Abstract—Under the background of the Internet Plus, the literature review method, questionnaire method and integrated data analysis method are applied in the research to analyze the differences between the male and female college students in the consuming behavior of online shopping and the decision-making factors. The specific research method is as follows: The questionnaires are distributed through WJX.cn. A total of 162 valid questionnaires are collected. The respondents are college students, including 79 male college students and 83 female college students. The scales include the Questionnaire on the Preference of College Students in Online Shopping compiled by Wang Zhiwen in 2013, and the Questionnaire on the Decision-making Style of College Students in Online Shopping compiled by Liu Jun in 2009. The investigation result shows: Male and female college students have big differences in the kind of online shopping, the available amount of online shopping, the total consumption of online shopping and the decision making of online shopping. The SPSS20.0 is used to conduct the variance analysis on the data in the aspect of decision making in online shopping. Finally, the related conclusion is reached.

Keywords—college students; gender; online shopping; difference

I. INTRODUCTION

The popularization of the network makes people’s life change with each passing day. The electronic commerce is being accepted by the majority of people. One of the characteristics of college students is that they are quick in embracing new things. They are the mainstream group and core force in the new pattern of the online shopping consumption at present. College students, the special group, is investigated in this research, especially the gender differences in the kind of online shopping needs and the gender differences in the decision making of online shopping, in order to provide guidance for different groups to establish the correct consumption view on the online shopping, at the same time providing some helps for electronic commerce enterprises in marketing strategies.

II. RESEARCH METHODS

A. Research Ideas

From the respective of gender difference, the research explores the characteristics of college students in the network consumption behavior and the decision-making style. The SPSS20.0 is used to conduct the variance analysis on the data in the aspect of decision making in online shopping. Finally, the related conclusion is reached.

The basis of the research is the paper of Li Jun, the Compilation of the Questionnaires on the Decision-making Style of College Students in Online Shopping and the Actual Measurement. The open questionnaire survey is conducted on college students. According to the structure arrangement and classification of questionnaire, the decision-making style of college students in the online shopping includes: the confusion of decision making, valuing reputation, novelty and fashion, recommendation and reference, entertainment, careful calculation and strict budgeting, paying attention to the dimension of brand.

B. Research Tools

The questionnaires are the Questionnaire on the Preference of College Students in Online Shopping compiled by Wang Zhiwen in 2013, and the Questionnaire on the Decision-making Style of College Students in Online Shopping compiled by Liu Jun in 2009.

C. Research Objects

The college students are research objects. The questionnaires are distributed through the network questionnaire platform of “Wenjuanxing”. A total of 195 questionnaires are collected, including 162 valid questionnaires, with the effective rate of 83.08%. The numbers of valid questionnaires contributed by male and female college students are 79 and 83 respectively.
III. DATA ANALYSIS

A. The Demographic Characteristic of the Sample

As shown in the following "Table I", in the survey, there are 162 college students participate in the online shopping, including 79 male college students and 83 female college students, occupying 48.8% and 51.2% respectively. The figure shows the online shopping is very popular among college students, and the difference of proportion of male and female college students in the online shopping is not big.

<table>
<thead>
<tr>
<th>Gender</th>
<th>Total</th>
<th>Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>79</td>
<td>48.8%</td>
</tr>
<tr>
<td>Female</td>
<td>83</td>
<td>51.2%</td>
</tr>
<tr>
<td>Total</td>
<td>162</td>
<td>100%</td>
</tr>
</tbody>
</table>

B. The Influence of Gender Difference on the Kind of Online Shopping

According to "Fig. 1", both male and female college students purchase many clothes, shoes and hats and accessories as well as snacks. It may be related to the requirements of college students. The proportion of male college students is higher than female college students in purchasing electronic digital products. However, the proportion of male college students is higher than male college students in purchasing cosmetics and daily supplies. It is caused by the living needs of male and female college students.

The investigation also shows the college students of different genders have different inclination on the products purchased during the online shopping festivals. Female college students pay more attention to the products like clothes, shoes and bags, cosmetics and snacks. It shows male and female college students have different preference in shopping in the online shopping festivals in "Table II".

C. The Influence of Gender Difference on the Available Amount in Online Shopping

<table>
<thead>
<tr>
<th>Available Amount in Online Shopping</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below 300 yuan</td>
<td>27</td>
<td>9</td>
<td>36</td>
</tr>
<tr>
<td>300-500 yuan</td>
<td>9</td>
<td>26</td>
<td>35</td>
</tr>
<tr>
<td>500-1000 yuan</td>
<td>23</td>
<td>29</td>
<td>52</td>
</tr>
<tr>
<td>Above 1000 yuan</td>
<td>20</td>
<td>19</td>
<td>39</td>
</tr>
<tr>
<td>Total</td>
<td>79</td>
<td>83</td>
<td>162</td>
</tr>
</tbody>
</table>

D. The Influence of Gender Difference on the Total Consumption of Online Shopping

<table>
<thead>
<tr>
<th>Total Consumption of Online Shopping</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below 100 yuan</td>
<td>9</td>
<td>2</td>
<td>11</td>
</tr>
<tr>
<td>100-300 yuan</td>
<td>26</td>
<td>19</td>
<td>45</td>
</tr>
<tr>
<td>301-500 yuan</td>
<td>19</td>
<td>25</td>
<td>44</td>
</tr>
<tr>
<td>500-1000 yuan</td>
<td>16</td>
<td>21</td>
<td>37</td>
</tr>
<tr>
<td>Above 1000 yuan</td>
<td>9</td>
<td>16</td>
<td>25</td>
</tr>
<tr>
<td>Total</td>
<td>79</td>
<td>83</td>
<td>162</td>
</tr>
</tbody>
</table>

According to the investigation report on the sum of consumption of online shopping of college students, the available amount of college students in online shopping is closely related to the total consumption of online shopping. The higher the available amount, the higher the sum of consumption in online shopping will be. The table of available amount shows the available amount of female college students is higher than that of the male college students. On one hand, female college students have more conscious in saving money and distributing money in daily life. Therefore, the available amount of female college students in online shopping is higher than that of the male college students; on the other hand, it may be related to the family education pattern in our country. People in our country believe "we must raise a son by giving him a little money, while a daughter by giving her lots of money". Therefore, parents will be different in giving living expenses to their children, and the available amount of female college students is higher than that of male college students. During the online shopping festival, the male college students with the total consumption between 100 and 300 yuan, 300 and 500 yuan, 500 to 1000 yuan are in the majority. However, the female college students with the total consumption between 300 and 500 yuan, 500 and 1000 yuan and above 1000 yuan are in the majority in "Table III".

E. The Influence of Gender Difference on the Decision Making of Online Shopping

In this analysis, the independent variable is gender, and the dependent variables are the confusion of decision making, valuing reputation, novelty and fashion, recommendation and reference, entertainment, careful calculation and strict budgeting, paying attention to the dimension of brand. The result through variance analysis shows among the seven variables, only the variance analysis of “valuing reputation” and “novelty and fashion” fails to reach the significant, and the differences of other five dependent variables on gender reach the significant. Specifically, the female college students pay...
more attention to the five dimension of “the confusion of decision making”, “novelty and fashion”, “recommendation and reference”, “entertainment” and “careful calculation and strict budgeting” than male college students; more male college students “pay attention to the dimension of brand” than female college students. The detail is shown in “Table IV”.

### Table IV. Summary Table of the Variance Analysis of Gender on the Decision-Making Style of Online Shopping Consumption

<table>
<thead>
<tr>
<th>Variable</th>
<th>F</th>
<th>Posterior comparison</th>
</tr>
</thead>
<tbody>
<tr>
<td>The confusion of decision making</td>
<td>4.142*</td>
<td>Female &gt; male</td>
</tr>
<tr>
<td>Valuing reputation</td>
<td>399</td>
<td></td>
</tr>
<tr>
<td>Novelty and fashion</td>
<td>0.132</td>
<td>Female &gt; male</td>
</tr>
<tr>
<td>Recommendation and reference</td>
<td>9.971*</td>
<td>Female &gt; male</td>
</tr>
<tr>
<td>Entertainment</td>
<td>0.344*</td>
<td>Female &gt; male</td>
</tr>
<tr>
<td>Careful calculation and strict budgeting</td>
<td>8.297*</td>
<td>Female &gt; male</td>
</tr>
<tr>
<td>Valuing brand</td>
<td>7.261*</td>
<td>Male &gt; Female</td>
</tr>
</tbody>
</table>

Note: *p < 0.05 ; **p < 0.01

According to the variance analysis, in the decision making process of shopping online, the gender difference will influence the decision making in shopping. On the dimensions of the confusion of decision making, novelty and fashion, recommendation and reference, entertainment and careful calculation and strict budgeting, the scores of female college students are significantly higher than that of the male college students, while male college students obtain a significantly higher score than female students in the dimension of paying attention to brand. It shows female college students are more willing to treat online shopping as a way of relaxing, and become confused and helpless in facing the tremendous information of goods and then seek help from others. Male college students are saner and more independent in online shopping. In online shopping, female college students pay more attention to the expense of goods, while male college students are inclined to choose the famous brand. The characteristics of shopping online are similar to the characteristics of male and female college students in shopping in the real life.

### IV. Discussion

#### A. Discussion on the Reason for the Preference Difference of Male and Female College Students in Online Shopping

The difference is analyzed through comparing the shopping inclination of male and female college students in the sort of goods in online shopping:

The difference between male and female college students in choosing the goods in online shopping is because male and female college students have different living needs. During the carnival of online shopping, the goods purchased by male and female college students have a big difference:

Compared with male college students, female college students prefer to purchase clothes, cosmetics and daily supplies online during the shopping spree. On one hand, compared with the male college students, female college students have stronger mentality of pursuing beauty. Therefore, during the carnival of online shopping, female college students will purchase more clothes and cosmetics that embody their sense of fashion and catch others’ eyes or get the praise. The praise of others will further stimulate the desire of female college students in purchasing. On the other hand, the shopping spree is during the period of changing dress proper for the season, so compared with the male, female college students are more inclined to seek fashion. In shopping spree, female college students will purchase the clothes that conform to the current trend to meet their demands for fashion trend. Female college students have a higher impulsion in purchasing clothes and cosmetics than male college students. Since female college students have the consumption concept that they pay more attention to the appearance and the appropriateness of the clothes and cosmetics except for its use, they will have the impulse of consumption of these goods in online shopping.

Compared with the female college students, the male college students are more inclined to purchase digital electronic goods and electric appliance online in the carnival of online shopping; male college students are more interested in products of science and technology than female college students, who have a lower interest in high technology than the male. Female college students prefer the simple electronic products, while male college students prefer to research high-tech products and accept high-tech products more easily.

No significant difference between male and female college students in books, shoes, bags and accessories in the carnival of online shopping exists. Their shopping inclination on these things is almost the same. According to the above analysis, we can see in the carnival of online shopping, the gender difference of male and female college students will lead to the different preference of online shopping. The big difference appears.

#### B. Discussion on the Reasons for the Difference of the Consumption Level of Male and Female College Students in Online Shopping

The comparison of the available amount and the sum of consumption of male and female college students in the carnival of online shopping shows, the available amount of college students in online shopping is closely linked to the total consumption of online shopping. The higher the available amount, the higher the sum of consumption of online shopping will be.

The reasons why female college students have a higher available amount than male college students are as follows: On one hand, the saving consciousness of female college students is higher than that of the male college students. Female college students are more conscious in distributing money in daily life. They have a higher ability in calculating the expense in daily life and control their daily expense. However, male college students often lack the consciousness of distributing the money in life and will not consider whether it exceeds their budget in spending money. Female college students will save money at ordinary times, contributing to the higher available amount of female college students than male college students in online shopping; on the other hand, it may be connected to the family education pattern in our country. The traditional educational concept believes “we must raise a son by giving him a little...
money, while a daughter by giving her lots of money"; in order to
guide the children’s attitudes towards money. Therefore, parents
will be different in giving living expenses to children, leading to
the higher available amount of female college
students than male college students.

Female college students belong to sensibility consumption
in online consumption. They will purchase their favorable
products when their available amount is high. In purchasing
goods, female college students seldom consider whether they
have alternatives for the goods. For example, female college
students will corner in some cosmetics and articles of daily use,
instead of purchasing them when they must be replaced.
Besides, female college students have more careful calculation
and strict budgeting than male college students in purchasing.
The products during the carnival of online shopping are greatly
cheaper than usual, so female college students will purchase
many price-off products in the carnival of online shopping.
Some even choose some products before the carnival of online
shopping and put them in the shopping trolley, and purchase
them when the price is off in the carnival, in order to reduce
the expense. Therefore, the investigation report shows the
female spend more money in the shopping spree and the
proportion of the female in the high consumption in online
shopping is higher than the male. In the online shopping, male
college students are inclined to rational consumption. They
will purchase the products required by them and will not
browse other products after purchasing the required products.
Therefore, male college students purchase less products online,
with a low sum of consumption.

C. Discussion on the Influence Factors of Decision Making
for Male and Female College Students in Online Shopping

According to the result of the questionnaire, the scores of
female college students are higher than that of the male college
students in the five dimensions of the confusion of decision
making, novelty and fashion, recommendation and reference,
entertainment and careful calculation and strict budgeting in
online shopping, while male college students obtain a
significantly higher score than female college students in the
dimension of valuing the brand. This shows in the carnival of
online shopping, the female college students are more willing
to treat the online shopping as a way of relaxing, and become
confused and helpless in facing the tremendous information
of goods, and then turn to others for help. Female college
students are more rational and independent in online shopping.
In online shopping, female college students pay attention to the
expense of goods, while male college students are inclined to
choose the famous brands. Male college students choose
rational consumption in online shopping, so they will often
consider the quality of goods. Therefore, male college students
will attach importance to brands in online shopping, preferring
the famous brands. However, female college students are more
willing to treat the online shopping in carnival as a way of
relaxing, closer to the realistic consumption. Furthermore,
female college students are more likely to pursue fashion and
trend, so they prefer to refer to others’ recommendation and
choose the fashionable goods. Female college students will
inquire the opinions of others in purchasing because they have
more confusions in choosing goods and need the support of
others; on the other hand, female college students attach more
importance to the price of goods in the consumption of online
shopping, so they are more willing to purchase the goods
required recently on the carnival of online shopping. Therefore,
female college students have more careful calculation and
strict budgeting than male college students.

V. CONCLUSION

The proportions of male and female college students that
participate in the carnival of online shopping are almost the
same. It shows among college students, the gender difference
does not have a great influence on the participation of college
students in online shopping.

In the carnival of online shopping, the gender difference
causes different shopping preference. Female college students
prefer to purchase clothes, cosmetics and daily supplies online
during the carnival of shopping spree; while male college
students prefer to purchase digital electronic products and
electric appliance in the carnival of online shopping; no
obvious difference between male and female college students
in the carnival of online shopping exists in purchasing books,
shoes, bags and accessories.

The available amount and the sum of consumption of
college students are different in the carnival of online shopping.
Generally speaking, the available amount and the sum of
consumption of female college students are higher than that of
the male college students. Male college students are inclined to
rational consumption while female college students tend to
sensibility consumption.

The gender difference influences the decision making
factor of online shopping. The scores of female college
students on the five dimensions of the confusion of decision
making, novelty and fashion, recommendation and reference,
entertainment and careful calculation and strict budgeting are
higher while the score of male college students is higher on the
dimension of valuing the brand. The gender difference is not
significant on the dimensions of novelty and fashion and
valuing reputation.

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