

Online and Offline Collaborative Management in O2O Services

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Abstract—In order to solve the problem of the existing imperfect O2O service management method, this paper proposes an online and offline O2O services collaborative management method. It constructs prices collaborative method, discusses quality collaborative method, considers channels collaborative method, and studies communication collaborative method. This method provides a favorable support for promoting the modern service industry and information industry better.

Keywords—O2O service; Online and offline; Information industry; Collaborative management

I. INTRODUCTION

With the development of network economy and modern service industry, electronic commerce has developed from the goods oriented modes such as B2B (Business to Business, such as Alibaba.com) and C2C (Customer to Customer, such as Taobao.com) to the customer oriented mode such as O2O (Online to Offline, such as Wechat and Dianping.com) [1]. O2O services which support customers to book services online and consume services offline have made Internet become the foreground for offline transaction, and created huge opportunities for service providers, as well as convenience and considerable interest for customers.

The research on O2O service includes O2O service technology [2,3] and O2O service management [4,5], but the latter began relatively later than the former. Although the current domestic and foreign studies in O2O service strategy and service management have yielded some results, there are still two following problems:

(1) The selection of O2O service management approach can not simply draw on supply chain management theory [6]. The research objects of O2O service are online (Web) services and offline services. Taking into account the special nature, the traditional supply chain management theory can not be simply applied and extended to O2O service areas.

(2) Online service quality and the coordination among offline services haven't really realized. The existing studies on O2O service management such as price decision model and market selection model are more improved by the traditional model [7], and haven't considered the problem of online and offline services collaborative management from the perspective of independent service vendor (ISV), web service

integrators (WSI) and customer.

II. ANALYSIS OF ONLINE CONSUMER BEHAVIOR

Consumers in network market have a behavioral process to aware, explore and make decision for web services. They first enter the home page and explore relevant sites information, then decide to submit orders or abandon the purchase of services, and finally make evaluations. The whole process can be divided into 4 stages such as consciousness forming, services searching, decision making and services feedback. Fig. 1 shows the online consumer behavior process.

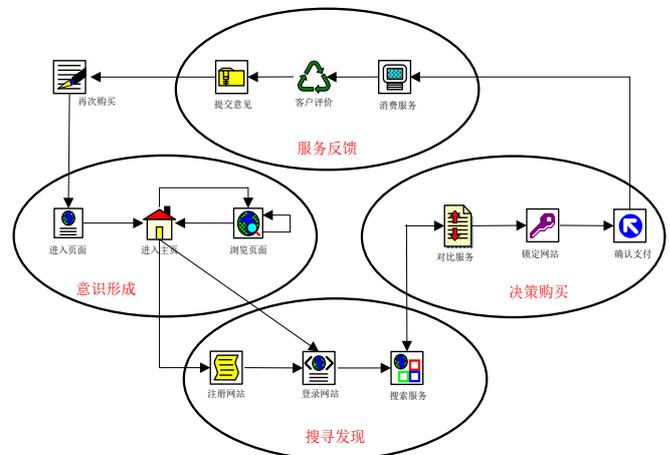


Fig. 1. Online consumer behavior process

(1) Stage 1: consciousness forming. Online consumers enter different pages in unconscious state and produce a set of pages browsing behaviors. Gradually, form a certain degree of consumer awareness in the process of browsing the web. Then, pick out the site to meet their needs by acquiring vast amounts of information, and enter the homepages of those sites for further attention.

(2) Stage 2: services searching. First, register in the selected site's home page, then login to the relevant page, and search for related page information. For example consumers can browse through the pages to the appearance of the product, service performance and other information.

(3) Stage 3: decision making. Consumers compare different sites that provide target services by the description of

the services (including text, pictures, etc.) and consumer evaluation of historical information, then lock one of those sites (ISV or WSI) to confirm the service and corresponding payments.

(4) Stage 4: services feedback. Consumers consume the purchased services online or offline, feel the feeling and experience they have brought, and make evaluation to the sites or suppliers.

The online consumer behavior is actually a continuous dynamic process. It is consisted by their needs, attitudes and purchasing behavior and psychological and behavioral chains.

In the above 4 stages, stage 1 and stage 2 are the basis for a network of consumer behavior, the 3 stage is the core consumer behavior. If the 4 stage of the customer experience better, it will re-form a new purchase of consciousness, then re-enter stage 1 for cycling the consumer behavior process. At the same time, different consumers' navigation paths are not the same, consumers' needs are different. Some consumers are buying regulars, and some are just browse but rarely buy from the site occasionally.

III. ONLINE AND OFFLINE SERVICE PRICES COLLABORATIVE MANAGEMENT

Price is a factor that customers are most concerned about. If O2O service owns the price advantage, customers will be more willing to choose it. Since the online services is a combination of several web services, then the online and offline service prices collaborative management requests the online prices consistent with the corresponding offline prices, and even more affordable. Therefore, it is necessary to develop unified cost and price management mechanisms between ISVs and WSIs. On the one hand, we need to ensure that the cost and price of offline services are stable and smooth, and the payment online is the same or even less than the payment offline. On the other hand, in order to meet customers' buying motives that the shopping online is cheaper, WSIs may adopt some more flexible, richer promotional strategies (promotions) such as free home delivery and small gifts presented to attract customers, thereby increasing the number of customers. Fig. 2 shows the online and offline service prices collaboration.

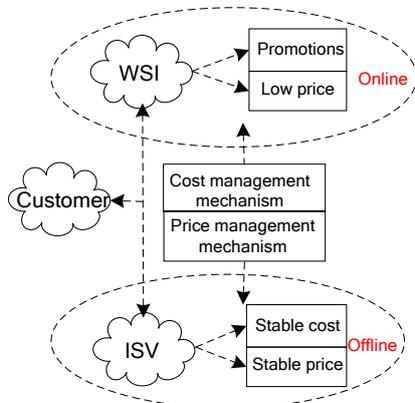


Fig. 2. Online and offline service prices collaboration

Although the online and offline service prices collaboration are based on the collaboration between ISVs and WSIs, and there are long-term communication and consultation before the development of the cost and price management mechanisms, the price of O2O service which is shown in front of the customers is still the most direct customers' perception point. However, online and offline service prices collaboration must weigh the benefits of the WSI and customers, although customers are the core service objects of O2O service, WSI provides customers with promotions only under the premise of ensuring their own benefits, therefore, we must also take into account the cost of O2O service and the experience of customers.

IV. ONLINE AND OFFLINE SERVICE QUALITY COLLABORATIVE MANAGEMENT

Online and offline service quality collaboration mainly aims to achieve synchronization and coordination between online and offline services from the overall QoS level perspective of O2O service. This section makes the online QoS indicators (availability of website, success rate of website and response time of website) correspond the offline QoS indicators (timeliness of consumption, success rate of consumption and waiting time). Fig. 3 shows the online and offline service quality collaboration.

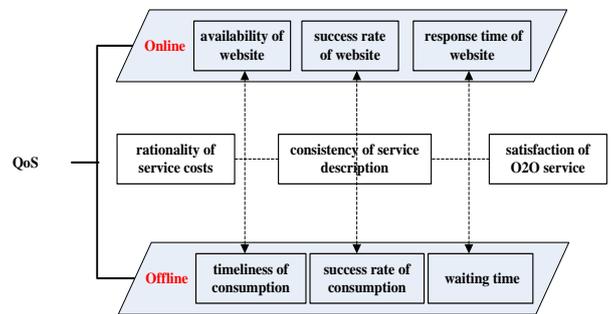


Fig. 3. Online and offline service quality collaboration

O2O service quality collaborative management ensures both the quality of online service such as availability of website, success rate of website and response time of website, and the quality of offline service such as timeliness of consumption, success rate of consumption and waiting time, and then makes availability of website correspond timeliness of consumption, success rate of website correspond success rate of consumption and response time of website correspond waiting time. The QoS indicators of rationality of service costs, consistency of service description and satisfaction of O2O service are running through the online and offline customer perception and evaluation process.

This collaborative management approach makes customers happy and relaxed to purchase O2O service online and enjoy high-efficient service offline, and ultimately brings a better reputation for the O2O service so that all the WSIs, ISVs and customers can obtain higher profits.

V. ONLINE AND OFFLINE SERVICE CHANNELS COLLABORATIVE MANAGEMENT

Customers' needs in e-commerce are different. Some customers prefer to get real experience and feelings to judge whether it is worth to buy the service by the way of offline before the online selection, and others prefer to online ordering before paying and enjoying the corresponding service offline. In order to meet the customer's individual needs, WSIs should provide an online and offline multi-channel business model to manage O2O services.

Since there are essential differences between O2O services and products or services sold by traditional enterprises in e-commerce platform, the channel conflicts of traditional enterprises are weakened in the presence of O2O services. O2O services change the original assist and being assisted relationship between online service channels and offline service channels into mutual balance and integration. Fig. 4 shows the online and offline service channels collaboration.

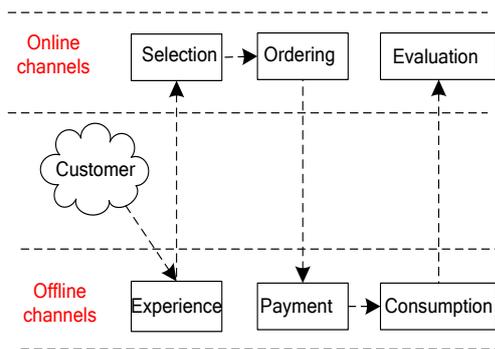


Fig. 4. Online and offline service channels collaboration

Online and offline service channels collaborative management makes both online channels and offline channels become a customer-centric common issue. Customers experience services offline, and select and order services online, then pay and consume the corresponding services offline, and make evaluation online. In this way, customers get more convenience, and the satisfaction towards to O2O service channels is increased.

VI. ONLINE AND OFFLINE SERVICE COMMUNICATION COLLABORATIVE MANAGEMENT

At present, more and more customers not only pay attention to the purchase of O2O services, but also take the initiative to participate in the evaluation online and share their experience to other potential buyers. Therefore, online and offline must also implement effective interactivity.

The online service communication includes O2O service introduction, online Q&A, services consulting, reservation inquiries, FAQ, personalized recommendation etc.. The offline service communication includes usage inquirer, reservation inquiries, enjoy consulting etc.. Online and offline service communication collaboration needs to be established based on the QoS collaboration between WSIs online and service suppliers offline. In order to eliminate the customers' worries after they buy O2O service, we must ensure the hardware

conditions and make timely and effectively interactive communication with customers. Fig. 5 shows the online and offline service communication collaboration.

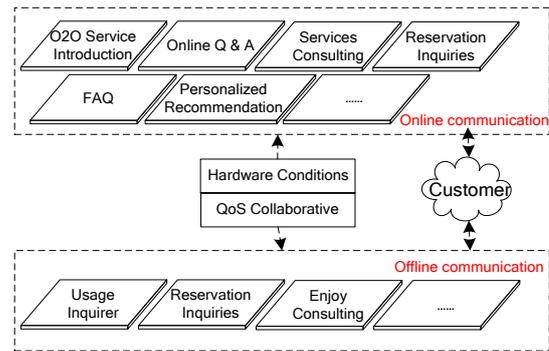


Fig. 5. Online and offline service communication collaboration

VII. CONCLUSION

O2O service contacts a variety of offline products and service resources and online information resources together. To achieve O2O services collaborative management, this paper has proposed an online and offline collaborative management method based on price, quality of service (QoS), channel and communication of services, as shown in Fig. 6. It will provide a favorable support for promoting the modern service industry and information industry better.

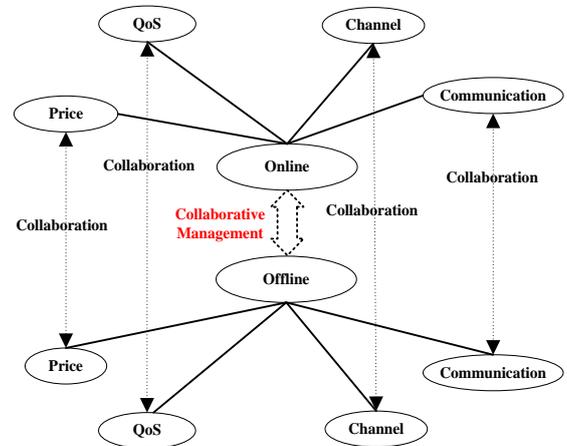


Fig. 6. Online and offline collaborative management method

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