Gender Differences in Online Shopping: Are Men More Shopaholic Online?

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Abstract—The purpose of this research is to see how the difference of gender influenced the preference in online shopping. We focus on the emotional level, the level of practicality, and the level of trust felt by every individual regarding online shopping, which relates towards the frequency of online shopping and the total amount spent on online shopping. The technique of data collection is done via a questionnaire that can be filled online. This research found that women are online shopping more than men, but regarding total spending, men spend more than women. Level of trust becomes the biggest factor for men in deciding how often they do online shopping and how much money they spend. Men’s risk aversion influences their activities in online shopping, while women’s risk aversion has no significant effects.

Index Terms—online shopping, gender difference, emotional level, practicality, trust, risk aversion

I. INTRODUCTION

Conventionally, shopping is stereotypically deemed to be a feminine activity [1]. Even time spent looking around in the shopping context also has a gendered benchmark, whereby masculine men finish shopping in a shorter length of time than women [2]. The existence of stereotypes explained above creates a notion that men who shop often can be labeled as less masculine, hindering men to have the same shopping times, frequency, and level of expenditure as women.

The dominance of one gender in shopping is not always entirely done by women; some findings show that men can be the dominant gender in online shopping (Rodgers and Harris, 2003). Male dominance in online shopping could happen due to a few things: the time it takes to make a decision to buy an item becomes much shorter when shopping online, the absence of face-to-face interactions which must be made with an offline seller or another person is more comforting to men [2], and also items that relate to the needs of men can be easily found on the internet (Van Slyke, et al. (2002)). On the other hand, when we see things from the point of view of women, there are quite a lot of barriers perceived by women in shopping online, some of which are: the lack of social interaction that occurs, as well as the difficulty of evaluating the goods in detail and clearly using techniques such as physical touches [2], and the risk levels perceived by women in the online shop are greater than for men (Garbarino and Strauthevezit (2004)). This is also in accordance with the results by Uni Gneezy [3] which found that females tend to be risk averse, and the difficulty in using computers to access the internet has also become barriers to women [4]. For women, online shopping becomes less compatible and accommodating than when they shop conventionally [5].

It is important to note that all of the research mentioned above was conducted between the years 2000 to 2006, which as many people were using the internet, and using a computer was the only way to connect to the internet. Since then, the development of technology has been increasingly fast. For example, the innovation of mobile phones which now can be used as a tool to connect to the internet. The number of internet users grew massively. According to “Internet World Stats,” in 2001 there were about 500 million users, then in the year 2017, it reached over 4 billion users around the world, which is an increase of more than 700%. This number equates to 54.4% of the total population in the world. The huge increase of internet users in the world is also felt by Indonesia. Internet users in Indonesia, according to the results of the survey “Internet service provider Association of Indonesia,” is experiencing a much bigger increase than the increase that occurred globally. In 2001, internet users in Indonesia was recorded reaching only 4.2 million people, but in 2017, there are about 143.26 million users, which is an increase of over 3000%. In the context of gender, internet users in Indonesia is slightly more dominated by men (51.43%) compared to women (48.57%). In addition to the expansion of the internet users, it is also followed by the emergence of online shops in each country, even some of that e-commerce is open to the entire world, like E-Bay and Amazon who have been established before the year 2000. Indonesia also has seen the emergence of many e-commerce such as Tokopedia, Bukalapak, Bibli.com, Zalora, Shopee, etc. Even the local brands are using the internet as an alternative place of sale.

Ease in accessing the internet shown by the increasing population of internet users, accompanied with a gap of internet users between women and men, and also the growing number of online shops, can provide many different conditions. Therefore, in this study the authors want to see if there is a difference in preference of each gender in the online shopping landscape, where the main preference factors of interest are based on Rodgers and Harris research [6], which are: the emotional level, the level of practicality, and the level of trust. Additionally, in this research, the authors are adding another main factor which is the risk aversion. The logic of
that factor is the higher the level of risk aversion; there will be a negative effect against the number of frequency or the amount of spending. This is because they will be more careful and spend less money to minimize the risk. Therefore, with those four main factors, we will see the difference toward the online shopping frequency and online shopping expenditure. The results would show whether the difference between the gendered preference in online shopping exists with the current conditions.

II. LITERATURE REVIEW

A. Risk Preference

Risk perceived by men and women is different, based on the research conducted by Gneezy [3]. He concluded that women in general are more risk-averse. The risk is also related to online shopping because shopping on the internet has a greater risk than conventional shopping due to the lack of direct contact with the seller. For women, risk in doing online shopping is perceived greater than men (Garbarino and Strahilevitz (2004)). This is also supported by the results of research conducted by Cyr and Bonanni [7], in which regarding confidence in the website on the internet, women produce a lower trust rating than men. Risk preference itself is based on the beliefs of each, based on research conducted by Rodgers and Harris [6], women are considered more skeptical in e-commerce than men, and this may affect them in online shopping because trust has a positive relationship to one’s attitude in online shopping.

B. Time Preference

Shopping online is essentially aimed at reducing costs in shopping activities, such as the cost of time and transport. Efficiency to opportunity costs is the biggest reason for men to buy the needed goods online. Therefore, shopping online becomes a shortcut for them to get information about the goods they want and get them quickly. On the other hand, the practicality of online shopping has different values for both men and women. Based on research conducted by Rodgers and Harris men felt the practicality more than women, and this may affect them in online shopping because trust has a positive relationship with the attitude of someone in online shopping [6].

C. Motivation Preference

Shopping activities are divided into two, namely hedonic and utilitarian. Hedonic shopping activities are intended for emotional, psychological, and social satisfaction, as well as experience in shopping, while the utilitarian motives of shopping activities aim to simply get the desired goods. In other words, this motive relies on the result, not the process [8].

The difference in motivation is also supported by the results of research conducted by Dittmar, et al. [2] who found that women are motivated by emotional, experiential and social factors, and identity-related concerns in which women are more focused in the hedonic process, while men are motivated by functional issues that tend to be more focused on results (utilitarian). In online shopping, functionality becomes more important than the other two motives, making it an obstacle for women to shop online, but will provide a strong stimulus for men.

Rodgers and Harris found that emotional factors, which are described by satisfaction levels, have a positive relationship with online shopping attitudes [6]. However, the emotional factors have different outcomes among women and men, in which men have a greater degree of satisfaction than women.

D. Enjoyment Preference

Conventionally, shopping can help women to relax, socialize, or it can even be a special activity (Buttle and Coates (1984)), while for men the activity is less enjoyable and should be completed quickly [2]. Men and women also have different comfortability when traveling to shopping malls, in which women enjoy the activity more than men (Dholakia, 1999). In the context of online shopping, Jackson, et al. state that the use of computers becomes a something not enjoyable for women because women consider it as fairly complicated and difficult to understand so that it becomes one of the barriers in online shopping [4]. Dittmar, et al. also stated that women are less comfortable in online shopping, due to the lack of direct contact and perceived social experience [2].

E. Shopping Stereotypes

Conventionally, shopping has a stereotype that it is a feminine activity [1], [2], [9]. In the case of online shopping, the stereotype of femininity in the activity is not felt by men. This happens because online shopping reduces face-to-face interaction with sellers and others, even though personal data is required in online shopping, but the activity keeps people away from social interaction so that it will be anonymous to the social environment. It can be said that the internet provides an alternative way out of gender issues (McLaren, et al. (2004)). On the other hand, men are judged to be more confident than women in computer and internet use (Whitley (1997); Woodfield (2000)). This is driven by the stereotype that men will look more masculine if they are more adept in the use of technology.

III. METHODOLOGY

Subjects of interest in the authors’ research are:

1) Those who have shopped online through e-commerce anywhere and any media.
2) Have a minimum age of 17 years old. This is because it is the minimum age required for bank account creation, so they have full authority to make decisions on online shopping activities, no longer influenced by others (e.g., their parents).

Sampling Method

The sampling technique used in this research is snowball sampling. This method can obtain a lot of respondents quickly and provides a variation on the demographic background of respondents. The questionnaire can only be filled online, through various online media (chatting applications such as
WhatsApp and Line, and also social media such as Instagram, Facebook, and Twitter. The survey period is conducted for one month in May 2018.

**Questionnaire Topics**

1) Demographic Data
   - Respondents will be asked questions about some basic information about their demographic background such as age, income, occupation, etc.

2) The frequency of Online Shopping in the Last Three Months (February - April):
   - The survey conducted by the authors starts from the end of April to May 2018, it aims to avoid bias in remembering. Respondent’s answer is a continuous number so that the respondent is free to write the numbers in the answer column.

3) Total Online Shopping Spending in the Last Three Months (February - April):
   - Similar to the frequency of online shopping, but the respondent’s answer will be in units of the rupiah currency.

4) Emotional Level
   - Questions about enjoyment, satisfaction, and pleasure.

5) Level of Practicality
   - Questions about the level of convenience, the speed of purchase, and how practical the online shopping activities.

6) Level of Trust
   - Contains questions that provide information on how much confidence the respondents feel in an online shopping.

7) Risk Aversion
   - Using questions by IFLS5, pp 134 section S101-S105, the question aims to see in the general circumstances how risk-averse respondents are: more risk averse or less risk-averse.

8) Shopping Stereotypes
   - As explained above about the stereotype of femininity in shopping activities, in this survey the authors want to see the response of the respondents to this notion.

**Indexing Method**

This research uses Rodgers and Harris’ research as the base research. Several techniques are also applied in this research. One of them is a technique in indexing the three main variables (the emotional level, the practical level, and the level of trust), in which the answers to the questions are summed and then averaged. For example, there are three questions for the emotional level; the three answers are summed and then divided by 3.

Before performing indexing techniques, it should be ensured that each question is answered on a scale from 1 to 5, where the greater the number indicates a positive connotation. For example, the greater the number in the emotional level, then he/she feels a greater sense of comfort, pleasure, or great satisfaction. If there is a non-scale answer, it needs to be converted first.

**Regression Model**

**Frequency of Online Shopping**

\[
\text{Frequency of Online Shopping}_i = \alpha_0 + \alpha_1 EL_i + \alpha_2 PL_i + \alpha_3 TL_i + \alpha_4 RA_i + \alpha_5 Sex_i + \alpha_6 Income_i + \alpha_7 Total Source of Income_i + \alpha_8 Employment Status_i + \alpha_9 Married_i + \alpha_{10} Divorce_i + \alpha_{11} Age_i + \alpha_{12} BoDeTaBek_i + \alpha_{13} OutJaBoDeTaBek_i + \alpha_{14} Surfing Frequency_i + \alpha_{15} Shopping Stereotypes_i + \epsilon
\]

**Total Spending towards Online Shopping**

\[
\text{Total Spending towards Online Shopping}_i = \beta_0 + \beta_1 EL_i + \beta_2 PL_i + \beta_3 TL_i + \beta_4 RA_i + \beta_5 Sex_i + \beta_6 Income_i + \beta_7 Total Source of Income_i + \beta_8 Employment Status_i + \beta_9 Married_i + \beta_{10} Divorce_i + \beta_{11} Age_i + \beta_{12} BoDeTaBek_i + \beta_{13} OutJaBoDeTaBek_i + \beta_{14} Surfing Frequency_i + \beta_{15} Shopping Stereotypes_i + \epsilon
\]

**Regression Steps**

From both models above, each model will be regressed three times;

1) The first regression is done to see the effect of the main factors and other factors on the frequency and expenditure of online shopping in general (male + female).
2) The second regression is done to see the effect of the main factors and other factors on the frequency/expenditure of online shopping conducted by men so that in this model the variable of sex does not become a control.
3) The third regression is performed to see the effect of the main factors and other factors on the frequency/expenditure of online shopping done by women, as well as the regression for men. The gender variable is not used as a control.

**IV. Results**

This research obtained 568 respondents. However, five respondents are less than 17 years old, and two people never shopped online, forcing the authors to remove seven respondents, amounting to 561 remaining respondents. In this question of risk aversion, some respondents were not included in the calculation, bringing the total number of respondents to 440, with 186 men (42%) and women 254 (58%). More male respondents are less risk-averse, and more women with more risk-averse status, it is in accordance with the general theory as well as from the results of research of Gneezy, which says that women are more likely to be risk averse than man [3].
### TABLE I

#### VARIABLES DESCRIPTION

<table>
<thead>
<tr>
<th>Variables</th>
<th>Explanation</th>
</tr>
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<tbody>
<tr>
<td><strong>Dependent</strong></td>
<td>The frequency of online shopping, the variable explains how often a person does online shopping within the last three months (February - April), with a continuous number answer.</td>
</tr>
<tr>
<td>Total Spending on Online Shopping</td>
<td>How much money a person spent in online shopping in the last three months (February - April), and has the answer in the form of numbers with units of the rupiah currency.</td>
</tr>
<tr>
<td>Emotional Level (EL)</td>
<td>Describes how a person perceives non-physically to an item. More clearly, it describes how one feels happy, comfortable, and satisfied. In shopping activities, when a person’s emotions are positive, it will make them more motivated to do the activity.</td>
</tr>
<tr>
<td>Practicality Level (PL)</td>
<td>The level of practicality explains how quickly someone does online shopping activities, how easily they are done, and also how practically they can be done.</td>
</tr>
<tr>
<td>Level of Trust (TL)</td>
<td>The level of trust explains how much a person feels safe, confident, and secure about their online shopping activities since online shopping has a relatively greater risk than conventional shopping.</td>
</tr>
<tr>
<td>Risk Aversion</td>
<td>This variable explains how the nature of each respondent is in avoiding risk in general, where the individual will be categorized as less risk-averse, more risk-averse, and gamble averse. However, for individuals who have status as gamble averse is not included in the analysis because it does not have a value. In later research,</td>
</tr>
<tr>
<td>$SEX_i$</td>
<td>0 = Female</td>
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<td></td>
<td>1 = Male</td>
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The first dependent variable is the frequency of online shopping, the author asks how many times they spend online shopping within the last three months (February–April), and the respondents’ answer is a continuous number. As many as 49 men do online shopping three times in the last three months, but for women, 60 women were online shopping five times in the last three months. It can be said that within this sample women shop online more than men in the last three months. It can be said that within this sample women shop online more than men in the last three months (February–April). The second dependent variable is online shopping expenditure in the last three months (February–April). Just like the frequency of online shopping, the respondent’s answer is continuous, but for this variable, we use the Rupiah currency unit. Most of the respondents’ spending on online shopping in the last three months is under Rp 500 thousand, but an important thing to note is online shopping spending above Rp 3 million is dominated by men.

### V. DISCUSSION

Risk aversion alone measures the condition of a person in the face of risk. If the risk aversion of someone is high, they will automatically be more careful in doing the “risky” action. In this case of online shopping, those with higher risk aversion will tend to online shop less.

The conclusion that can be taken in the three points above is that with the existence of the risk aversion factor considered in the regression, the difference between men and woman exists, where for men the emotional level factor is not significant to frequency of online shopping, whereas for women all the major factors are significant to the frequency of online shopping. On the other hand, the risk aversion factor only influences the frequency of online shopping conducted by men. The condition does not influence the risk aversion towards the frequency of women’s online shopping, because women, in general, tend to be more risk-averse than men. In summary, women feel a lower level of trust than men in online shopping.
but women’s risk aversion does not affect how often they shop online.

According to the table above, risk aversion affects the condition of someone in shopping online. As per theory, individuals who are more risk averse would be more careful in making decisions, so that in the context of spending, individuals who are more risk averse will be more careful in spending the money and tend to spend less money with the aim to minimize the risks that may arise.

Additionally, there is a difference in outcomes between men and women after the risk aversion factor entered the regression when looking at its effects on online shopping expenditure. For men, it is only the level of trust that can affect spending in online shopping, while for women, in addition to the level of trust, the level of practicality also affects online shopping expenditure. On the other hand, for men, risk aversion factors affect online shopping expenditure, where when men are more risk averse then their spending will be smaller, whereas for women the risk aversion factor does not affect their online shopping expenditure.

VI. CONCLUSION

The online shopping frequency of women are more than men, but in terms of online shopping expenditure, there is no significant difference between men and women. Men tend to spend more than women; it means that goods purchased by men tend to have a higher value than women. It answers the question of this research that women shop online frequently, but men shop online expensively. Men are more affected by the level of trust, while women are more influenced by emotional and practicality level. On the other hand, the risk aversion factor only affects the online shopping activities on both frequency and expenditure done by men. If men are risk averse, the frequency and expenditure will be less. These differences are correlated with previous studies that explain that men are utilitarian, meaning men will focus on outcomes. But regarding online shopping, there is more risk than the conventional shopping, so men will tend to be more careful to online shop, whereas women are hedonic, so they engage in shopping activities to experience and socialize. Therefore, women would like to find similar experience from online shopping to lead them to feel the enjoyment they feel when doing conventional shopping.

REFERENCES


Table of Regression
Fig. 3. The frequency of online shopping (general).

Fig. 4. Total spending of online shopping (general).

Fig. 5. The frequency of online shopping (men).

Fig. 6. Total spending of online shopping (men).

Fig. 7. The frequency of online shopping (female).

Fig. 8. Total spending of online shopping (women).