# Research on Enterprise's Online to Offline Business Model

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Abstract: After nearly 30 years of practice, electronic commerce has been considerable development. It must be pay attention to be the influence in the e-commerce to the entity economy But there are 95% of the traditional market still linger in the electronic commerce besides. And O2O (Online to Offline) is complied with the electronic commerce development trend and result of a based on local life service mode of electronic business affairs. Through the empirical analysis of 164 valid samples, it can be concluded that: online subscribers, the offline teams, technological change, merchant resources and organizational resources have significant positive influence of internal value and customer value. Shops resources, organizational resources, internal value and customer value have partial intermediary role between merchant resources, organization resources and the successful run of O2O business model apart.

Keywords: Online to offline business model Empirical analysis, Influence factor

### 1. Acknowledgements

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## 2. Introduction

O2O is a new business model via interaction between online (virtual world) and the line (real-world) in the filed of living consumption.Through the discount (bulk), provide information and services (book), etc, the offline store of information for online users, which converts the offline consumer customers. Traditional enterprises and group-buy site can both use this kind of business model. It has three features of localization, no logistics and online payment.[3]

The academic studies of O2O business model, study the mechanism of its operation, the empirical analysis of the factors which influence its success is being run, interpret how companies utilize O2O business model better. The frame of this paper comprises of three types of variables namely: independent variables(online scale, offline team, technological change, shops resources and organization resources), intermediary variables(internal value and customer value)and the dependent value(the successful operation of O2O business model). We hope that we can explain how O2O business model successfully run through the frame.

The Theoretical Foundation and Literature Review

#### 2.1 Online User Scale (US)

Online user scale refers to the number of users and the size of internet traffic. User scale is only an index representing the result. The factors that affect the user scaleare strategic positioning, product innovation, user experience, ecosystem construction and platform operations. Liu Peng (2012) proposed that O2O platform can only cooperate and attracting shops to participate in the platform by gathering enough users to the platform. So the O2O platform must attract a enough size of users to stay on the platform.

#### 2.2 Offline Teams (OT)

The offline teams is the one to cooperate with those offline merchants, mainly including the ability of marketing, services negotiations, as well as the ability to collect the feedback information of consumers and so on. Liu Peng (2012) proposed a concept of based-push, which is refer to the mode of the shops push out some kinds of promotion event to attract customers to their shops and to their online site.

This requires the O2O platform operators have anoffline teams with the marketing and service capabilities. Without the basis of the based-push team, the development of the operation of the O2O platforms is a castle in the air. Risk investors pay most attention to foodservice-field O2O is the team the unique abilityof spreading points of shops. The unique shops resources is an important way of the enterprise to distinguish between competitors to gain a competitive advantage.

The ability of marketing, services and negotiation the O2O platform owned will be a great impact on the successful operation of the possibility of its business model.

#### 2.3 Technological Change (TC)

The technological change in this study is considered from the point of view of the external environment, it refers to the introduction of the external new technology, namely the O2O business model is coming into the mobile Internet era and so on. Lavie (2006) argues that in view of the scope of the impact of technological change, it includes both the enterprise value activities, as well as the form of the connection between the value of higher-level activities.

#### 2.4 Shops Resources (SR)

In this paper, the definition of the shops resources is not only refers to the quantitative indicators what O2O platforms provide such as shops quantities and the size, but also involves whether can the enterprise maintain a long-term and stable cooperation with the shops, how often the platforms update the shops , whether they do a credit verification to safeguard the interests of consumers and so on.

The O2O business model needs to integrate offline resources. The O2O participants, including O2O platform Operators, shops and the customers. The resource of on-line shops and users are relatively concentrated, but the resources of offline businesses and users are more dispersed. From the experience of China's lead O2O business model – the Ctrip, the integration of offline shops or the user resources is expected to become the breakthrough of the domestic enterprises.

#### 2.5 Organization resources (OR)

In this paper, the definition of the organization's resources include both the enterprise resources (external), as well as the organizational structure of the enterprise (internal resources). The concept of organization resources is from the resource-based view (RBV). The RBV argues that enterprise is a collection of various resources.

As for the definition of organization resources, many scholars do research and analysis from different angles. Grant (1991) points out that the resource is kinds of investment of tangible and intangible in the process of production, including plant, equipment, technology, capital, skills, brand and so on [6].Amit, Schoemaker (1993) argues that the organization resources are the factors of production owned or controlled by enterprises, enterprises need to combine or change the resources according to the market demand, and changed it into the final product or service.

The organization resources is the antecedents elements of the business model, it is the basis of the operation of the business model. The characteristics of resources will undoubtedly affect the competitive advantages of the business model. Taking into account the differences in resources in different industries, this study was referred to the Bainey's (1991) point of view. He argues that enterprise resources is the assets, skills, talents, and organizational processes, information and so on owned by the enterprise in order to ensure that it is able to achieve the strategic objectives.

## 1) Internal value (IV)

Customer value is refers to the extent that how well is accepted by the customers for the products and services provided by the enterprises in order to realize a profit in the marke. It includes providing specific products or services to the target clients, satisfying the needs of the client with the function of the product or service, and how the customer's satisfaction in the process of using the product or service.

## 2) Custom value (CV)

Internal value is refers to the concept that in order to create and deliver value, enterprises need to plan and design the process of product development, manufacturing and marketing, etc.. So as to improve operation efficiency and profitability. It includes the degree of how many enterprise resources are input into the process, the types, the quantity and quality of the products or services, customization degree to customer needs, operating costs and expenditure structure. The internal value lies in the efficiency of the transformation of value and profitability.

#### 3) The successful operation of O2O business model (SO)

O2O success is measured through measuring the enterprise performance, the performance is divided into market performance and financial performance. In recent years, the concept of performance has been further sublimation because of the scholars' depth study. At this stage, the most common point of view is that performance is the combination of behavior and the output. Rynes and Olian proposed that actions should be part of the performance, as the result can be linked with behavior in theory.

Lin XinQi (2010) explain the performance as a combination of output and behavior, it refers to a series of actions and their results under the control of the collectives or individuals. The successful operation of O2O business model defined in this paper refers to the enterprise's market performance and financial performance index can meet or exceed the industry average.

## **3.** Theory and Hypotheses

#### 1. Online user scale on internal value

Large user scale will enable companies to improve operational efficiency to meet customer needs, enabling enterprises to see the shortage of their products and services' type, quantity and quality more easily. Enabling enterprises to promote their value transformation efficiency and finally get higher profit gaining ability other aspects of the lack of enterprise value conversion efficiency, so as to achieve high profits ability. <sup>[2]</sup>Therefore, this paper proposes the following hypothesis:

H1: Online user scale has a positive effect on internal value.

#### 2. Online User scale on Custom Value

User scale is a measure of how much the market space of enterprises have, High scale will bring more profit opportunities, If accompanied by good reputation, the situation can present a virtuous circle of development of enterprises, so that enterprises can provide consumers with better products and customer service.<sup>[4]</sup> Therefore, this paper proposes the following hypothesis:

H2: Online user scale has a positive effect on custom value.

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## **3.** Online user scale and the successful operation of O2O business model

Only supported by the growing scale of users and traffic scale, can the O2O business model attract upstream and downstream partners of the industry chain, rich products and applications of the platform, promote the user experience, enhance user stickiness, and thus forming a platform with a virtuous circle of development. Or, the platform is easy to be losing their attraction. Therefore, this paper proposes the following hypothesis:

H3: Online user scale has a positive effect on the successful operation of O2O business model.

### 4. Offline teams and internal value

Through the offline teams' communication between enterprises and businessmen, the transfer efficiency of value can be increased significantly, the efficiency of value creation can be higher at the same time, and the efficiency of the resources using and processes of the enterprise can be improved. And the internal value could be promoted significantly. Therefore, this paper proposes the following hypothesis:

H4: Offline teams has a positive effect oninternal value.

### 5. Offline teams and custom value

By understanding consumer demand, offline teams can dramatically improve the customer satisfaction of services and make it closer to the needs of the consumers. Therefore, this paper proposes the following hypothesis:

H5: Offline teams has a positive effect on custom value.

## 6. Offline teams and the successful operation of O2O business model

Offline teams can be said to be the tie connecting the offline shops and the online platform. It will directly affect the direct perception of customer for service. Therefore, this paper proposes the following hypothesis:

H6: Offline teams has a positive effect on the successful operation of O2O business model.

#### 7. Technological change and internal value

Adamantia G. Et al. (2009)argues that the technological change affect the innovation of enterprise's value activities system. Through the In the adjustment in fields of infrastructure, human resource, technology development, procurement, production, marketing ,service and so on, the value chain of the enterprise's resources and processes can be integrated and optimizated, the existing cost structure and profit model can be improved , and finally performance could be improved. Therefore, this paper proposes the following hypothesis:

## H7: Technological change has a positive effect on internal value.

## 8. Technological change and custom value

Foster (1986), Christensen et al (2006) found that the degree of technological change will affect the time of customer acceptance of new products in a certain extent. The new technology used different working principle in compared with the existing technology. This made the performance of the product having a fundamental improvement and can greatly improve customer value. Products with introduction of this type of new technology can make rapid customer response, early adopters of new technologies will quickly occupied the market. Therefore, this paper proposes the following hypothesis:

H8: Technological change has a positive effect on custom value.

## 9. Technological change and the successful operation of O2O business model

Justin (2007) argues that the application of new technologies in technology change expand the customer value space, and enterprises need to adjust and re-positionthe business model. The level of customer value innovation will lead to the enterprise's organization and framework improvement, and through this way, enterprises can gain more profit and be in a favorable position in the competition. Therefore, this paper proposes the following hypothesis:

H9: Technological change has a positive effect on the successful operation of O2O business model.

### 10. Shops resources and internal value

The more the number of shops owned by the enterprise, the higher the requirements of managing shops' model and the credibility of credit of evaluation system. A variety of types of shops will increase the requirement of enterprise's marketing ability as well as the ability of providing a particular product or service to consumers who have specific requirements significantly. The shops resources can affect the enterprise's profit pattern and some more deeper contents. Therefore, this paper proposes the following hypothesis:

H10: Shops resources has a positive effect on internal value.

## 11. Shops resources and custom value

Having a large number of shops resources, the platform can gain an advantage in the market competition, and with a greater possibility that consumers will chose the platform to consume. Meanwhile, by increasing the number of shops, there will be competition among the shops themselves and the shops will provide better products and services with lower prices. These are be beneficial to enhance customer satisfaction. Therefore, this paper proposes the following hypothesis:

H11: Shops resources has a positive effect on custom value.

## **12.** Shops resources and the successful operation of O2O business model

A lot of experts, as well as O2O platform practitioners have pointed out that the shops resources is the primary factor in the success of O2O platform. Because the shops resources is the fundamental O2O operation, it can be said as the products of the platform. The quality of the shops' products' quality and whether there is enough shops for consumers to choose, will directly affect the online flow of the O2O platform, and finally influence the success of the mode of operation.Therefore, this paper proposes the following hypothesis:

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H12: Shops resources has a positive effect on the successful operation of O2O business model.

#### 13.Organization resources and internal value

Bian Yanjie and Qiu Haixiong (2000) prove that organization resources can improve the status of the enterprises in the supply chain, and it can enhance the voice of the leading enterprises. WilHamson (1975) is considered that the organizational structure with the design of high efficient and reasonable interior can ensure the smooth process of enterprises' production, can stimulate the creative staff, will ensure rapid response to customer needs. As well, reasonable organizational structure helps to reduce operating costs and will accelerate the promotion of performance. Therefore, this paper proposes the following hypothesis:

H13: Organization resources has a positive effect on internal value.

#### 14. Organization resources and custom value

Arnina (2008) argues that the standardization and specialization of the organizational structure can ensure the quality of the enterprise's value creation process, and they are also the embodiment of the core competitiveness of enterprises. The decentralization of the Organization will improve organizational decision-making efficiency, able the organization response to customers' requirements quickly, will stimulate staffs' innovation consciousness, provides the impetus for the creation of enterprise value, will establish long-term cooperative relationship with customers, and will improve the level of satisfaction. Therefore, this paper proposes the following hypothesis:

H14: Organization resources has a positive effect on custom value.

## **15.** Organization resources and the successful operation of O2O business model

Brush et al (1998) studied that the enterprise resources has a positive effect on performance. But on the different dimensions of resources, as well as in different environments or strategic circumstances, the combination of material and technical resources will significantly promote the improvement of firm performance, and it can be the basis of the core competence of an enterprise.[5]Therefore,this paper proposes the following hypothesis:

## H15: Organization resources has a positive effect on the successful operation of O2O business model.

## 16. Internal value, custom value and the successful operation of O2O business model

Thomas (2001) research the relationship between the business model and corporate performance centring on enterprise's operation system, including the factors of customer, supply, the process, the channels and the resources. The results show that the elements of business model on enterprise internal composition and structure can provide more detail and more in-depth analysis than the industrial classification. Therefore, this paper proposes the following hypothesis:

H16: Internal value has a positive effect on the successful operation of O2O business model.

## H17: Custom value has a positive effect on the successful operation of O2O business model.

In summary, the relationship that exists between the variables as shown in **Figure 1**, among them, the internal value and customer value in the former play an intermediary role between the independent variables and the successful operation of the O2O business model.



Figure 1: The influencing factor model of the successful operation of O2O business model

#### **Table 1:** Summary of $\alpha$ of variables

| Variables             | Items  |       |  |  |
|-----------------------|--|-------|--|--|
| The total scale       |  | 0.917 |  |  |
| Intervening variables | _  |       |  |  |
| Independent Variables | _  |       |  |  |
| 1.Online user scale   | Enterprises have a considerable number of online users.            |       |  |  |
| (US)                  | Enterprises can attract large-scale users to stay on the Platform. | 0.808 |  |  |

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|                                | Enterprises can attract new users to access the platform through the impact of technological innovation or            |  |  |  |
|--------------------------------|---|--|--|--|
|                                | marketing.<br>The services provided by the enterprises are too mass-market that they can not meet the consumers' need |  |  |  |
|                                | for uniqueness.   |  |  |  |
|                                | The offline teams have the ability of field marketing.  |  |  |  |
| 2.Offline teams                | The offline teams have the ability of field service.  | 0.811                                    |  |  |
| (OT)                           | The offline teams have a weak negotiation ability with the new shops.   | 0.011                                    |  |  |
|                                | The offline teams have the ability of collecting feedback information of customer service in time.                    |  |  |  |
|                                | The form of on-line payment gradually tend to Third-party payment tools, allowing users' Cash delivery                |  |  |  |
| 2 Tashnalagiaal shanga         | process more easy and safe.   |  |  |  |
| 3.Technological change<br>(TC) | O2O gradually entered the era of mobile Internet, and create more consumption.  | 0.814                                    |  |  |
| (10)                           | The integration of mobile map software's location-based services, making it it easier to find the shop.               |  |  |  |
|                                | The integration of the QR codes to make the confirm of orders more convenient.  |  |  |  |
|                                | The enterprise can maintain a long-term stable cooperative foundation with the offline shops.                         |  |  |  |
| 4.Shops resources              | The enterprise maintain regular contact with the offline shops.   | 0.922                                    |  |  |
| (SR)                           | The introduction of shopsare old and did not updated in tim.  | 0.823                                    |  |  |
|                                | The enterprise do the credit verification to safeguard the interests of consumers.                                    |  |  |  |
|                                | The process of enterprise organization is standard.   |  |  |  |
| 5.Organization                 | The enterprise's internal processes is specialized.   |  |  |  |
| resources                      | The enterprise has strong technical basis to support existing business.   | 0.869                                    |  |  |
| (OR)                           | The enterprise hassufficient funds.   |  |  |  |
|                                | The enterprise's workforce is stable.   |  |  |  |
|                                | The enterprises established extensive cooperative relations with shops or some brands.                                |  |  |  |
| 6.Internal value               | The enterprise response to customer needs rapidly.  | 0.001                                    |  |  |
| (IV)                           | The enterprise has its own unique character and the enterprise has core competitive ability.                          | 0.881                                    |  |  |
|                                | The enterprises has a certain monopolistic shops resources and corporate reputation.                                  |  |  |  |
|                                | The customers can find expected service through easy and convenient click or operation.                               |  |  |  |
|                                | The prices for the customers are too high.  |  |  |  |
| 7.Custom value                 | Customers can obtain the evaluation and sharing of services on the O2O operation platform.                            | 0.850                                    |  |  |
| (CV)                           | The customershave a high satisfaction and loyaltyfor the services provided by the O2O operation                       |  |  |  |
|                                | platform.   |  |  |  |
| 0.771 0.1                      | With a lower increase of the sale the lasttwo years compared to others in the industry                                |  |  |  |
| 8.The successful               | With an increased growth of market share the last two years rapidly.  |  |  |  |
| operation of O2O               | With introducing new products or services constantly the last two years.  | 0.843                                    |  |  |
| business model                 | With an increased ROI compared to others in the industry  | d ROI compared to others in the industry |  |  |
| (SO)                           | With a higher rate of profit compared to others in the industry   |  |  |  |

## 4. Results

## 4.1 Reliability and validity analysis

The questionnaires are issued to the MBA students of Xidian University and undergraduate students of Xidian University. A total of 200 questionnaires were sent out, of which 164 valid questionnaires, 36 copies of invalid questionnaires. Aspects of measurement scales, because there is no O2O business model of the empirical research, only part of the variables can use existing scales. As for the variables such as technological change, organization resources, internal resource, custom resource and the successful operation of the O2O business model, we use a way of combining the existing scales and the features of the O2O business model. And the other variables' scales are to take the way of literature investigation, combined with the characteristics of self-made.

| Kaiser-Meyer-G   | .860                       |          |  |  |  |
|------------------|----------------------------|----------|--|--|--|
| Bartlett test of | The approximate chi-square | 1418.097 |  |  |  |
| sphericity       | sphericity df              |          |  |  |  |
|                  | .000                       |          |  |  |  |

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|      |       | Table 3: Factor loading coefficient (rotated)         Elements |       |       |       |       |       |       |
|------|-------|--|-------|-------|-------|-------|-------|-------|
|      | 1     | 2  | 3     | 4     | 5     | 6     | 7     | 8     |
| US 1 | . 233 | 062  | . 027 | . 132 | . 806 | 115   | . 098 | . 097 |
| US 2 | 099   | . 180  | . 130 | . 042 | . 780 | . 173 | 069   | 006   |
| US 3 | . 309 | 061  | 036   | . 033 | . 730 | 047   | .044  | .015  |
| US 4 | . 055 | . 183  | . 150 | .126  | . 731 | . 106 | . 182 | .192  |
| OT 1 | . 107 | .043   | .085  | . 089 | 039   | . 780 | . 107 | .081  |
| OT 2 | . 298 | .070   | .134  | . 195 | 045   | . 734 | . 152 | .057  |
| OT 3 | 008   | .034   | .017  | . 025 | . 150 | . 760 | .034  | . 230 |
| OT 4 | . 150 | .001   | . 050 | . 292 | .040  | . 715 | . 098 | . 088 |
| TC 1 | .094  | 017  | . 332 | . 085 | 065   | .060  | . 733 | .175  |
| TC 2 | . 056 | .021   | .068  | .172  | . 252 | . 098 | . 765 | . 058 |
| TC 3 | .054  | . 037  | . 228 | .051  | . 293 | .073  | . 727 | .150  |
| TC 4 | . 150 | .118   | .020  | . 177 | 181   | . 172 | . 773 | .027  |
| SR 1 | . 212 | .023   | .042  | . 067 | .078  | . 148 | . 123 | . 734 |
| SR 2 | . 183 | . 099  | . 346 | 015   | 028   | . 260 | 116   | . 725 |
| SR 3 | .072  | .082   | .056  | . 261 | . 163 | . 120 | . 188 | . 740 |
| SR 4 | . 337 | .012   | . 186 | .071  | .068  | .039  | . 187 | . 722 |
| OR 1 | . 714 | . 117  | .060  | .184  | . 158 | .108  | . 132 | . 312 |
| OR 2 | . 722 | . 028  | . 200 | .162  | . 218 | . 242 | . 137 | .108  |
| OR 3 | . 741 | . 245  | .070  | 007   | .081  | .062  | . 037 | .154  |
| OR 4 | . 730 | .041   | . 212 | .071  | .086  | .072  | 001   | . 224 |
| OR 5 | . 722 | . 264  | . 188 | . 073 | .030  | . 153 | .115  | .041  |
| CV 1 | .217  | 071  | .114  | . 762 | . 228 | . 225 | .120  | .017  |
| CV 2 | .029  | .118   | .113  | . 790 | . 020 | .077  | .161  | . 234 |
| CV 3 | . 038 | . 126  | . 039 | . 753 | . 093 | . 201 | . 259 | .113  |
| CV 4 | . 126 | . 240  | .176  | . 772 | . 038 | . 103 | 022   | . 009 |
| IV 1 | .065  | . 123  | . 808 | . 090 | . 144 | . 162 | . 187 | .100  |
| IV 2 | .084  | . 158  | . 785 | . 211 | .110  | . 112 | . 155 | .113  |
| IV 3 | . 243 | . 150  | . 773 | . 113 | .000  | . 030 | . 096 | . 162 |
| IV 5 | . 240 | . 093  | . 810 | . 038 | .036  | 004   | . 127 | . 097 |
| SO 1 | 019   | . 702  | 005   | . 228 | . 184 | . 038 | .111  | 028   |
| SO 2 | . 120 | . 796  | . 181 | .074  | . 027 | 077   | 005   | . 247 |
| SO 3 | .045  | . 726  | . 207 | 054   | .064  | 004   | .017  | 043   |
| SO 4 | . 264 | . 728  | . 157 | .044  | 097   | . 258 | .062  | .078  |
| SO 5 | . 248 | . 808  | 011   | . 152 | .011  | .011  | 013   | . 009 |

#### Table 3: Factor loading coefficient (rotated)

Extraction Method: Principal Component

Rotation: the Kaiser standardized method of orthogonal rotation.

Reliability refers to the credibility of the demonstration method and the data, it also refers to the possibility whether the unified measurement tools can measure the unified object with consistent results (data or results) in the measurement. The  $\alpha$  was between 0~1. There is a very low probability of 0 or 1. The greater the  $\alpha$ , indicating that there is a higher degree of reliability of the scale. Generally, the  $\alpha$  of the total scale had better be in 0.8 above, and when  $\alpha$  is between 0.7-0.8, it's acceptable. The  $\alpha$  of the subcale had

better be in 0.7 above, and when  $\alpha$  is between 0.6-0.7, it's acceptable. If  $\alpha$  is below 0.6, re-designed questionnaire should be considered.

We doing the tests of the reliability of the total scale, the intervening variables, the independent variables and each variables, and the summary is shown in Table 1. It can be seen in the table that the  $\alpha$  is above 0.8, it proves the scale we use is reliable and can be use to study this question.

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In order to determine whether the original data is suitable to doing factor analysis, this part firstly KMO and Bartlett test need to be done. We use Varimax rotation to exclude the high correlation between different factors.

The indicators can be used to be the measurement items should satisfy the following conditions.

- 1) The factor loading of items of a certain factor is greater than 0.7.
- 2) The content of all the items measuring a particular factor should be consistent with other items on the expression.
- 3) Items will not appear on the issue of cross-load of different factors.

The KMO and Bartlett's test of the sample as shown in **Table 2**.In this sample, The KMO value is 0.860 and the approximate Chi-square for Bartlett sphericity test is 1418.097. Degrees of freedom is 561,and the significance level is less than 0.000.It shows that the questionnaire is very suitable for factor analysis.

In accordance with the conditions, the final result of the factor loading coefficient of the questionnaire on the successful operation of O2O is shown in **Table 3**. The number in the frame is the greatest factor loading for each of the items.

Each of the items included in the corresponding factor, and the factor loading of each items were more than 0.7, and there is not the phenomenon of cross-loading. Therefore, the questionnaire has good construct validity.

## 4.2 Correlation Analysis

Based on the study of the design of the questionnaire, further analysis of the correlation analysis between each variables and the successful operation of O2O is needed. Correlation analysis is a statistical method studying the degree of how close between the variables. The correlation coefficient is the statistics to describe the magnitude and direction of the linear relationship. Normally, we use the Pearson coefficient of the system default, when it's positive, there is a positive correlation, and when it's negative, there is a negative correlation. The relevance is corresponding to the positive correlation. In this paper, the IBM SPSS 22 Statisticis is used and the method of Pearson correlation analysis selected, the specific correlation analysis include:

- 1) The correlation analysis between internal value and every independent variables.
- 2) The correlation analysis between customer value and every independent variables.
- 3) With the analysis of the correlation between the antecedents of customer value
- 4) The correlation analysis between the successful operation of O2O and the mediating variables
- 5) The correlation analysis between the successful operation of O2O and every independent variables.

The correlation between the variables as shown in **Figure 2**.

The successful operation of O2O business model does not have correlation with theuser scale  $\$  offline teams and technology change, so the regression analysis could not be done between each of them. And the hypotheses of H3, H6 and H9 are invalid.

### 4.3 Regression analysis

Through the establishment of regression model between the independent variable and the dependent variable, the regression analysis study on the causal relationship between the variables, and test whether the role of the independent variables is according with the pre-conception.

By using the method of multivariate linear regression analysis, regression were carried out respectively on the antecedents and the customer value, The antecedents and the internal value, And on the successful operation of the O2O business model and the intermediary variable.



Figure 2: The correlations between variables

- \*\* represent the parameter estimation is significant at the 0.01 level,
- \* represent the parameter estimation is significant at the 0.05 level.

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| No. | Hypotheses  | Sig                        | Test results |
|-----|---|----------------------------|--------------|
| H1  | Online user scale has a positive effect on internal value.                                      | .030                       | Accepted     |
| H2  | Online user scale has a positive effect on custom value.  | .012                       | Accepted     |
| Н3  | Online user scale has a positive effect on the successful operation of O2O business model.      | No significant correlation | Not accepted |
| H4  | Offline teams has a positive effect on internal value.  | .014                       | Accepted     |
| H5  | Offline teams has a positive effect on custom value.  | .000                       | Accepted     |
| H6  | 6 Offline teams has a positive effect on the successful operation of O2O business model.        |                            | Not accepted |
| H7  | Technological change has a positive effect on internal value.                                   | .000                       | Accepted     |
| H8  | Technological change has a positive effect on custom value.                                     | .000                       | Accepted     |
| Н9  | Technological change has a positive effect on the successful operation of O2O business model.   | No significant correlation | Not accepted |
| H10 | Shops resources has a positive effect on internal value.  | .000                       | Accepted     |
| H11 | Shops resources has a positive effect on custom value.  | .002                       | Accepted     |
| H12 | Shops resources has a positive effect on the successful operation of O2O business model.        | .042                       | Accepted     |
| H13 | Organization resources has a positive effect on internal value.                                 | .000                       | Accepted     |
| H14 | Organization resources has a positive effect on custom value.                                   | .001                       | Accepted     |
| H15 | Organization resources has a positive effect on the successful operation of O2O business model. | .000                       | Accepted     |
| H16 | Internal value has a positive effect on the successful operation of O2O business model.         | .002                       | Accepted     |
| H17 | Custom value has a positive effect on the successful operation of O2O business model.           | .007                       | Accepted     |

Through the linear regression analysis, if it is assumed that the significant P values were less than 0.05, that is, the hypothesis can be accepted and have gone through the hypothesis. The finally hypothesis testing results are shown in Table 4.

#### 4.4 Intermediary effect analysis

According to the interpretation of baron & Kenny (1986), an intermediary role should be to meet the following four conditions:

- 1) The independent variable can significantly predict the intermediary variables to be tested;
- 2) The intermediary variable can significantly predict the dependent variable to be tested:
- 3) The independent variable can significantly predict the dependent variable;
- 4) When the intermediary variable to be tested entered the regression equation, the regression coefficient between the independent variable and the dependent variable is significantly reduced.

If the regression coefficient between the independent variable and dependent variable has dropped to zero, it is fully mediated.

If the regression coefficient between the independent variable and dependent variable has dropped but no to zero, it is part of the intermediary.

Table 5 shows that there is an intermediary of internal value and customer value between the and shops resources, organization resources and the successful operation of the O2O business model respectively. And the intermediary effect could be analyzed.

#### **Table 5:** A summary of the correlation between variables

| Table 5. A summary of the correlation between variables |                            |                    |  |  |  |
|---|----------------------------|--------------------|--|--|--|
| Variables   | Correlation with the       | Significant        |  |  |  |
|   | successful operation of    | coefficient        |  |  |  |
|   | O2O business model         |                    |  |  |  |
| User Scale  | No significant correlation | Correlation: 0.180 |  |  |  |
| Offline Teams   | No significant correlation | Correlation: 0.180 |  |  |  |
| Technological   | No significant correlation | Correlation: 0.167 |  |  |  |
| Change  |                            |                    |  |  |  |
| Shops Resources   | Significant correlation    | p=0.000            |  |  |  |
| Organization  | Significant correlation    | p=0.000            |  |  |  |
| Resources   |                            |                    |  |  |  |
| Internal Value  | Significant correlation    | p=0.002            |  |  |  |
| Custom Value  | Significant correlation    | p=0.007            |  |  |  |

When the internal value and customer value enter the regression model between the and shops resources, organization resources and the successful operation of the O2O business model respectively, thenon-standardized coefficient B was obviously decreased (as shown in Table 6), indicating that the internal value and the customer value are both have a partial mediating effect between the independent and dependent variables.

| Table 6: | Summary | of the | intermed | liary e | effect test |
|----------|---------|--------|----------|---------|-------------|
|          |         |        |          |         |             |

| Items                                       | Non-standardized |
|---|------------------|
|   | coefficient B    |
| Shops resources                             | 0.243            |
| Shops resources added internal value        | 0.233            |
| Shops resources added custom value          | 0.241            |
| Organization resources                      | 0.358            |
| Organization resources added internal value | 0.167            |
| Organization resources added custom value   | 0.296            |

## 5. Conclusions

In addition, the internal value have some intermediary role to the business resources and O2O successful operation, organizational resources and O2O successful operation; customer value also have some intermediary role to business resources and O2O successful operation, organizational resources and O2O successful operation.

The reasons for the various assumptions that are not accepted are explained below.

H3: The online user scale has no significant positive impact on the successful operation of O2O.

The user scale represents thehow large the influence the enterprise have on market only in some extent, however, it is how many user can be converted into consumption rather than the number of users that have decisive influence on the successful operation of O2O.

H6: The offline team did not have a significant positive impact on the success of O2O.

The effect of the offline team as a link exists, and its effect is similar to the intermediary role, not directly on the successful operation of O2O; offline field team is affected by the local population factors, economic factors, so that it can not directly affect the successful operation of O2O.

H9: The innovation of technology has no signification impact on the successful operation of O2O.

If you can not keep up with technological changes, the impact of technological change on O2O may be negative. The successful operation of O2O depends on the perceived ability of the firm for technological change and the degree of matching between business capability and technological change. Therefore, technological change has no direct positive impact on the successful operation of O2O

Enterprises should be able to attract traffic by improving the services or services provided by the products, optimizing the site interface, attracting the first-class business to the O2O platform, and paying attention to how much of the traffic to the site can actually be converted into consumption.

For different industries to train a dedicated line of the offline team, while collecting consumer feedback, and by constantly collecting feedback, continuous improvement to enhance the quality of their products. Due to the localization characteristics of O2O, consumers need to consume in real places, so it is still a big problem for consumers to look for places. Fortunately, many companies have insert LBS technology in their apps, which is actually convenient for finding shop locations. At the same time, the convenience of mobile payment has penetrated into all aspects of daily life, looking forward to the future development of O2O combined with social life is becoming its new direction. O2O platform can attract business through the following ways: through the O2O promotion, enterprises can get accurate feedback companied with the general goal-free advertising, which have a strong attraction for a strong business owners. For O2O, because it give order first and then into the store, it is easy to judge whether the effect of online promotion is good or bad. From the business, adding O2O is equivalent to targeted advertising [10]. Because of the limits of resources of any organization, in the face of resource investment, it should choose the targets which can fully meet the requirements of clients.

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