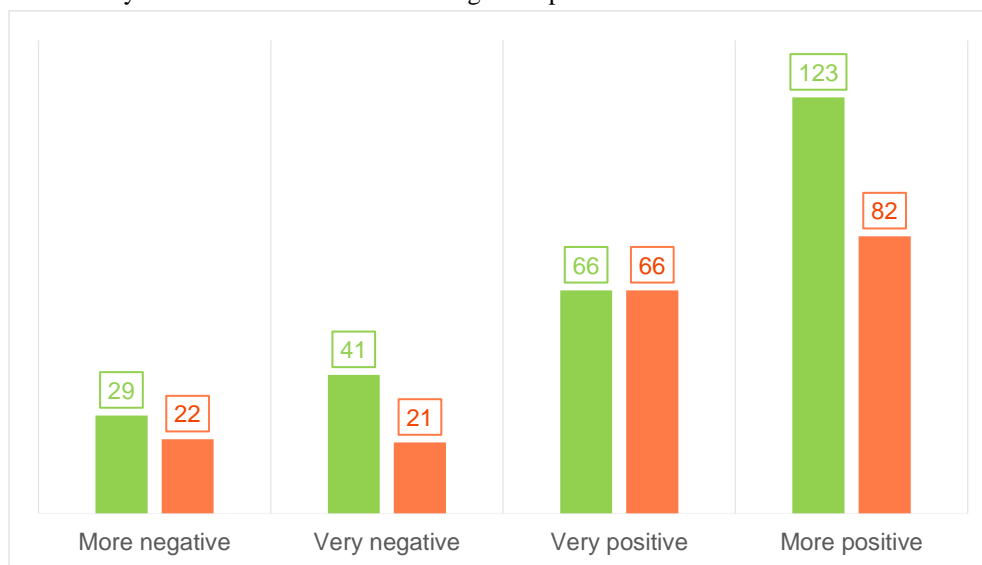
Keywords-Tongcheng	count	Keywords-Tongcheng	count
journey	85	time	15
tour guide	76	not have	15
hotel	70	patience	15
service	64	Dalian	14
arrangement	52	scenery	14
satisfied	37	be worth	13
recommend	33	whole journey	13
compare	30	rational	13
stay	28	master worker	13
correct	26	scenic spot	12
whole	26	second	12
tour	26	fine food	12
enthusiasm	23	weather	11
travel	22	thanks	11
special	22	pretty	11
feature spot	21	explain	11
Qingdao	21	this time	11
learn through practice	18	unobstructed	10
attentive and satisfactory	18	great master	10
driver	15	remind	10

Comparing the two words of Tongcheng and Ctrip, the following conclusions can be drawn intuitively: First, the tour guide has the most critical influence on the reputation of self-run products; second, the itinerary,



This paper uses Nvivo qualitative analysis software to conduct emotion analysis on the disordered comment text. First of all, on the basis of the frequency of words in the previous article, the emotional words are classified and coded, which are mainly divided into four parent nodes: very positive, positive, very negative emotions, and negative emotions.

The calculation shows that the percentage of total positive emotion nodes in Tongcheng is 77.5%, and the percentage of total positive emotion nodes in Ctrip is 72.9%. The positive sentiment node is 4.6% higher than Ctrip. The reputation of the same journey product relative to Ctrip, will be a bit better. However, in general, the products of both companies account for a high percentage of positive emotional nodes. It can be seen that tourists are relatively satisfied with both and have a good reputation.



To sum up, the pricing of Tongcheng's proprietary products is higher than that of Ctrip. Compared with Ctrip self-run products, the number of similar self-run products is small, the price is high but the reputation is better.

It is suggested that the same journey platform should broaden its business field and increase the number of products on the premise of ensuring product quality. Both platforms should strictly check the quality of products, constantly improve the quality of service services, provide consumers with better services, and implement the concept of quality first. As Zhou Mingqi said, "Tourism enterprises should adapt to and recognize the situation, reshape their core capabilities, and abandon the past extensive development model with real estate as the core. In the future, we should return to the main tourism industry and take tourism products as

the core of profit, which also puts forward higher requirements for the enterprise's own research and judgment ability, product ability, management ability, resource and capital integration ability "[5].

#### **IV. CONCLUSION**

With the development of the Internet era, more and more enterprises begin to transfer their e-commerce business to the third-party platforms, but at the same time, there are also some problems. In the Internet era, third-party platforms have brought convenient services to enterprises, but at the same time, there are also certain risks. Many enterprises lack the ability to control risks when transferring their own business, resulting in the loss of their own interests. Therefore, all OTA platforms should actively carry out their own business and realize the e-commerce model combining online and offline. For Ctrip and Tongcheng, under the development trend of the self-run business of the e-commerce platform, they should formulate reasonable price strategies, improve the service quality system, establish brand effect and establish diversified marketing strategies according to their own situation. This paper aims the comparative research and analysis of Tongcheng and Ctrip in self-run business, hoping to provide some reference for related enterprises.

#### **V. INSUFFICIENT RESEARCH AND OUTLOOK**

This paper mainly with Tongcheng and Ctrip, for example, the OTA platform proprietary business comparative analysis. Through the comparison of OTA platform proprietary product characteristics and pricing, found in the electric business platform proprietary development trend, OTA platform should according to their own situation to choose appropriate proprietary business, to improve their product price strategy, brand effect, service quality, price and service gap and marketing strategy, so as to realize the combination of online e-commerce model development. However, there are still some shortcomings in this paper, mainly reflected in the following two aspects: the number of samples selected in this paper is relatively small, and the understanding of the self-run products of OTA platform is not deep enough. The analysis of this paper is limited to two representative OTA platforms and Ctrip, so the research conclusions also have some limitations. In the future, more OTA platforms can be studied in depth, and corresponding countermeasures and suggestions can be put forward, so as to provide theoretical basis and practical guiding significance for the whole OTA industry.

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