Customers' Trust and Purchase Intention towards Taobao's Alipay (China online marketplace)

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1. Project structure

Background information of Taobao and Alipay will first be introduced. A comprehensive literary review will be clarifying the fundamental grounds of this project and incorporating the previously published useful ideas to build up further knowledge development. Research Design and methodology will include explanation of the model and hypothesis, being back up by data analysis, with the intention to give managerial insights from customers’ point of view to existing online payment system operating companies which have businesses in China. Discussion and recommendations will also follow to be the final part of this paper.

2. Objectives

Online marketplace is becoming more popular in China each day. Names like Eachnet and Taobao are known to almost every Chinese consumer, especially the young. When people find online shopping mall being a very convenient platform for them to gain access to different kinds of products from different vendors by just a few clicks, the issue of mistrust over the online payment system also has made them hesitate as to whether or not they go on to the next step to complete their purchase. As for academic study about the growing situation online shopping in China, at
present it is still at rather a pioneer stage. Hence, the aim of this paper is to take the very first attempt to arouse interest in studies in such aspect, in order to provide all the present or potential online vendors with certain amount of insight as to encourage online shoppers' purchase intention.

Recently in 2011, case of deception of Alibaba has badly influenced net users' trust in online payment systems, making people more and more concerning about e-commerce security. In this project, an in-depth look at the trust issue will be taken to see if there are some positive relationships between trust and features of the third party which handles financial payments of the online transactions. For Alibaba's Taobao, which has been the biggest soothing star in China online shopping market, the famous third party is Alipay, by which a huge part of Chinese online transactions are settled every single day.

Linkages between four core features of the online payment system and the associated trust in the system will be looked at. Security control, convenience, reliability and responsiveness of the third-party payment system would be analyzed with hypothesis, pushing finally to the issue of customers' purchase intention at Taobao via the factor of trust.
On the level of providing managerial insight, the aim of this paper is to make any company that provides online marketplace services more customer-related during the decision making process. Self-regulated alertness is also expected to be raised among management groups.

3. Taobao and Alipay

In 2011 February, Taobao.com is firmly standing on the 4th rank on the list of most popular website in *China Websites Ranking*, measured by netizens visiting flow.

Taobao was created by Alibaba group in May 2003. Over the past six years, it has successfully gained 170 million registered members, with an annual transaction amount of RMB 208.3 billion to become the largest internet retailing platform in Asia. According to *iresearch.cn*, a well-known internet analyzing institution in Mainland China, online transaction settled by Taobao has taken up to 80% of the total market share.

Selling points of Taobao online shopping include convenience, very reasonable prices, amazingly wide variety of goods available, quick information of products
comparison on the forum or commenting system and the instant online communication messager service called Aliwangwang.

Taobao's competitors include the western giant eBay, which does not have big success in China market; the local based Paipai.com and Eachnet.com, to name but a few. As mentioned, none of them has become strong enough to be an immediate competitor to Taobao.

Taobao has the strong Alipay (支付寶) as payment system, which is China's leading third-party independent payment platform, found also by Alibaba group in 2004, with safety, convenience and efficiency being its selling points to build up trust with customers. In December 2010, the number of registered customers has reached 550 million, having daily transaction amount of RMB 250 million in 8.5 million settlements. Alipay has been handling business with over 460 thousands institutions and stores. Business partners of Alipay include the most famous banks like Industry and Commercial Bank of China, Construction Bank of China, Agriculture Bank of China, China Merchants Bank; other institutions like China post and international ones like VISA and MasterCard.
4. Literary review

4.1 E-service quality

E-service quality can be defined as overall customer evaluations and judgments regarding the excellence and quality of e-service delivery in the virtual marketplace (Santos, 2003). In the past decades, many studies were focused on how service quality influence customers' decision. However, due to the e-commerce became popular there are more studies about e-service quality. Such as assessing the quality of virtual community web sites (Kuo, 2003), satisfaction with e-commerce channels (Devaraj et al., 2002), and determinants of web site success (Liu and Arnett, 2000). Based on previous studies, many researches have developed WebQual (Loiacono et al., 2007) that rates Web sites on 12 dimensions: informational fit to task, interaction, trust, response time, design intuitiveness, visual appeal, innovativeness, flow, emotional appeal, integrated communication, business processes and substitutability. E-service quality becomes a key factor for customer to choose an online store. (Santos, 2003)

Parasuraman et al. (1988) developed a well known SERVQUAL scale to measure service quality. It included five dimensions: tangibles, reliability, responsiveness, assurance and empathy. Furthermore, SERVQUAL scale was used to measure e-service quality (Devaraj et al., 2002; Kim and Lee, 2002). Also, Yoo and Donthu (2001) developed a scale to measure web-based service quality SITEQUAL that included four dimensions: ease of use, aesthetic design, processing speed, security
and eTailQ which contained 14 items and four dimensions: web site design, reliability/ fulfillment, privacy/ security and customer service. There are a few studies focus on online payment systems service quality/ features in China so; it is worth to do more research on it. And convenience is a feature of payment system and the perceived benefit of using online payment system. Security control, convenience, reliability and responsiveness of third party payment system were constructed a new model. Then these dimensions linked with trust and finally to find out their association with purchase intention.

4.2 Features of the third party

Features of vendors payment system may affect the trust of consumers in online shopping (Odom, Kumar, and Saunders 2002), which in turn is positively related to customer purchase intention. Trust was an important factor which had a significant influence on consumers' intention to make online transactions. (McKnight et al. 2002; Al-alak & Alnawas 2010). In this paper, the largest part would be focusing on four main features of the online third party payment system: Security Control, Convenience, Reliability and Responsiveness, which also would directly apply to Taobao. Hypothesis will be revolving around the relationships of the independent and dependent variables above, in hope of contributing to people's understandings on trust issues of Taobao, the name which stands for as much as 80% of the online shopping
transactions in China.

4.3 Trust

Trust is defined as customers' willingness to accept vulnerability in an online transaction based on their positive expectations regarding future online store behaviours (Kimery and McCard, 2002). This clearly implies that trust encourages customers to make transaction online, which is the intention of shopping.

The fact that trust concept being linked with vulnerability was first viewed by Mayer et al. (1995), then followed by Gefen, 2002; Lee and Turban, 2001; Rousseau et al., 1998; Tan and Theon, 2001. ). Rousseau et al. (1998), in his idea, has said that "Trust is a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behaviour of another".

Trust plays an important role in online shopping. People have more trust to online shopping that may increase their purchase intention online. One of the concerns is the payment system of online shopping, the safety of payment system/ mechanism affect the customers purchase intention to online shopping. So, trust of the middleman- third party- may influence customers who shop online.

A review conducted by Kim and Tadisina (2007) of 21 research papers on trust published from 1999 to 2006 shows that the existing literatures have examined
third-party support, company reputation, service quality, website quality, familiarity, and disposition to trust as the main factors that affect customers' trust in e-commerce. Consumers' online trust can be viewed in four dimensions: trust propensity, general trust of e-commerce, trust in specific companies, and trusting intentions (McKnight et al., 2002).

In the relationship, an individual assumes a risk when he or she proffers trust to another person or an institution, i.e., the individual accepts the probability that a hazard may arise in the future as a consequence of proffering trust (Koehn, 2003) (Yuan Gao, Xiaoyu Wu, Jan/Feb 2010).

Trust in third party increases the intention to do online shopping. And people are willing to spend more time shopping and browsing products. With the presence of third party, people would consider that risk they originally have to bear is now shared and hence lowered. Trust in third party is then expected to have a positive relationship with frequency and tendency of people shopping online in Taobao.

4.4 Purchase Intention
Whitlark, Geurts and Swenson (1993) define purchase intention as a purchase probability associated with an intention category at the percentage of individuals that will actually buy product. Customers' buying process can be treat as a sequence of several stages (Kotler, 1997; Oliver, 1981; Ranganathan and Ganapathy, 2002).
Customers’ willingness to buy a product can be influenced by retail experience and there was seldom studied the impact of payment system (Xia Liu, Mengqiao He, Fang Gao and Peihong Xie 2008). It is also part of customers’ shopping experience.

5. Research model and Statement of Hypothesis

As few studies focused on how customer perceptions of trust in third party payment system influence their purchase intention, so empirical research is required to provide more details on how the features of third party payment system influence trust in individual payment party of the online marketplace and the trust influences customers' purchase intention at Taobao. The proposed research model was constructed from Lee, Gwo-Guang; Lin, Hsiu-Fen's e-service quality dimensions including reliability, responsiveness; convenience and security control were from Fang He, Peter P. Mykytyn's characteristics of online payment methods. And these features of online payment system were linked to the trust of online payment system and push forward to purchase intention at Taobao. (See Figure 1)

5.1 Model
With the research model above, the relationship among the proposed features of online payment system, trust and purchase intention is hypothesized and discussed below.

5.2 Hypotheses

1. Security Control

Establishment of security control of online payment brings great concern to consumers, making them hesitate in engaging in online payment. It reduces their purchase intention to do shopping online. According to (Fang He & Peter P Mykytyn 2007), there is a trend for customers' loss of confidence involving online banking leading to more costly channels. The security of online payment brought
many discussions in e-commerce. It affects customers' confidence to obtain merchandise online. To transfer payments and confirm transactions, customers rely heavily on security control level. From a report that 75% of Internet shoppers concerned their credit card security when doing online shopping (Chain Store Age, 1999). It shows negative impact on trust of payment system. The following hypothesis is proposed.

**H1. Security control of Alipay in Taobao positively influences trust.**

2. **Convenience**

Convenience yielded from online payment system lies in the fact that people can handle transaction in any time and place where internet connection is accessible. (Yu et al. 2002). From David M. Szymanski and Richard T. Hise (2000), online shopping brings great convenience that gives satisfaction to customers. It will increase their shopping intention through Internet. It is also the perceived benefit of using online payment system and there may have relationship with trust. Hence, the following hypothesis is proposed:

**H2. Convenience of Alipay in Taobao positively influences trust.**

3. **Reliability**

Reliability represents the ability of the website to fulfill orders correctly, deliver promptly, and keep personal information secure (Parasuraman et al., 1999; Janda et
al., 2002; Kim and Lee, 2002; Lee and Lin, 2005). The importance of reliability has always been strongly stressed by the information technology-oriented services. Especially now being applied to the case in China, the issue of reliability is looked at by the general public internet users (netizens) with careful attention. The following hypothesis is proposed:

**H3. Reliability of Alipay in Taobao positively influences trust.**

### 4. Responsiveness

Responsiveness describes how often an online store voluntarily provides services (e.g. customer inquires, information retrieval and navigation speed) that are important to its customers (Parasuraman et al., 1988; Yang, 2001; Kim and Lee, 2002).

The following hypothesis is proposed:

**H4. Responsiveness of Alipay in Taobao positively influences trust.**

To the above four features, customer Trust is related. The following hypothesis is proposed:

**H5. Customers' trust in Alipay of Taobao positively influences their purchase intention towards Taobao.**
6. Research Methodology/ Procedure

6.1 Research design

This study focuses on customers who made purchase at Taobao through Alipay and who understand the operation of Alipay. Alipay is the major payment system at Taobao, and most customers make payments through Alipay because it is creditable.

There are a few of previous studies have examined the relationship between Taobao's Alipay system and Taobao's purchase intention. First of all, in order to get more insights about the topic we mainly focus on literature review to learn about Taobao, online payment system and online shopping behaviour in China. After constructing the hypotheses and obtaining qualitative suggestions through literature review, a pre-test questionnaire was distributed to test the proposed hypotheses.

6.2 Questionnaire Design

The questionnaire aimed to find out, in quantitative terms, the amount of each feature of Alipay would affect the trust of third party payment system; and the associated purchase intention towards Taobao. Alongside with two parts about customers' consumption pattern and demographic information, there were a total of six sections in structural questions which were shown in the Appendix. All the items from six sections were measured using a 7-point Likert scale (ranging from 1
"strongly disagree" to 7 "strongly agree") – in order to get quantitative results.

Questions were adapted from previous relevant studies, which were regarded as more trustworthy and with stronger explaining power.

The questionnaire started by two screening questions (Q1-Q2) to ensure that those respondents were familiar with Alipay and current users of Alipay. And the following two questions were about customers’ consumption pattern (Q3-Q4), making sure they will have more solid memory of the system.

In order to not affect the respondents’ answers for dependant variables, the sets about purchase intention and trust are placed in the first two parts on the questionnaire.

Items for measuring purchase intention (Section 1) were revised from Putrevu, Sanjay; Lord, Kenneth R (1994). There were totally three questions used in each of the mentioned dependant variables part.

Trust is an important issue to do online shopping in all around the globe including China. It would affect customers to make transactions online (Kimery and McCard, 2002). Three items were used to measure trust of Alipay (Section 2) and received from Lee, Gwo-Guang; Lin, Hsiu-Fen (2005). They are used to identify respondents' trust to Alipay and whether there is a positive relationship with their purchase intention at Taobao.
Then the following parts were about independent variables:

Items for measuring security control (Section 3) and convenience (Section 4) were modified from Fang He, Peter P. Mykytyn (2007) and Xia Liu, Mengqiao He, Fang Gao and Peihong Xie (2008). The items for reliability (Section 5) and responsiveness (Section 6) have been adopted the construction from Lee, Gwo-Guang; Lin, Hsiu-Fen (2005).

There were totally twenty-four structural questions and the respondents are requested to select the response that best indicate their perceptions on each statement.

There were four items of demographic information were asked in last part. They included gender, age, education and monthly income.

6.3 Questionnaire Justification

With the aim to achieve content validity, our questionnaires have undergone the process of being extended and shortened, finally refined by undergoing times and times of pre-test before being published and distributed. The reason for a series of pre-testing is to reach high instrument clarity, questions wordings validity as much as possible to that the set of questions become simple, straight-to-the-point and easily understandable. 25 respondents – including females and males, university
students at Sun Yat-sen University in Guangzhou; and age group from 18 to 25 - who have once experienced online shopping at Taobao were invited to first complete and then make comments on the questionnaire and its wordings. Their valuable comments were then carefully considered to be a firm foundation for further amendments of the structure and details of the whole set of questions. This first round of pre-test data were not counted into our final data collection, since at that time the questions set were still to be improved.

6.4 Sampling method
An email survey was conducted at Sun Yat-sen University and Nan Jing University in China. The advantage of using email survey is that it is more efficient to contact with respondents than in-person interview and easier to measure target customers. The survey was sent by email and forward to other respondents. The sample consisted of 203 students in an undergraduate level. Target respondents were customers who had current shopping experience at Taobao through Alipay and were familiar with Alipay. Over a three weeks distribution, a total of 203 surveys were collected, 202 were usable questionnaires and other 1 were not usable.
### 7. Date Analysis

#### 7.1 Profile of Respondents

<table>
<thead>
<tr>
<th>Item</th>
<th>Basic data</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>54</td>
<td>26.73</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>148</td>
<td>73.27</td>
<td></td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Below 18</td>
<td>1</td>
<td>0.50</td>
<td></td>
</tr>
<tr>
<td>18 to 25</td>
<td>171</td>
<td>84.65</td>
<td></td>
</tr>
<tr>
<td>26 to 35</td>
<td>30</td>
<td>14.85</td>
<td></td>
</tr>
<tr>
<td>36 to 45</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Above 45</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secondary School or below</td>
<td>5</td>
<td>2.48</td>
<td></td>
</tr>
<tr>
<td>Associate Degree</td>
<td>29</td>
<td>14.36</td>
<td></td>
</tr>
<tr>
<td>Degree</td>
<td>166</td>
<td>82.18</td>
<td></td>
</tr>
<tr>
<td>Master or above</td>
<td>2</td>
<td>0.99</td>
<td></td>
</tr>
<tr>
<td><strong>Monthly Income</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Below $2000</td>
<td>143</td>
<td>70.79</td>
<td></td>
</tr>
<tr>
<td>$2000 to $4000</td>
<td>27</td>
<td>13.37</td>
<td></td>
</tr>
<tr>
<td>$4001 to $6000</td>
<td>8</td>
<td>3.96</td>
<td></td>
</tr>
<tr>
<td>$6001 to $8000</td>
<td>17</td>
<td>8.42</td>
<td></td>
</tr>
<tr>
<td>Above $8001</td>
<td>7</td>
<td>3.47</td>
<td></td>
</tr>
<tr>
<td><strong>Latest time using Alipay</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1- 2 weeks before</td>
<td>55</td>
<td>27.23</td>
<td></td>
</tr>
<tr>
<td>3- 4 weeks before</td>
<td>42</td>
<td>20.79</td>
<td></td>
</tr>
<tr>
<td>5- 6 weeks before</td>
<td>36</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frequency of visiting Taobao in the past 3 months</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>before 7 weeks or above</td>
<td>69</td>
<td>34.16</td>
<td></td>
</tr>
<tr>
<td>1- 3 times</td>
<td>74</td>
<td>36.63</td>
<td></td>
</tr>
<tr>
<td>4- 7 times</td>
<td>46</td>
<td>22.77</td>
<td></td>
</tr>
<tr>
<td>8- 11 times</td>
<td>51</td>
<td>25.25</td>
<td></td>
</tr>
<tr>
<td>more than 12 times</td>
<td>31</td>
<td>15.35</td>
<td></td>
</tr>
</tbody>
</table>

About half respondents were current users of Alipay 27.23% of respondents used 1-2 weeks before and 20.79% of respondents used 3- 4 weeks before. 34.16% of respondents used Alipay last time was before 7 weeks or above and 17.82% respondents currently used Alipay in 5- 6 weeks before. 36.63% respondents visited Taobao in the past 3 months were 1 to 3 times. 22.77% and 25.25% respondents' frequency of visiting Taobao were 4- 7 times and 8- 11 times respectively. These information showed respondents shopping pattern at Taobao.

Over 73.27% of respondents were female and more than 84.65% aged between 18 and 25. 14.85% of respondents aged between 26 and 35. There were no respondents aged between 36 and 45 and age group above 45 It showed that most of online shoppers were younger generation and they had advanced education (14.36% Associate Degree and 82.18% Degree). The minority groups were secondary school or below 2.48% and master or above 0.99%. Because most of respondents were students, most of them the monthly income was below $2000. And 13.37%
respondents' monthly income was between $2000 and $4000. There were 8.42% respondents was $6001 to $8000. The minority groups were 3.96% ($4001 to $6000) and 3.47% (above $8001). It also showed that younger age with relatively low income would prefer shop in Taobao.

7.2 Factor Analysis

7.2.1 Factor analysis and reliability test of Purchase Intention

The principle component factor analysis was conducted on 3 statements in Purchase Intention. The Bartlett's Test of Sphericity was significant (Bartlett's test of Sphericity =208.068, sig=0.000, p<0.001) and the Kaiser- Meyer Olkin (KMO) value was 0.718 which was larger than 0.6 that factor analysis was used appropriately. The correlation Matrix of 1- tailed test showed that all three questions did not duplicate. The resultant factor explained 73.304% of the variance. The reliability test was 0.816 which was larger than 0.7 that showed satisfactory internal consistency reliability.

7.2.2 Factor analysis and reliability test of Trust

A principal component factor analysis was used on the 3 items that assessed trust of Alipay. The Bartlett's test of Sphericity was significant (Bartlett's Test of Sphericity =291.721, sig=0.000, p<0.001). the Kaiser- Meyer Olkin (KMO)value was 0.734 which was larger than 0.6 that the use of factor analysis was appropriate. It explained
79.014% of the variance. Also, the Correlation Matrix 1-tailed test showed those questions did not duplicate. The three items achieved quite a high score 0.871-0.898 that showed respondents had confidence in Alipay. The Cronbach's Alpha coefficient of trust was 0.866 that is higher than the standard alpha of 0.7. That showed satisfactory internal consistency.

7.2.3 Factor analysis and reliability test of Security Control

A principal component factor analysis was used on the 6 items that assessed security control of Alipay. The Bartlett's test of Sphericity was significant (Bartlett's Test of Sphericity=494.423, sig=0.000, p<0.001). The Kaiser-Meyer Olkin (KMO) value was 0.849 which was larger than 0.6 that the use of factor analysis was appropriate. It explained 58.477% of the variance. And we can see that those 6 items did not duplicate by the Correlation Matrix table (see the Appendix). The reliability test of security control is 0.857 that is greater than the standard reliability level 0.7. It showed satisfactory internal consistency.

7.2.4 Factor analysis and reliability test of Convenience

The principle component method was used with 6 items. The Bartlett's test of Sphericity was 200.713 and significant (sig=0.000, p<0.001). The Kaiser-Meyer Olkin (KMO) value was 0.768 that exceed 0.6. Thus, the use of factor analysis was appropriate. The resultant 2 items explained 58.845% of the variance. The reliability
test of Convenience was not significant 0.694 that is lower than the standard
reliability 0.7. But if item 6 deleted, the Cronbach’s Alpha coefficient of
Convenience would be 0.728 that met the standard reliability alpha 0.7.

7.2.5 Factor analysis and reliability test of Reliability

The principle component factor analysis was conducted on 3 statements in
Reliability of Alipay. The Bartlett's Test of Sphericity was significant (Bartlett's test
of Sphericity =262.913, sig=0.000, p<0.001) and the Kaiser- Meyer Olkin (KMO)
value was 0.732 which was larger than 0.6 that factor analysis was used
appropriately. The correlation Matrix of 1- tailed test showed that all three questions
did not duplicate. The resultant factor explained 77.317% of the variance. The
reliability test was 0.853 which was larger than 0.7 that showed satisfactory internal
consistency reliability.

7.2.6 Factor analysis and reliability test of Responsiveness

The principle component factor analysis was conducted on 3 statements in
Responsiveness of Alipay. The Bartlett's Test of Sphericity was 182.131 and
significant (sig=0.000, p<0.001). The Kaiser- Meyer Olkin (KMO) value was 0.698
which was larger than 0.6 that factor analysis was used appropriately. The
correlation Matrix of 1- tailed test showed that all three questions did not duplicate.
The resultant factor explained 70.773% of the variance. The reliability test was
0.792 which was larger than 0.7 that showed satisfactory internal consistency reliability.

7.3 Regression Analysis

7.3.1 Relationship between the four features of Alipay and customers' trust in the system

Table 1: ANOVA statistics figures of the four features of Alipay and customers' trust in the system:

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>107.470</td>
<td>4</td>
<td>26.867</td>
<td>39.394</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>134.357</td>
<td>197</td>
<td>.682</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>241.826</td>
<td>201</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a  Predictors: (Constant), Responsiveness, Securitycontrol, Convenience, Reliability
b  Dependent Variable: Trust

First the foremost, the model has to go through the ANOVA test to get a significant figure to continue completing the following regression test. From the above figure generated by SPSS, the output figure was 0.000, which was a significant one.

7.3.2 Table 2: Relationship between the four features of Alipay and customers' trust in the system in terms of statistics figures:
After examination by SPSS multiple regression about trust and the four features of Alipay – security control, convenience, reliability and responsiveness – the magnitudes of influence induced by both security control and reliability of the payment system are suggested by figures to be the most significant factors positively affecting trust, with security control’s significant level being 0.000 and reliability’s significant level being 0.000.

Security control, among all the four independent variables, affected most tremendously the level of trust. Figure showed a strong association between it and trust (Beta=0.490); While the second most important factor positively adding to trust is reliability (Beta=0.337). With the strongest relation to trust, security control is therefore expected to be placed on the highest attention list of online marketplace payment system management. The independent variable Convenience was, however, suggested by the SPSS to be not related to customers’ trust in the system with an insignificant figure level, which
was only 0.873, linking itself with the dependent variable trust. This level did not even suggest a weak relation.

Another independent variable Responsiveness was, on the other hand, suggested by the SPSS to be not related to customers' trust in the system with an insignificant figure level, which was only 0.058, linking itself with the dependent variable trust; while it is less insignificant than Convenience. Yet, such level did not suggest even a weak relation.

### 7.3.3 Table 3: Model summary:

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.667(a)</td>
<td>.444</td>
<td>.433</td>
<td>.82584</td>
</tr>
</tbody>
</table>

a Predictors: (Constant), Responsiveness, Security control, Convenience, Reliability

Interpreted from the SPSS model summary of the first part of multiple regression, the R Square was 0.435 that two dimensions explained 43.5% of the variance between the four features - security control, convenience, reliability and responsiveness - and the dependent variable - trust.
7.3.4 Relationship between customers’ trust in Alipay and their purchase intention at Taobao

Table 4: ANOVA statistics figures of the four features of Alipay and customers’ trust in the system:

\[
\begin{array}{|c|c|c|c|c|c|}
\hline
\text{Model} & \text{Sum of Squares} & \text{df} & \text{Mean Square} & F & \text{Sig.} \\
\hline
1 & \text{Regression} & 86.825 & 1 & 86.825 & 161.207 & .000(a) \\
& \text{Residual} & 107.719 & 200 & .539 & & \\
& \text{Total} & 194.544 & 201 & & & \\
\hline
\end{array}
\]

a Predictors: (Constant), Trust

b Dependent Variable: purchaseintention

Likewise, the model has to go through the ANOVA test to get a significant figure to continue completing the following regression test. From the above figure generated by SPSS, the output figure was 0.000, which was a significant one.

7.3.5 Table 5: Relationship between customers’ trust in Alipay and their purchase intention at Taobao in terms of statistics figures

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>2.006</td>
<td>.252</td>
</tr>
<tr>
<td>Trust</td>
<td>.599</td>
<td>.047</td>
<td>.668</td>
</tr>
</tbody>
</table>

a Dependent Variable: purchaseintention

Similarly, by examination of SPSS multiple regression about customers' trust in
Alipay system and their purchase intention at Taobao using Alipay, the magnitudes of influence induced by trust in the payment system are suggested by figures to be a significant factors positively affecting customers' purchase intention at Taobao via Alipay, with significant level being 0.000. With (Beta=0.668), vendors who are expecting to boost customers' purchase intention at a online marketplace using certain payment system like Alipay, managerial focus of attention would be to build up customers' trust.

7.3.6 Table 6: Model summary:

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.668(a)</td>
<td>.446</td>
<td>.444</td>
<td>.73389</td>
</tr>
</tbody>
</table>

a Predictors: (Constant), Trust

For the last part of the model, where trust and purchase intention were analyzed, the R Square was 0.446 that two dimensions explained 44.6% of the variance between the customers' trust and customers' purchase intention at Taobao via Alipay.
8. Discussion and Implication

<table>
<thead>
<tr>
<th>Path To</th>
<th>Path From</th>
<th>Hypotheses</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trust</td>
<td>Security Control</td>
<td><strong>H1</strong>: Security Control of Alipay of Taobao positively influences Trust</td>
<td>Supported</td>
</tr>
<tr>
<td></td>
<td>Convenience</td>
<td><strong>H2</strong>: Convenience of Alipay of Taobao positively influences Trust.</td>
<td>Not supported</td>
</tr>
<tr>
<td></td>
<td>Reliability</td>
<td><strong>H3</strong>: Reliability of Alipay of Taobao positively influences Trust.</td>
<td>Supported</td>
</tr>
<tr>
<td></td>
<td>Responsiveness</td>
<td><strong>H4</strong>: Responsiveness of Alipay of Taobao positively influences Trust.</td>
<td>Not supported</td>
</tr>
</tbody>
</table>

Among the four proposed features of Alipay - Security Control, Convenience, Reliability and Responsiveness, there were two of them being statistically significant and worth paying great attention to.

About Security Control (H1.) of a payment system at an online marketplace, it has naturally been the most attended and emphasized by the public users, for the system links directly to customers' financial details. The sum of money involved could even go beyond customers' credit cards' overdraft limits which are largely offered by most commercial banks. This statistically significant figure also suggested that customers, who mostly are local Chinese, care absolutely much about the security level of an online payment system. From the results of questionnaires, customers placed very much importance onto this factor, indicating that managerial group of Alipay should
also place the corresponding emphasis on keeping the system's security control in a high level. The next important factor affecting customers' trust is Reliability (H3.) of the system. Reference has been taken from previous studies which generalized that reliability is an effective determinant of web-based service quality. This implies that the stability of Alipay's automatic system has to be maintained in high level in order for customers to build up confidence to use it for purchase, similarly, because each transaction involves certain amount of money. Appropriate handling of each transaction is contributing brick by brick to accumulate trust.

Convenience (H2.) and Responsiveness (H4.) of the system have unfortunately been analyzed statistically to be not related to customers' trust in Alipay. By simple reasoning, convenience, which has too been suggested by regression that it does not directly add to customers' trust in this model; it may instead add to the frequency that customers' purchase via the system or the enthusiasm that people will visit or even make purchase over there. If the customers could use the system to buy items of their preference with much convenience and ease of learning to use it, it is likely that they will browse more frequently and it will add to the probability that they make purchase. Again, by raw reasoning, Responsiveness to customers' from a website might instead add to customers' satisfaction that they are cared and
respected by the company.

<table>
<thead>
<tr>
<th>Path To</th>
<th>Path From</th>
<th>Hypotheses</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchase Intention</td>
<td>Trust</td>
<td><strong>H5:</strong> Customers' trust in Alipay of Taobao positively influences their purchase intention towards Taobao.</td>
<td>Supported</td>
</tr>
</tbody>
</table>

Purchase intention (H5.) and trust together have shown close relationship between each other in terms of statistic figures - Significant level between them is less than 0.05. By balancing cost and benefit of engaging in an online shopping transaction, customers will only take the risk of providing their financial and personal details onto a certain website when they perceive the situation as not dangerous; with benefit being any convenient and successful purchase. This perception is to be rephrased by trust. Lack of trust of online business is one of the main reasons for customers from not engaging in commercial transactions on the web (*Hoffman et al. 1999; Lee and Turban, 2002; Pavlou, 2003*).

**9.Conclusion**
Being an online marketplace, in order to build up a trust-worthy platform for sellers and buyers to safely trade with confidence and trust, Taobao's Alipay, or any other online marketplace providers, have to put stress on maintaining high security control and reliability of the system. Hence, with success in maintaining these huge two factors, customers' trust and purchase intention towards the system will naturally go up.

10. Recommendations

From this study it has reached a conclusion that customers' trust in Taobao's Alipay is strongly linked to the level of security control that, as how they perceived, are associated with the system. In a big pool of potential factors affecting trust, it is suggested that the tremendous online trading platform Taobao, or any other potential competitors could also take as reference, is highly recommended to spend a relatively large portion of capital investment on ensuring that every single transaction is secured. Strong research and development team or internet technology controlling team is a suggested item for building up public's confidence in the system; this is also to discourage and even combat hackers or potential hackers from possibly attacking Alipay's system.

With a strong force ensuring security, Alipay will also need certain level of
promotion on its ever-improving security promise, letting the public know how good it is working ahead. As Alipay is belonged to Taobao, which comparatively is a large platform with millions of potential customers clicking onto it every moment, management decision-makers are recommended to place advertisement about security promises or statements at Taobao website openly, so that everybody in the searching group notice its existence.

About reliability, it is the second strongest independent variable that links with customers' trust in the system. It is very important that the website managerial level to aim at maintaining a high level of Alipay's running stability – each transaction should be handled automatically and smoothly with simple way so that customers would not easily fall into manipulating errors; and automatically, there should not be systematic errors which slash customers' trust in big extent. The core solution to this will be system design by Research and Development force. Savings in investment on system design would not be a good idea for online shopping payment development, for one single error will harm customer's confidence in the system reliability, and by the powerful word-of-mouth, a tiny error will soon outspread to be pieces of harmful or even fatal news to the company.
The independent variable responsiveness, however, has been suggested by regression that it does not directly add to customers' trust. But, it could increase customers' satisfaction. Taobao should also pay attention on responsiveness of Alipay although it cannot add to customers’ trust.

On academic field, we will always be looking forward to further studies about the way vendors could possibly boost customers' satisfaction towards an online trading platform.

From the suggested idea that investment should be put onto ensuring security control and reliability of the payment system, it is strongly believed that if these two aspects are fully enforced to be perfectly trusted, purchase intention toward Taobao, via Alipay, will go all the way upward. Online vendors in China, where insights about boosting trust online have always been a serious lack, will then have better grasp as to how they could quickly set target for the company and head to their destinations in a clearer and smoother way.
12. Appendix

Hong Kong Baptist University
Survey of Online Shopping at Taobao (淘寶)

We are final-year undergraduates from the BBA China Business Studies at Hong Kong Baptist University. We are doing a survey about Online Shopping Behavior at Taobao. There is no right or wrong in your answers, please provide you candid opinions. All information will be kept confidential and only be used for academic research. In case of enquiry, please contact: pca_rabeea@hotmail.com (Rabeea) or isatyw@gmail.com (Isabella)

Q1: Do you understand Alipay's operation?
   Yes  No (End of questionnaire, Thank You)

Q2: Have you ever made any purchase through Alipay?
   Yes  No (End of questionnaire, Thank You)

Q3: When did you make your most recent purchase at Taobao?
   A. before 1 – 2 weeks
   B. before 3 – 4 weeks
   C. before 5 – 6 weeks
   D. before 7 weeks or above

Q4: How often do you visit Taobao in the past 3 months?
   A. 1 – 3 times
   B. 4 – 7 times
   C. 8 – 11 times
   D. Above 12 times

In the following sections, please state your opinions according to your latest experience in visiting Taobao website or shopping in Taobao. Please circle at ONE answer in each question according to your personal perception:

Section 1 Purchase intention of Taobao

<table>
<thead>
<tr>
<th></th>
<th>Strongly disagree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>PI 1</td>
<td>It is very likely that I will make online purchase at Taobao.</td>
<td>1</td>
</tr>
<tr>
<td>PI 2</td>
<td>I will do transaction at Taobao the next time I buy product online.</td>
<td>1</td>
</tr>
</tbody>
</table>
Section 2 Trust of Alipay of Alipay

<table>
<thead>
<tr>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>T 1</td>
<td>I believe Alipay is trustworthy.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>T 2</td>
<td>Alipay instills confidence in customers.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>T 3</td>
<td>I trust Alipay to pay my bills.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>

Section 3 Security Control of Alipay

<table>
<thead>
<tr>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>SC 1</td>
<td>I think Alipay has sufficient technical capacity to ensure that the data I send cannot be modified by a third party.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>SC 2</td>
<td>When I send data to Alipay, I am sure that they will not be intercepted by unauthorized third parties.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>SC 3</td>
<td>I feel secure giving out credit card information at Alipay.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>SC 4</td>
<td>Alipay has established adequate security features.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>SC 5</td>
<td>Alipay can effectively protect my information privacy.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>SC 6</td>
<td>Alipay have enough security measures to protect my personal and financial information.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>

Section 4 Convenience of Alipay

<table>
<thead>
<tr>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>C 1</td>
<td>To me, it is easy to use Alipay.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>C 2</td>
<td>Alipay enables me to pay bills faster than traditional methods.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>C 3</td>
<td>I prefer paying bills through Alipay as I can easily gain access to networked computers.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>C 4</td>
<td>I prefer paying bills via Alipay when I have easy control over HOW MUCH to pay.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>C 5</td>
<td>I prefer paying bills via Alipay when I have easy control over WHEN to pay.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>
Section 5  Reliability of Alipay

<table>
<thead>
<tr>
<th></th>
<th>Strongly disagree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>RL 1</td>
<td>I think Alipay's transaction processes are undertaken appropriately.</td>
<td>1   2   3   4   5   6   7</td>
</tr>
<tr>
<td>RL 2</td>
<td>Alipay shows a sincere interest in solving customers' problems.</td>
<td>1   2   3   4   5   6   7</td>
</tr>
<tr>
<td>RL 3</td>
<td>Transactions with Alipay are error-free.</td>
<td>1   2   3   4   5   6   7</td>
</tr>
</tbody>
</table>

Section 6  Responsiveness of Alipay

<table>
<thead>
<tr>
<th></th>
<th>Strongly disagree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>RP 1</td>
<td>I think Alipay gives prompt service.</td>
<td>1   2   3   4   5   6   7</td>
</tr>
<tr>
<td>RP 2</td>
<td>I believe Alipay is always willing to help customers.</td>
<td>1   2   3   4   5   6   7</td>
</tr>
<tr>
<td>RP 3</td>
<td>I believe Alipay is never too busy to respond to customers' requests.</td>
<td>1   2   3   4   5   6   7</td>
</tr>
</tbody>
</table>

Individual Background Information

IBI 1: What is your gender?

Male  Female

IBI 2: What is your age?

Below 18  18-25 years old  26-35 years old  36-45 years old  above 45 years old

IBI 3: What is your education background?

High School or below  Associate  Bachelor's  Master's or above

IBI 4: What is your monthly income?
你好！我們是香港浸會大學工商管理學院- 中國貿易學系-的三年級生。我們現正為畢業論文進行一項關於“淘寶”- 中國網上購物平台的問卷。問題不設有特定答案，希望閣下能提供最真實直接的答案。所以資料只會用作學術用途，絕不公開。如有進一步查詢，歡迎以電郵方式聯絡 pca_rabeea@hotmail.com(Rabeea) 或 isatyw@gmail.com(Isabella)。

1: 你是否了解淘寶的支付寶運作?
   了解  不了解(問卷完, 多謝回答!)

2: 你可曾透過支付寶付款?
   有  沒有(問卷完, 多謝回答!)

3: 你對上一次在淘寶網使用支付寶購物是何時?
   A. 1 星期 – 2 星期前
   B. 3 星期 – 4 星期前
   C. 5 星期 – 6 星期前
   D. 7 星期或更早之前

4: 過去三個月, 你瀏覽淘寶網的頻率是?
   E. 1 – 3 次
   F. 4 – 7 次
   G. 8 – 11 次
   H. 多於 12 次

以下部份，請以你最近期瀏覽淘寶網或於淘寶網進行交易的經驗作答。請根據你個人的認知，於每題圈出一個答案。
### 第一部分  對淘寶的購買意願

<table>
<thead>
<tr>
<th>PI 1</th>
<th>我傾向在淘寶網進行網上購物。</th>
<th>1 2 3 4 5 6 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>PI 2</td>
<td>下次進行網上購物時，我也會選擇淘寶網。</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>PI 3</td>
<td>我一定會再次選用淘寶網。</td>
<td>1 2 3 4 5 6 7</td>
</tr>
</tbody>
</table>

### 第二部分  對支付寶的信任

<table>
<thead>
<tr>
<th>T 1</th>
<th>我認為支付寶值得信任。</th>
<th>1 2 3 4 5 6 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>T 2</td>
<td>支付寶能給予客戶信心。</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>T 3</td>
<td>在繳交自己的帳務項時，我信任支付寶。</td>
<td>1 2 3 4 5 6 7</td>
</tr>
</tbody>
</table>

### 第三部分  支付寶的安全管理

<table>
<thead>
<tr>
<th>SC 1</th>
<th>我認為支付寶有足夠的技術確保客戶傳送出的資料不會被第三者修改。</th>
<th>1 2 3 4 5 6 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>SC 2</td>
<td>於支付寶送出自己個人資料時，我肯定資料不會被未被認可的第三者阻礙。</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>SC 3</td>
<td>我感覺在支付寶提供信用卡資料是安全的。</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>SC 4</td>
<td>支付寶設有足夠的安全裝置。</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>SC 5</td>
<td>支付寶能有效地保障我的私人資料。</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>SC 6</td>
<td>支付寶有足夠的安全設置保障我的個人與財務資料。</td>
<td>1 2 3 4 5 6 7</td>
</tr>
</tbody>
</table>

### 第四部分  支付寶的方便程度

<table>
<thead>
<tr>
<th>(7)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(7)</td>
<td></td>
</tr>
<tr>
<td>(7)</td>
<td></td>
</tr>
</tbody>
</table>
C 1 對我來說，支付寶的付款系統很容易操作。
C 2 比起傳統支持方式，支付寶讓我的款項交易進行得更快。
C 3 我會選用支付寶進行金錢交易，因為我很容易便能以各方式連線到互聯網。
C 4 用支付寶進行金錢交易使我能夠自如控制交易金額。
C 5 我會選用支付寶進行金錢交易使我能夠自如控制交易時間。
C 6 用支付寶進行金錢交易為我省下郵寄費用。

第五部份 支付寶的可靠性

(7)

RL 1 我認為在支付寶的交易都被恰當處理。
RL 2 支付寶積極為客戶解釋交易時遇到的問題。
RL 3 支付寶的交易處理很少差錯或故障。

第六部份 支付寶的服務

(7)

RP 1 支付寶提供快速服務。
RP 2 我相信支付寶樂意幫助客戶。
RP 3 我相信支付寶會對客戶的要 求作出快速回應。

個人背景

問題 1: 你的性別是:

男 女

問題 2: 你的年齡是:

18 歲以下 18 至 25 歲 26 至 35 歲 36 至 45 歲 45 歲以上
問題 3: 你的教育程度是:
高中或以下      大專      大學學士      大學碩士或以上

問題 4: 你每月的收入:
$2000 以下      $2000 至$4000      $4001 至$6000      $6001 至$8000      $8001 以上

問卷完
感謝你的參與!

References


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18. Putrevu, Sanjay; Lord, Kenneth R (Jun 1994), "Comparative and Noncomparative Advertising: Attitudinal Effects under Cognitive and Affective Involvement Conditions", Journal of Advertising; 23, 2; ProQuest pg. 77


