Effect of online shopping on consumptive behaviour of female workers in Cilegon, Banten, Indonesia

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Abstract. This research was carried out as a form of responsibility for the implementation of an internal research grant from Faculty of Engineering, University of Sultan Ageng Tirtayasa on women’s studies. This research is a qualitative and quantitative study to analyse the influence of online shopping on consumptive behaviour of female workers in Cilegon City, Banten Province, Indonesia, especially who live at Kebondalem village. The independent variables in this study are Cultural Factors (X1) and Psychological Factors (X2). The dependent variable is consumer behaviour (Y). There were 50 respondents involved in this research and filled the questionnaire with a Likert scale with 4 alternative answers. Hypothesis testing is analysed with t-test (partial test), F-test (simultaneous test), and R-square test to determine the effect of independent variables with dependent variable using SPSS program. The F-test result the regression equation is not linear, with the equation is \( Y = 11.654 + 0.110 \times X1 + 0.197 \times X2 \). The R-square test gives the correlation coefficient is 0.119 and correlation between the dependent and independent variable is very weak, even considered to have no relationship. The t-test result shows that cultural factors and psychological factors did not significantly influence female worker’s consumptive behaviour.

1. Introduction

Internet is a technology that has become a necessity for everyone. Information presented on the internet can be in news, photos, videos, friendships on social networks, to shopping. Online shopping is a process where consumers directly buy goods, services and others from sellers /stores interactively and real-time without an intermediary media through the internet [1]. The online store opens 24 hours a day which allows more consumers to access stores whenever and wherever they are, get product information through catalogues quickly, and get access online store simultaneously to compare quality and price of products [2].

Some online buying and selling sites that are well known in Indonesia that is Lazada, Bukalapak, Tokopedia, Bhinneka.com, Zalora, Blibli.com, Shopee and so on. Online shopping seems to have become one of the lifestyles that hit all circles, students, businessman and busy working mothers who have no time to go to mall looking for the desired product. The product can be the daily needs, such as fashion, cosmetics, health products, foods, handicrafts and handphone, etc.

Through online shopping buyer get some benefits, which is cost savings if the product only sold out of town, immediately delivered to home after paying, no need to bring much money to the store because payment through internet banking and the prices more competitive. While the benefit for seller is that they don't have to pay any taxes and rent shop [2]. All the convenience provided by the online shopping system make someone wants more products that they really don't need. They don't shop according to
their needs but based on their desires. They buy products only because the products are interesting and funny. This makes them more consumptive in shopping. Consumptive behaviour can be interpreted as a person's tendency to do unlimited consumption where the person is more concerned with his emotions than rational or more concerned with his desires than his needs [3].

Behaviour is closely related to objects whose studies are directed at human problems. Consumer behaviour is an action to acquire and consume a product or service directly. Some factors can influence consumer behaviour such as cultural, social, personal and psychological factors. Previous research states that cultural (X1), social (X2), personal (X3) and psychological (X4) factors positively influence consumer behaviour in fashion shopping with a linear regression equation (1).

\[ Y = 0.830 + 0.290X1 + 0.100X2 + 0.135X3 + 0.292X4 \]  

Cultural factors and psychological factors have a positive and significant effect on consumer behaviour in fashion shopping [4]. Cultural factor is a way of life that developed and shared by a group of people and inherited from generation to generation. The elements that underlie every culture are values, language, myths, manners, rituals, laws, or products passed on from one generation to the next generation. It can be learned from family, neighbours, friends, teachers and community leaders. The relationship between cultural factors and consumptive behaviour is related to people's trust into product. The higher public trust into a product, the higher the consumer's decision to do purchase [5].

Psychological factors are the consumer's choice while shopping influenced by psychological factors such as motivation, perception, as well as confidence. The higher a person's motivation, perception and confidence towards a product, the higher the person's decision to do consumptive behaviour. A person's motivation has several needs at a time, can be biogenic or psychogenic. Biogenic need is something that comes from physiological tension, such as hunger, thirst and comfort. While psychogenic need is something that comes from psychological tension, such as the need to be recognized, self-esteem and feel insulted in the environment society [5]. The development of self-esteem follows the span of human life, namely high self-esteem in childhood, down during adolescence, rising gradually throughout adulthood, and declined sharply in old age. The decreased self-esteem in old age caused by decreasing in health and socio-economic conditions [6]. The view of someone who has high self-esteem is the belief that they will be accepted and do not care about the opinions of others so that their consumptive behaviour is low [7].

Rapid industrial development in Cilegon also affected other sectors such as trade, services and the increasing population. Many immigrants make a living at Cilegon and reside in Kebondalem Village. immigrants then married and took along their respective region culture. In this research, an analysis will be carried out to determine the effect of online shopping to the consumptive behaviour of female workers in the Cilegon City, Banten Province, Indonesia, especially in the Kebondalem Village, Purwakarta sub-district.

2. Experimental Method

The data is obtained from the interviews, questionnaires, documentation and observation. The data analysis technique used is descriptive analysis with a qualitative approach. The process of retrieving questionnaire data is done by filling out the questionnaire online. There are two types of research variable in this research, which is dependent variable and independent variable. The independent variables in this study are Cultural Factors (X1) and Psychological Factors (X2). The dependent variable in this research is consumer behaviour (Y) that is consumer behaviour in buying products online. Consumption behaviour is a tendency to consume goods or services in excess or no limit and more concerned with the desire factor than the needs [8]. The respondents are female workers who live in Kebondalem Village, Cilegon city, Banten, Indonesia.

There were 50 respondents involved and filled the questionnaire online. The questionnaire with a Likert scale with 4 alternative answers contains the identity of respondent, several statements that suits the respondent, including respondent's culture, psychocological of respondents and consumptive behaviour. Respondent's culture (X1) involve view of the products (prohibited or not according to laws), advice for
shopping online, reputation of online shop and trusted payment system. Psychological of respondents (X2) involve motivation to shop online, feel confidence by shopping online and perception of online shop. Consumptive behaviour (Y) involve the need of products, decision to do shopping online and the desire to buy trending products.

Hypothesis is analysed with t-test (partial test), F-test (simultaneous test) and R-square test to determine the effect of independent variables with dependent variable using SPSS program.

3. Result and Discussion
3.1. Characteristics of respondents
Rapid industrial development in Cilegon affected trade and services sector and also the increasing population. The livelihood of the resident changes from farmers into labours, traders, employee and so on [6]. From the questionnaire, we know the respondents’ age. It is divided into three, the age of 20-30 years (34%), 31-40 years (50%) and 41-50 (16%) as shown at Figure 1.

![Figure 1. Age of respondents.](image)

The respondents’ educational background is different each other, as well as the respondents’ work. Respondents who have a secondary education level of 2%, 32% have high school education, 20% have diploma education, 34% have undergraduate education and 12% have a master’s degree as shown at Figure 2.

Most respondents work as housewives as much as 52%. Respondents who work in educational institutions 14%, as entrepreneurs 12%, work in private companies 10%, work in government institution 8% and 2% of respondents work in BUMN. Respondents who are shopping with frequencies 1-3 times a month reach 88%, 4-6 times a month as many as 8% and 2% for respondents who are shopping with frequencies 7-9 times and more than 9 times a month, respectively as shown at Figure 3.

The product categories bought online by respondents are diverse, such as fashion, cosmetics, children's need and household and so on. Respondents who often shop for fashion products are 48%. As many as 30% of respondents chose to shop products online for children's need and households, such as milk, diapers, spices/cooking tools, and so on. As many as 16% of respondents chose to shop cosmetics online because more choices than shopping at stores near home. Six percent of respondents chose to shop online tickets, such as cinema and plane tickets.
Figure 2. Respondent’s educational background.

Figure 3. Frequency online shopping per month.

The costs for online shopping each month are varying depends on the respondent’s income. Most respondents (58%) spent <IDR 500,000 for online shopping. As many as 26% of respondents spent between IDR 500,000 and IDR 1,000,000 for online shopping. Respondents who spent between IDR 1,000,000 and IDR 1,500,000 as much as 12%. Respondents who spent between IDR 1,500,000 and IDR 2,000,000 and >IDR 2,000,000 were 2% of respondents, respectively as shown at Figure 4. This is proportional to the frequency of respondents’ shopping where the higher the frequency of respondents’ shopping the higher the costs spent.

3.2. Normality test
Kolmogorov-Smirnov test results using the rule value: If the value of sig > 0.05, then the data is normally distributed, and if the sig value < 0.05, then the data is not abnormal distribution [8]. Under these conditions, the test results in Table 1 indicate that the distribution test is normal.
3.3. Partial test (t-test)

The terms: H0 is a psychological factor and cultural factors have no significant effect on consumptive factors. H1 is a psychological factor and cultural factors have a significant effect on consumptive factors.

Testing is done through t-test by comparing t_{calc} with t_{table} at \( \alpha = 0.05 \). If the calculation results show: 
\[ t_{count} \geq t_{table}, \] 
then H0 is rejected and H1 accepted, meaning the variation of independent variables can explain the dependent variable and there is influence between the two variables tested. 
\[ t_{count} < t_{table}, \] 
then H0 accepted and H1 rejected, meaning the variation of independent variable cannot explain dependent variable and there is no influence between two variables tested [8].

### Table 1. One-sample Kolmogorov-Smirnov test (normal distribution).

|                        | Unstandardized Residual |
|------------------------|-------------------------|
| N                      | 50                      |
| Normal Parameters\(^a\,\(^b\) | Mean \( \cdot 000000 \) |
|                        | Std Deviation \( 2.75514503 \) |
| Most Extreme Differences | Absolute \( 0.070 \) |
|                        | Positive \( 0.070 \) |
|                        | Negative \( -0.070 \) |
| Test Statistic         | \( 0.070 \) |
| Asymp. Sig. (2-tailed) | \( 0.200 \) |

\(^a\) Test distribution is Normal.

\(^b\) Calculated from data.

Table 2 shows the result of t-test: Constant Sig = 0. 
\[ t_{count} = 2.482; \quad t_{table} = (\alpha / 2; 50\text{-class}-1) = (0.025; 50\text{-3}-1) = (0.025; 46) = 2.012. \]

At the value of t_{table} with \( t (0.025); (46) \) it is found that \( t_{table} \) is 2.012.

In the tests that have been conducted, it was found that: at X1, psychological factors, the sig > \( \alpha \) value is sig = 0.272 and the value of \( t_{count} < t_{table} \) is 1.113<2.120, then H0 is accepted. At X2, cultural factors, the sig > \( \alpha \) value is sig = 0.103 and the value of \( t_{count} < t_{table} \) is 1.661<2.120, then H0 is accepted.
Table 2. Partial test result (Coefficients).

| Model      | Unstandardized Coeff. | Standard Coeff. | t     | Sig |
|------------|------------------------|-----------------|-------|-----|
| 1 (Constant) | 11.654 | 4.695 | 2.482 | .017 |
| Psychological | .110 | .098 | .165 | 1.113 | .272 |
| Cultural | .197 | .118 | .246 | 1.661 | .103 |

So, it can say that the cultural factors and psychological factors do not significantly influence one's consumptive factors.

3.4. Simultaneous test (F-test)

Table 3 shows that \( df_1 = k - 1 = 3 - 1 = 2 \), \( df_2 = n - k = 50 - 3 = 47 \). In the value of Ftable \( n_1: 2 \) and \( n_2: 47 \), it is found that Ftable is 3.20 while the Fcount obtained was 3.182 and the sig obtained was 0.051. Testing is done by F test by comparing Fcount (Fc) with Ftable (Ft) at \( \alpha = 0.05 \). If the result of the calculation shows: Fc<Ft, then Ho is rejected and H1 accepted, Fc<Ft, then Ho accepted and Ha rejected.

Table 3. Simultaneous test result (ANNOVA).

| Model      | Sum of Squares | df | Mean Square | F        | Sig   |
|------------|----------------|----|-------------|----------|-------|
| 1 Regression | 50.370 | 2  | 25.185 | 3.182 | .051 |
| Residual       | 371.950 | 47 | 7.914 |        |       |
| Total           | 422.320 | 49 |        |        |       |

F test is done to know the effect simultaneously between independent variable with the dependent variable. After F test on this data, it is found that Fc<Ft, which is \( 3.182 < 3.20 \) and sig> \( \alpha \), which is \( 0.051 > 0.05 \), then H0 is accepted, then the regression equation is not linear.

To determine the linear regression equation can use the Table 2. Linear regression equation between psychological factors and cultural factors on consumptive factors can be seen in equation (2).

\[
Y = 11.654 + 0.110X_1 + 0.197X_2
\]  

(2)

3.5. R-square test (determination test)

The following is the interpretation of the relation coefficient if:

\( R^2 \leq 0.02 \): Relationship is very weak (ignored, considered non-existent)

0.02 \( \leq R^2 \leq 0.40 \): Low or weak relationship

0.40 \( \leq R^2 \leq 0.70 \): Moderate or sufficient relationship

0.70 \( \leq R^2 \leq 0.90 \): Strong relationship

0.90 \( \leq R^2 \leq 1.00 \): Relationship is very strong

Table 4. Correlation coefficients test.

| Model | R      | R square | Adjusted R square | Std. Error of the Estimate |
|-------|--------|----------|-------------------|---------------------------|
| 1     | .345   | .119     | .082              | 2.813                     |

Based on the data obtained from Table 4, the correlation coefficient value is 0.119. If it is interpreted that the relationship between the independent variable and the dependent variable has a very weak relationship, it is even considered to have no relationship.
The uncorrelated data might happen because of primer data of respondents’ age. Fifty percent of respondents are 31-40 years old. A person's self-esteem increases when getting older because of health and socio-economical factor, so that their consumptive behaviour becomes lower [7]. From Figure 4 we can also say that the respondents brought their thrifty culture, where 58% of respondents only spend less than IDR 500,000 to shop online a month.

4. Conclusion
It can be concluded that: from the F-test result the regression equation is not linear, with the regression equation is: Y = 11.654 + 0.110 X1 + 0.197 X2. From the correlation coefficient test or R² test, the correlation coefficient is 0.119. The correlation between the dependent variable and the independent variable has a very weak relationship, even considered to have no relationship. From the t-test, it was found that cultural factors and psychological factors did not significantly influence female worker’s consumptive behaviour.

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