Perceived benefits, risks and trust on Online Shopping Festival

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Abstract. This paper investigated to what extent perceived benefits, risks and trust has influenced Chinese customers' attitude and purchasing intention towards online shopping festival on Alibaba.com. It seeks to investigate critical factors drive the huge business success of the company in 'Double 11 online shopping festival' from consumer point of view.

Keywords: perceived benefits, risks, B2C, Online Shopping Festival, Alibaba.com, Chinese online consumer, purchase intention

1 INTRODUCTION

Alibaba.com is the largest operator of online and mobile marketplaces in wholesale and retail trade in China. The company reached revenues of CNY 52,504 million during the financial year ended March 2014, an increase of 52.1% over FY2013 (Market Line, 2015). This increase might be driven by the continued growth of the retail business of Alibaba.com in China. The company also runs a various range of marketplaces, which attract sellers and buyers with diverse interests. Meanwhile, Taobao.com marketplace is the largest online shopping website in China, meanwhile, Tmall.com is stated as China's most powerful third-party platform for retailors and brands, in terms of gross merchandise value (GMV). In addition, in FY2014, the marketplace of Alibaba.com had GMV of $296 billion with 14.5 billion annual orders (Market Line, 2015).

China's Singles Day is originally created in the 1990s by college young adults who believe the date 11/11 looked as four solitary stick figures. As other holidays, this strange day became noteworthy and strong, somehow, became an excuse for the Chinese to go online shopping (International business times, 2013). Consequently, Alibaba.com launched the OSF in 2009 with 27 participating brands to light up an inanimate shopping period between National Day and Chinese lunar New Year in January or February; while in 2013, over 30,000 players including western companies were involved in the 'Double 11 OSF'. More than 20,000 merchants on Tmall.com and Taobao.com are promising 50% discounts on 'Double 11 OSF' (Lynch, 2014).

In 2014, the country's largest e-commerce giant Alibaba.com smashes an online sales record of $9.3 billion on 'Double 11 Single Day' in 24 hours (Lynch, 2014).

Shopaholic singles have stimulated the E-business giant Alibaba.com set this new record for highest online sales revenue generated in one day. In the meantime, one of Alibaba's online platforms Tmall.com set its own record for the most mobile phones sold in 24 hours, with selling a miraculous 1,894,867 handsets (Lynch, 2014). In this respect, Alibaba.com 'Double 11 OSF' has become one of the biggest OSFs in the world.

There is no literature directly investigated the potential customer attitudes and intentions on Chinese OSF except the research did by Swilley and Goldsmith (2012) who investigated the customers intentions on Black Friday and Cyber Monday. Alibaba.com 'Double 11 OSF' provides 50% off discount to lure online customers has been popular in China for around 6 years, however, research in this field is extremely limited. There are some previous studies investigated the factors influencing consumers' intentions to participate in online shopping (Hsu et al., 2013); even in the online group buying (Liu et al., 2012). Consumers can purchase online in various ways, thus some people viewed online shopping as an online marketplace, while some others perceived it to be something else such as online auctions, online retailing, online group buying and even OSF, leading analysis of incorrect measurements. Thus, in order to obtain an accurate representation of results, it is necessary to focus on a certain type of online shopping.

This research is the pilot to explore from the consumer and online user perspective how perceived benefits, risks and trust influence Chinese consumers' attitude and intention on Alibaba.com 'Double 11 OSF'. The purpose of this paper is to explore the critical factors influencing behavioral decisions in OSF by analyzing the perceived Chinese customers' benefits, risks and trust. In this regard, this study will help to fill the research gaps through both quantitative and qualitative methods, which means both semi-structured interview and questionnaire survey are conducted to explore the hypotheses proposed in the theoretical model. The data were analyzed by factor analysis and regression analysis through SPSS. Thus, through the statistical results, all the 4 hypotheses were supported. To be specific, the customer attitude positively leads to purchase intention on 'Double 11 OSF', meanwhile, intentions are influenced by perceived benefits, risks and trust. Interestingly, the product and price both showed risks and benefits that influence customer intention. Thus, the results provided concentrated evidence and analysis about OSF and online consumer preference in China. Further, the results of this paper enables the OSF initiator (i. e. Alibaba.com), even online retailers to gain a better comprehension of the online customer preference and barriers for OSF The online business managers should not only consider the product and price benefits during the transaction, but also the perceived risks on the opposite.

2 RESEARCH METHODOLOGY

Quantitative research and qualitative research are not mutually exclusive but interrelated and complementary reinforcing. Combining the two approaches enables researchers discover potential problems and study the same theme from different angles

(Smith, 1975). Therefore, if we want a comprehensive understanding of antecedents influencing OSF, both quantitative and qualitative research should be conducted.

The main method used is quantitative research enables researchers to evaluate their hypotheses by analyzing and measuring the casual associations between variables (Denzin and Lincoln, 2005). To be specific, the emphasis of this research method is on cause-and-effects of behavior. The mathematical procedure is the standard for testing the numeric empirical observation, the information generated from numbers can be demonstrated and qualified, and overall outcomes are presented in statistical terminologies (Denzin and Lincoln, 2005). Considering the objectives of this research and characteristics of quantitative research, this study conducted a quantitative survey questionnaire approach to collect data for testing the conceptual model and to find empirical support for research hypotheses.

In the meantime, qualitative research method is also employed to support the quantitative research. Denzin and Lincoln (2005), asserted that qualitative method investigates how and why of the decision making, not just where, when and what, meanwhile, it is an explosive research and a procedure of investigating new things widely used in different fields such as for social science and in marketing research (Smith, 1975). Furthermore, the qualitative research interview was used aims to describe the meanings of critical themes in the subject and the main task in interviewing is to seek and understand the potential information of what the interviewees said (Kvale, 1996). Thus, this method is used to seek customer in-depth understanding and perception, and to get the story behind participants' experiences in OSF.

3 DATA ANALYSIS AND FINDINGS

3.1 Descriptive Statistics

A total 203 valid questionnaires were received. The demographic characteristics of the respondents are presented as follows: The sample contains considerably more female respondents (n=115) than male respondents (n=88). Female customers compromise 57% of the age, while male customers compromise 43% of the age. Regarding the age, 87% of the sample are aged from 18-27, this sample is just the main target sample of this study. Mean-while, thinking of the popularity among various age group participating the OSF in China, this study also concluded a small number of sample aged from 28-37, which compromise 10% of the sample and even 6 respondents aged from 38 to 47. As for experience on OSF, 95% of the respondents have the shopping experience on OSF. This sample characteristic could better represent the customers' attitude and intention for OSF. The details are shown in Table 1.

3.2 Preliminary analysis

Data analysis found a good fit for the proposed model and gained support statistically for all the hypotheses. In this study, principal components factor analysis with varimax rotation was adopted to every variable in order to ex-am the fundamental components of the model. Factor analysis is applied to find a method to decrease a

group of original variables into a smaller spectrum of underlying variables with imperative information as a data reduction technique (Gorsuch, 1983). Factor analysis is essential lies in the following aspects, identifying the analysis's groups, achieve data reduction and variable selection and adopting the results generated from factor analysis to other multivariate approaches. Therefore, Table 2 shows the collected final results of the factor analysis including 8 items separately explained the internal reliability and validity of the gathered data.

Table 1. Descriptive data

	Frequency	Percent
Gender		
Male	88	43.3%
Female	115	56.7%
Total	203	100%
Age		
under 18	2	1%
18-27	176	86.7%
28-37	19	9.4%
38-47	6	3.0%
Total	203	100%
Experience on online shopping festival		
Yes	193	95.1%
No	10	4.9%
Total	203	100%

Reliability Test.

The Cronbach's alpha coefficient is used to calculate internal reliability of each variable and construct. According to Hair et al., (1998) higher reliability leads to the higher stability. Based on the various value categories of Cronbach's alpha, George and Mallery (2003) provided an accepted empirical rule to explain the internal consistency. The internal consistency is excellent when the value is between 0.9 and 1.0, is good when the value is between 0.8 and 0.9, when between 0.7 and 0.8, it is acceptable. The extent to which the item correlates with the total score shows the construct validity of the items (Hair et al., 1998). In this research, as presented in the Table 2, the Cronbach's alpha value of perceived benefit got 0.657; perceived risks got 0.813; while the trust during the purchase process got 0.770; finally, the purchase intention got 0.804. Regarding on the previous statement of Hair et al. (1998), all the variables in this study were considered to be reliable, thus, the clustering structure of the factors for each potential variable is in accordance with that proposed theoretical framework.

Validity Test.

After ensuring the reliability of the collected data, validity test is also concerned in this study as showed in Table 2. To evaluate the adequacy of the correlation construct,

Table 2. Factor analysis results

Variable	Mean	Std.	KMO	Bartlett's Test	Eigen-value	Factor loading	Variance Explained	Cronbach Alpha
Perceived benefits	3.2808	0.7541						
Price benefit	3.34	1.062	0.699	122.606	1.991	0.859	49.779%	0.657
Product benefit	3.41	1.023				0.694		
Recreation benefit	3.1823	0.9577				0.457		
Perceived risks	3.5616	0.7579						
Product risk	3.62	1.029	0.750	433.891	3.113	0.959	51.889%	0.813
Price risk	4.06	0.965				0.824		
Delivery risk	3.7020	0.9691				0.491		
Privacy risk	3.22	1.110				0.320		
Financial risk	3.06	1.093				0.293		
Trust	3.2771	0.8674						
Trust on initiator's web site	3.26	1.124	0.758	207.764	2.377	0.697	59.414	0.770
Trust on social networking system	3.37	1.172				0.496		
Trust on friends	3.2365	0.9625				0.430		
Purchase intention	3.5345	0.8865						
Purchase attitude	3.38	1.020	0.500	122.221	1.676	1.676	83.779	0.804
Willingness to return	3.68	0.917				0.324		

Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity were performed, meanwhile, eigenvalues and factor loadings were investigated in order to ensure the concept is well defined by the measures (Hair et al., 1998). Based on Kaiser and Rice (1974), the KMO value set in the 0.90s was 'extraordinary', in the 0.80s was perceived as 'meritorious' ,in the 0.70s is showed as 'middling', while below 0.50 is viewed as 'unacceptable'. As for KMO value in this

study, perceived trust listed in this survey is the most significant one with the highest score 0.758, meanwhile perceived benefit and perceived risk got 0.699 and 0.75 score separately. In addition, the variable 'purchase intention' is not as significant as other variables in this analysis with a low score 0.5. Considering the above analysis, the construct validity of this research is satisfactory. In the meantime, the critical test for significance of all relations in a correlation matrix known as Bartlett's test of sphericity also indicated significant results for validity in this study. The Bartlett's test of sphericity measures of sampling adequacy of the four selected variables are all higher than 120, among which perceived risks got the highest score of 433.891(p=0.000), other results also seems significant (X perceived benefits= 122.606, p=0.00, X trust= 207.764, p=0.00, X purchase intention=122.221, p=0.00). This result supporting the fitness of the factor analysis for the fata from the survey based on the criteria discussed previously.

Moreover, the eigenvalues are all qualified (>1.0) with no cross-construct loadings, and most of the factor loadings for items are over 0.5, however, with the statements from researchers, the factor loadings in 0.50 or higher than 0.50 are viewed as practically statistical and significant, while the items with eigenvalue lower than 1.0 or components with rotated factor loading less than 0.50 should be dropped if necessary (Hair et al., 1998). In this sense, from the results showed in factor loading and eigenvalue measure, financial risk and privacy risk with extremely low factor loading results (0.320 and 0.293) should consider to be removed from the perceived risks in this research. Considering the comparatively satisfied eigenvalue of the perceived risks, the privacy and financial risks perceived as security risks in the OSF was dropped from potential risk. Nevertheless, the security risks would be discussed in the discussion section. Apart from that, the scale still indicates suitable validity according to statements from previously researchers.

3.3 Correlation

After confirming the reliability and validity of the quantitative data, correlation analysis was conducted to measure the conformity accuracy of the 4 hypothetic relationships proposed in the previous sections: *relations between perceived benefits and purchase intention; correlations lie in perceived risks and purchase intention; relations between trust (on friends, social networking sites, website initiator) and purchase intention, between customer attitude and purchase intention*.

It is defined by Hair et al. (1998) that Correlation analysis is the evaluation of relationship between two mathematical variables or measured data, and conducted as one of the most pervasive reported and applied statistical approaches for analyzing research data involving, usually referred to as bivariate correlation. Researchers often use 'r' coefficient (referred as Pearson's product-moment r) to test whether the relationship between any two variables exists and to evaluate how strong or how significant of that relationship (Taylor, 1990). Correlations have two significant attributes including direction and strength. Positive correlations emerge while the variables move in one direction, which indicates a direct relationship between the metric two variables. When the correlation efficient at zero indicates that no association exists

between the two measured variables, while negative demonstrates inverse relationship among which an increase in the first variable leads to a decrease of the other corresponded variable (Taylor, 1990).

The correlation results were showed in Table 3 consisted of Pearson's product-moment correlation efficient and p value which indicated the significant level of the results. All the r values ranged from 0.229 and 0.676 were positive under the p-values of each outcome were smaller than 0.001. According to the theoretical principles discussed before, such results support the appropriateness of the hypothesized relationships in the proposed model. To be specific, the association between purchase attitude and purchase intention was extremely significant (r=0.676, p=0.000). As hypothesized in before, the perceived benefits are positively associated with the purchase attitude as well as purchase intention with 0.649 and 0.490 (p=0.000) r coefficient values separately. The perceived risks are also positively related to the purchase attitude and intention. (r=0.330 and 0.229). Meanwhile, the significant positive association between trust and purchase attitude and intention were confirmed. (r=0.552 and 0.406)

Table 3. Correlation Results

		Perceived benefits	Perceived risks	Trust	Purchase attitude
Perceived benefits	R Coefficient Sig. (2-tailed)		0.372 0.000	0.581 0.000	0.649 0.000
Perceived risks	R Coefficient Sig. (2-tailed)	0.372 0.000		0.453 0.000	0.330 0.000
Trust	R Coefficient Sig. (2-tailed)	0.581 0.000	0.453 0.000		0.552 0.000
Purchase intention	R Coefficient Sig. (2-tailed)	0.490	0.229 0.000	0.406 0.000	0.676 0.000

**. Correlation is significant at the 0.01 level (2-tailed).

3.4 Regression Analysis

After ensuring the associations in the hypothesized relationships in the model by correlation analysis, the cause-and-effect relationship was measured via the process which is known as regression analysis. To start with, simple linear regression is a widely used method to check out the hypotheses via testing the usefulness of one independent variable as a predictor of the corresponding dependent variable (Kirchner, 1996). This method aims to identify one variable's value from another variable's value to interpreting the linear dependence of one variable on the other. At the same time, this analysis approach can make corrections for the linear relationship between two factors (Kirchner, 1996).

According to Steel and Torrie (1960), the coefficient of determination, R-square, illustrated to what extent the data points statistically fit the proposed model and aims

to test the hypotheses and forecasting the potential outcomes. In this study, the four main relationships proposed in the conceptual model are measured separately through the R-square, in order to explain how significant the regression illustrated the variance. In addition, Brace et al. (2012) illustrated that except for R-square, adjusted R-square is recognized as the modification of R-square that adjust the number of participants and variables in this model.

With the theoretical knowledge, R-value, R-square and adjusted R square of four proposed relationships are showed in the Table 4 after running the SPSS. According to the interpretation of R-square referred above, it is evident that the coefficient of item was 0.388, which indicate nearly 38.8% of the variance in attitude towards OSF was interpreted by variance in perceived benefits. In a similar way, 27.4% of variance in attitude towards OSF was explained by variance in trust, and 45.6% of variance in purchase intention was accounted for by the variance in consumer attitude towards OSF. Nevertheless surprisingly, only 9.3% of variance in attitude towards OSF was interpreted by perceived risks.

Table 4. Coefficients of determination

Model	R	R square	Adjusted R Square
H1	0.623	0.388	0.385
H2	0.306	0.093	0.089
H3	0.523	0.274	0.270
H4	0.676	0.456	0.454

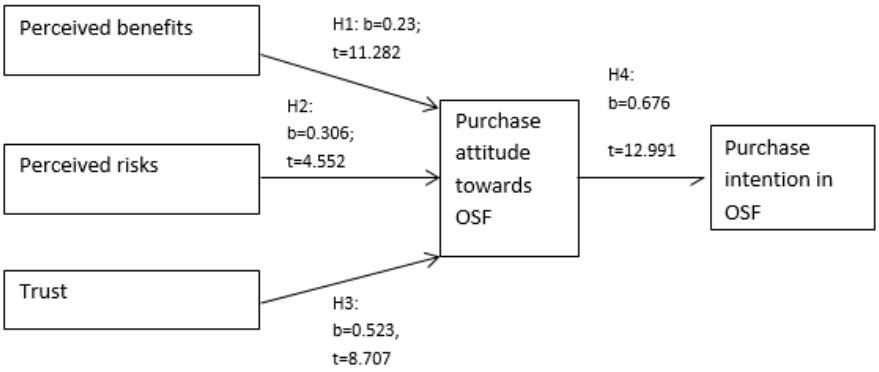
In the same time, the standardized coefficients and t-value were also conducted to measure the coefficients. Brace et al. (2012) have asserted that standardized coefficient, which also known as Beta coefficients with the purpose to investigate the strength of the influence of the independent variable on the dependent variable, which also suggest that how many standard deviations that a dependent variable changes, resulting in per standard deviation rise in the independent variable. Upon these implications, the Beta coefficients of the hypotheses reached positive values ranged from 0.306 to 0.676 as shown in Table 5.

The significant degree and the cause-and-effect relationship were explored in this research, by combining he beta coefficient and t-value that associated with how strength the relationships are. As the hypotheses indicated, the perceived benefits have a positive effect on the consumer purchase intention on OSF. (B=0.623, t=11.282) Furthermore, the trust on website, social networking platforms and even friends have a positive influence on online shopping intention in ‘Double 11’ (B=0.523, T=8.707). Interestingly, the path from perceived risks to purchasing intention was not as significant as perceived benefits and trust do. (B=0.306, t= 4.552). However, on the whole, the total four propositions were confirmed.

Table 5. Simple Linear Regression

Model		Coefficients			
Dependent	Independent	Beta	t	Sig.	Hypotheses
Purchase intention	Perceived benefits	0.623	11.282	0.000	H1: Yes
Purchase intention	Perceived risks	0.306	4.552	0.000	H2: Yes
Purchase intention	Trust	0.523	8.707	0.000	H3: Yes
Purchase intention	Overall attitude	0.676	12.991	0.000	H4: Yes

Fig. 1. Conceptual Model with hypotheses



4 DISCUSSION

This study is the first to explore the theoretically customer perceived benefits, risks and trust on holiday shopping, particular on the most profitable Chinese online shopping day 'Double 11 OSF'. Data analysis found an appropriate fit for the model proposed in the literature section and obtained support statistically for the 4 hypotheses. The results indicate that the perceived benefits of participating in the 'Double 11 OSF' including relatively low price, variety of commodities and enjoyment of hunting the products in one day. A significant number of people perceive the risk from bloated price during the 'Double 11 OSF'.

This study makes a quantity of theoretical contributions, which will be demonstrated as three demonstrations: Customer perceived benefits and purchase intention on OSF; customer perceived risks and purchase intention on OSF; customer perceived

trust and purchase intention on OSF; as well as customer attitude towards OSF and shopping intention on OSF.

Based on the TPB, this research shows a strong connection between customer attitude and purchase intention with the r square value at 0.456, which can be interpreted as nearly 45.6% of the variance in purchase intention was resulted from the purchase attitude. This result is consistent with Ajzen (1990)'s model. The regression analyzing result (b=0.676, t=12.991) also indicated customer attitude has positive effect on purchase intention in OSF.

5 CONCLUSIONS

At a first glance, online shopping processes advantages (i.e. convenience, time-saving, easy to search etc.) compared with offline shopping as a new purchase channel, especially in China. Nowadays, the 'Double 11' has become the country's annual OSF and everyone considers it as the best day to do online shopping thanks to thousands of giant discounted products promoted online. As a result, huge benefits were gained by both online venders and consumers. This study focused on OSF and verifies significant perceived benefits, perceived risks and trust on OSF.

To some extent, quantitative research is the foundation and premise of qualitative research (Smith, 1975), thus, both research methods were conducted in this study. The questionnaire approach provides data for analyzing and the semi-structured interview allows the researcher get a comprehensive understanding of customers' perception and in-depth feeling. This study contributed a model for the critical factors influencing online shopping festival meanwhile, the data collected intensive customer perceptions to the OSF through a questionnaire implemented and further analyzed through SPSS.

In the data analysis section, to ensure the reliability of the factors, the most critical and fundamental features of measure process reliability and validity (Hair et al., 1998) were conducted in this study. After that, factor analysis method was used to reduce a large number of variables into a significant array of underlying variables. After showing all the four associations exit by testing correlation coefficients, among which the relationships between shopping intention and perceived risks is most significant. In sequence, cause-and-effect relationships are measured. Finally, by using the single linear regression analysis, the hypotheses proposed in the model were confirmed statistically.

As shown in the results section, the most significant factor influence customer attitude and intention to participate in OSF are perceived price benefits and product benefits. The price risk and product risks are perceived to be the most serious hinders negatively influence customer attitude. Meanwhile, trust is configured as the one of the significant antecedents encouraging customer repeat purchase intentions. Thus, the OSF host Alibaba.com should try to increase the website quality, service quality and information system quality in order to maintain the well-built reputation and allure repeat purchase on OSF.

In a nutshell, the results of this study will bring a long-term influence to both practitioners and literature in understanding the roles of perceived benefits, perceived risks and trust in customer attitude and purchasing intention in OSF. The analyzing will serve as foundations of future research in the online shopping promotion area, in particular, OSF.

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