

## E-Commerce as New Concepts in 4.0 Era

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**Abstract.** This research aims to develop new concepts in IT-based business as an idea of an online business venture that has been widespread in the world. This research used mix methods. Qualitative explanation based on a literature study. This research can be used as a reference for developing new concepts in IT-based businesses to increase customer interest and convenience. This new concept can be used for online business entrepreneurs in creating and developing a newer IT-based online business or system. This research was based on journal references and subjective assessments as users of online business applications, and especially online shop which shows that online business shop competition continues to compete and develop in providing new features for the convenience of its users. The results of this study are created new ideas that are unique, creative, effective, efficient, providing benefits and ease of use.

### 1. Introduction

Today many developments in information technology e-commerce that continues to make updates on the management of online-based business shop [1]. This online trading system develops in tandem with developments in information technology, ranging from web-based to Android-based. The first time information technology innovation can be a reference material for companies that drive a driving industry. The enormity of the creative economy is indeed recommended by various parties and is widely written in various newspapers such as news in the scientific journal of creative and innovative economics based on ICT according to online transportation X and online transportation Y Henri Septanto [2]. Innovation is based on the level at which individuals accept new ideas and make innovative decisions related to other individuals, and determine what is meant by the first adoption supported by [3]. Based on the information above, innovation is created by the e-commerce business. This new idea created an old system that was still based on manual being based online built online-based barter which had features in it such as exchange of conditions, added exchange, certain lending items with online-based security [4].

This study aims to develop new concepts in Information Technology-based businesses as buy-based online business ideas that have been created in the world. This research used mix methods. Qualitative explanation based on a literature study. This research can be used as reference material in developing new concepts in Information Technology-based businesses consisting of online businesses without buying and selling activities as in general to increase interest and facilitate customers [5-6]. This new concept can be used for online business entrepreneurs in creating and developing a new information technology-based system or online business. This research is based on journal references,

and evaluation of observations of users of online business applications offered online shopping which discusses online business shop competition that continues to compete and develop in providing new features for users. So from the results of this study, new ideas are created that are unique, creative, effective, efficient that provide the strength to compete, provide benefits and ease of use.

## 2. Method

This research used mix methods. Qualitative explanation based on a literature study. The development of these technologies creates new ideas and inventions to defeat its competitors and dominate the global market by attracting customers [7]. The qualitative analysis presented factor analysis. The factor loading which shows the most significant ability of the factor to explain the new form of the factor. From the Matrix Drawings are as follows: customer recommendations (0535), bulletin (0536), linking strategies (0522), community (0543), free offers (0512), sweepstakes (0531), list of prospective buyers (0528), chatrooms (0538), reference lists (0527), text products (0538), affiliate programs (0541), and search engines (0529). Based on the MSA results, it found 12 factors that must be processed further because the value is higher than 0.5. See results communalities: customer recommendations (0751), bulletins (0692), linking strategies (0749), community (0726), free offers (0721), sweepstakes (0674), lists of potential buyers (0634), chatrooms (0619), lists references (0662), product texts (0689), affiliate programs (0627), and search engines (0638). This study used Principal Component Analysis with total variance, producing the smallest specifics and variance errors. Determining new factors can be done by checking eigenvalues.

## 3. Results and Discussion

There are 12 factors processed in factor analysis. With each factor variance = 1. Total variance is  $12 \times 1 = 12$ . 12 factors are summarized into components or are  $12 \times 1 = 12$ . 12 factors are summarized into components or are  $12 \times 1 = 12$ . 12 factors summarized into components or factors formed, the variants that can be explained by each component or formed are Component 1:  $1,634 / 12 \times 100\% = 13,616\%$ . From these calculations, the total factor can explain 13,616% of the 12 factors.

Customer recommendation factors, newsletters, link strategies, community, free offers, sweepstakes, prospective buyer lists, discussion rooms, reference lists, product descriptions, affiliate programs, and search engines. After the eigenvalue process is carried out, the next process is determining the loading factor. Recommendation factors are categorized into the factors that influence consumers the most in making purchases online. (See Figure 1).

	<b>Components 1</b>
Customer Recommendation	.589
Newsletter	.572
Link Strategy	.561
Community	.557
Free Offer	.549
Sweepstakes	.535
List of Prospective Buyers	.521
Chatroom	.516
Reference List	.511
Product Description	.508
Affiliate Programs	.506
Search Engine	.501

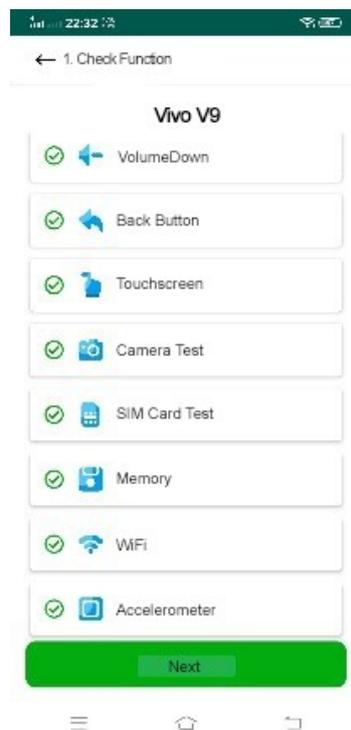
**Figure 1.** Factor Chart

The twelve factors, including the initial factor analysis, finally, one factor is formed in the factor naming process (factor labeling). In this research, they are consisting of twelve dimensions. Customer

recommendations, newsletters, link strategies, community, free offers, sweepstakes, lists of potential buyers, discussion rooms, reference lists, product descriptions, affiliate programs, and search engines. These factors become the priority choice of customers to conduct an online store so that each online store company can set strategic advantages based on these factors [8]. The results of this study led to a discovery, such as a feature in a unique application called online barter to facilitate customers. This result is elaborated in the application of the development of an online shop creating an online barter system in a mobile version [9]. In Indonesia, one of the online shop sites has established an online barter feature, Tokopedia [10]. The online barter feature has a process where the exchanger will conduct a checking session to the exchange. The results of the check affect the value of an item.

### 3.1 Barter Condition Checking Process

In this menu, checking some functions on the smartphone that we have such as testing the voice button, checking the touch screen manually and checking on the sim card, memory capacity, wifi, and accelerometer features are integrated. (See Figure 2).



**Figure 2.** Barter Condition Checking Process

### 3.2 Check Volume Button

Checking the voice button in the corner of the smartphone as a stage for checking outside functions. (See Figure 3).



**Figure 3.** Check Volume Button

### 3.3 Check Back Button

Recheck the function of the button to find out the state of the button function. The back button on most smartphones uses a touchscreen, whereas, in certain smartphones, it still uses an external button. (See Figure 4).



**Figure 4.** Check Back Button

### 3.4 Touchscreen Test

The check the condition of the smartphone's touchscreen to determine the condition from every corner, the process is swiped on the screen to remove the colour of the green box that will turn white when swiped. (See Figure 5).



Figure 5. Touchscreen Test

3.5 Camera Test

At this stage, checking the function and the clarity of the images captured by the smartphone camera, checking starts from the front camera and rear camera. (Figure 6).

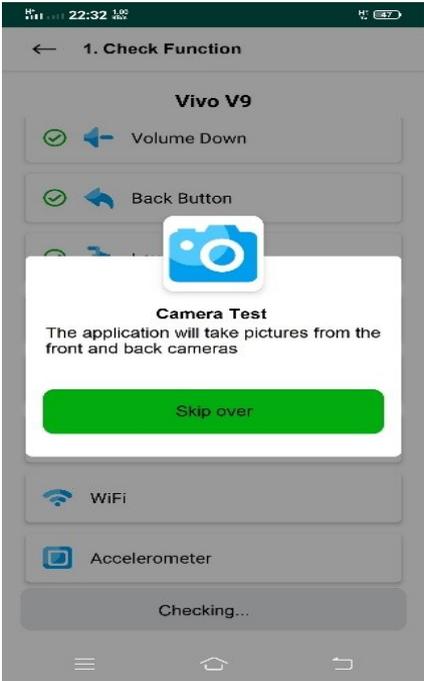


Figure 6. Camera Test

### 3.6 Barter Transaction Process Flow

After checking the smartphone on the exchanger it will go through the process of bartering conditions to the selected shop to conduct the exchange of conditions, the barter process starts from the notification that the store has accepted the condition of the exchanger and is approved, the next step the courier will come to the shop to pick up the smartphone which will be exchanged with the exchanger, the courier comes to the exchanger to recheck the condition of the smartphone. If when checked according to the process in the previous picture, the courier will give the exchange smartphone from the store to the exchange along with money, if the exchange smartphone is of a lower value than the smartphone belonging to the store [11]. If the results of checking are not in accordance with the previous process, then the barter transaction will be rejected. The barter process has two conditions, the first in the condition of the same sale value or the second is a different sale value so that the exchanger or shop provides additional money to increase the exchange value of goods condition-owned. (Figure 7).



**Figure 7.** Barter Transaction Process Flow

## 4. Conclusion

The technological development of both hardware and software continues to grow, with unique and different features creating new ideas for competitors in conducting good business competition. This idea was created as a new feature in online-based businesses. The barter feature had the benefit of being a user transaction quickly to own certain items. Improving the effectiveness and process of doing business creates an ideal for users. The increase and addition of business features enhance the brand on the site. This development makes it easy for online businesses to attract customers and make it easier for the public to use it.

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