

# New Ecological Paradigm: Is it Important to Formate the Green Purchase Behavior?

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**Abstract.** Green purchase behavior is a form of human responsibility to protect the earth from rampant environmental exploitation. Implementing a theory of Value-belief-norm, the determinants factors of Green purchase behavior are analyzed. The main aims of this research are to analyze the antecedents of the New Ecological Paradigm - NEP, and its consequences on Green Purchase Behavior. The respondents of this research were consumers who consumed immune vitamins containing natural ingredients, during this COVID-19 pandemic. NEP is an individual's awareness in realizing the consequences and responsibility toward environmentally friendly behavior. The results of this study indicated that altruistic value is not an antecedent of NEP, either directly or when it tested between altruistic value and green purchasing behavior which mediated by the new ecological paradigm. The altruistic value, which is defined as feeling or concerns to others in relation with environment, it does not influence the NEP and Green Purchase Behavior. Hedonic values, NEP, and personal norms become factors that form the green purchase behavior.

**Keywords:** Altruistic Value; Hedonic Value; New Ecological Paradigm; Personal Norm Green Purchase Behavior

## 1 Introduction

In recent years, the idea of "green purchase behavior" has received significant attention from researchers because of its impact on the environment. Environment itself is a word that describes in aggregately that all the influences and conditions of external forces that influence life, nature, behavior, growth, development, and maturation of living things [1], [2]. The purchase and consumption of a product includes external conditions that affect human behavior and development in the environment. Uncontrolled consumption of products and irresponsible behavior which harm the environment, so that it influences the balance of ecosystems and human life [3]. Humans becomes part of the world, we must take responsibility to protect the earth from rampant environmental exploitation. Therefore, a paradigm change from conventional buying to behavior is needed. Environmentally friendly purchase to reduce negative impacts on the environment [4].

Because of the negative impact on human health in recent years, consumers move forward to buy supplements or vitamins that contain more natural ingredients, they are not type of vitamins which made from chemicals. Many pharmaceutical products are banned globally because of the excessive use of chemicals, toxic, and having side effects to consumers. Some

of these pharmaceutical products contain chemicals, such as mercury, hydroquinone, retinoic acid, and heavy metals [5]. Indonesia also face such critical issue regarding the growth of pharmaceutical products use, ranging from vitamins to chemical-based cosmetics. Throughout 2018, the National Food and Drug Supervisory Agency or BPOM has found illegal traditional drugs (OT) and/or containing chemical drugs as much as 22.13 billion rupiah [5]. However, there is still a lack of research which examines the buying behavior of consumers toward immune vitamin products. Considering its situation, the researchers in this study tried to explain consumers' eco-friendly purchasing behavior toward the immune vitamin products.

In the study of, it showed that the altruistic value of pro-environmental belief was not supported, while in the research of there was a new ecological paradigm variable which was as a mediating variable between altruistic value and personal norm variables, and the results of the hypothesis were supported [6], [7]. In addition, in the research of, there was a variable influence of hedonic value on personal norms [8]. The results showed that the hypothesis was supported. In addition, green purchase behavior which done by public during the COVID-19 pandemic had become an interesting issue to be discussed.

### **1.1 Literature Review**

The Value Belief Norm approach was used in this research to explain the influence of human behavioral values in the context of environment [9]. This theory suggests that the relationship between values, beliefs, norms, and behavior in a causal chain [9], [10]. The values refers to guidance principles for each behavior based on the desired trans-situational goals, which have some variation according to relative importance [11], [12]. In term of value components, namely, altruistic value, biospheric value, and egoistic value [13], [14].

### **1.2 Altruistic Values And New Ecological Paradigm**

The relationship between values in the form of bio-spheric value, altruistic value, egoistic value and the new ecological paradigm (NEP) as well, it is justified by using the value-belief-norm (VBN) theory [13]. According to this theory, individuals who care about self-prosperity and others, overall environment as well, they will have a positive attitude that reflects the ecological world view about the relationship between humanity and environment. For example, Prati and Zani found that altruistic value had a positive and significant effect on NEP [15]. Perrea, Grunert Krystallis, and Zhou also stated that altruistic value has a significant and positive effect on environmental attitude [16]. Therefore, it is assumed that altruistic value is expected to have a positive effect on NEP. Thus, some hypotheses of this research are formulated as follow:

H1: There is a positive influence between altruistic values on the new ecological paradigm

### **1.3 Hedonic Value and New Ecological Paradigm**

The orientation of hedonic value in which individuals focus on personal pleasure or self-satisfaction. It happens because pro-environmental option can provide certain benefits, such as saving money or time. But it can threaten other personal gains such as comfort and pleasure. When we are faced with the choice of pro-environmental behavior, individuals with a hedonic value orientation focus on potential hedonic costs, such as discomfort, displeasure or effort, thereby it will limit the individual's desire to perform pro-environmental behavior.

Various levels of pro-environmental behavior are closely related to basic values, such as human-nature balance, the enjoyment and happiness that nature brings to humans [17]. Research Steg, Perlaviciute, Van Der Werff, and Lurvink, which states that hedonic value is very important in evaluating consumer environmental behavior [18]. Hedonic value becomes a concern where the elements of comfort and pleasure as the other values which formed by individuals before acting on the environment [18]. The relationship between hedonic values and certain beliefs such as awareness of problems and a new environmental paradigm or new ecological paradigm which has been investigated [7]. However, there are still few studies which have examined the relationship between hedonic value and the new ecological paradigm in immune vitamin products. Thus, this research can formulate the following hypothesis:

H2: There is a positive influence between hedonic value and the new ecological paradigm

#### **1.4 New Ecological Paradigm (Nep) Dan Personal Norm**

VBN theory states that an individual's attitude will influence norm, especially individuals who hold general faith or beliefs about environment welfare tend to do develop positive personal norm. This belief is an important factor that can influence pro-environmental personal norm [19]. NEP has been examined in relation to specific beliefs that lead to pro-environmental personal norm [18]. The direct relationship between NEP and personal norm is still a little to be evaluated. Therefore, this study is expected that NEP has a positive influence to personal norm. Thus, this study formulates the following hypothesis:

H3: There is a positive influence between the new ecological paradigm on personal norms

#### **1.5 Personal Norm Dan Green Purchase Behavior**

Value-belief-norm (VBN) theory suggests that personal norm supports behavior that promotes environmental movements such as environmental activism, environmental citizenship, policy support and personal environmental behavior [20]. Various previous studies had examined this relationship. It examined the influence of personal norm on various types of pro-environmental behavior such as consumption behavior and purchase intention of environmentally friendly products [20]. Thus, this theory justifies personal norm and green purchase behavior. In environmental research, there is a positive relationship between personal norm and pro-environmental behavior which had been documented well [10], [21], [22]. However, only a few studies have analyzed the relationship between personal norm and green purchase behavior in the context of purchasing immune vitamin products. Thus, this study formulates the following hypothesis:

H4: There is a positive influence between personal norm on green purchase behavior.

#### **1.6 Altruistic Values, Personal Norm, New Ecological Paradigm**

Value orientation related to NEP leads to significant environmental behavior [9]. This idea was stated by examining the relationship between NEP and pro-environmental personal norm [23]. Until now, there are still few effect of NEP mediation between pro-environmental values and personal norm that has been analyzed. The influence of NEP between values and personal norm can be justified theoretically based on VBN theory [13]. According to this theory, human values such as altruistic values, biosphere values and egoistic values are expected to influence faith and beliefs which will affect their norm [13], [21], [24]. Altruistic values

influence human trust on the environment. Furthermore, Sahin agreed that human trust toward the environmental state influenced his personal norm [25]. Furthermore, Stern hypothesized that altruistic value is environmentally friendly antecedent [13]. In addition, Stern et al. suggested that personal norm was influenced by values and beliefs [9]. Based on the previous discussion, it is hoped that NEP will mediate the relationship between altruistic values and personal norm. Thus, a hypothesis is written as follows:

H5: There is a positive influence between altruistic values on personal norm on the new ecological paradigm

### 1.7 Hedonic Value, Personal Norm, And New Ecological Paradigm

Significant mediating influence of trust in the relationship between consumer orientation and repurchase intention [26]. In environmental studies, the mediating effect of values (altruistic and hedonic values) on personal norm has been studied in various contexts, such as in the textile and clothing industry, transportation industry, intelligent energy systems and ecotourism[8], [27]–[29]. However, there are still few researches about the mediating effect of personal norm that also applies in the context of immune vitamin products during this COVID-19 pandemic in Indonesia. Thus, this study also has the following hypothesis:

H6: There is a positive influence between hedonic values and personal norm through the new ecological paradigm

### 1.8 New Ecological Paradigm, Green Purchase Behavior, And Personal Norm

Pro-environmental behavior is influenced by personal norm with awareness of consequences and presumption of responsibility [14]. Stern also supports this view and adds a new ecological paradigm in VBN theory that encourage consumer awareness [13]. As a result, personal norms influence green purchase behavior among consumers [30]. Thus, the personal norm shows the mediating effect between the new ecological paradigm and green purchase behavior. The mediating influence of personal norm on the relationship between beliefs and pro-environmental behavior has been found [10]. However, the mediating effect of personal norm also applied in the context of immune vitamin products during the COVID-19 pandemic in Indonesia and it can not be concluded yet. Supported by the VBN theory, this study considers personal norm as a mediation. Thus, this study formulates the hypothesis below:

H7: There is a positive influence between new ecological paradigm on green purchase behavior through personal norm

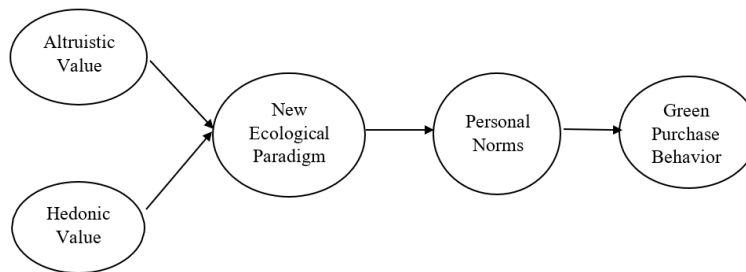


Fig. 1. Conceptual Framework

## **2 Methodology of Research**

This research is a survey research with its respondents were consumers who consumed immune vitamin products containing natural ingredients. This question became initial question that was a requirement to be a respondent. The number of respondents who were eligible to continue to be processed were 204 people. The frequency results of the total respondents showed that respondents who were based on gender were 37.3% male and 62.7% female. The frequency results which based on the age of 18 - 22 years, it was 53.9%, aged 23 - 27 years was 4.9%, aged 28 - 32 years was 3.4%, aged 33 - 35 years was 1.5%, aged over 35 years was 36.3%. The frequency results of the total respondents showed that respondents which based on occupation were private employees by 26.5%, students by 51.5%, civil servants by 5.4%, and entrepreneurs by 16.7%.

The measurement of each variable, namely, the altruistic value variable consisted of 2 items, Hedonic Value consisted of 5 items, New Ecological Paradigm consisted of 9 items, Personal Norm consisted of 3 items, Green Purchase Behavior consisted of 5 items [6], [9], [31], [32]. From those 5 (five) variables which were tested, in the early stages, the instrument testing was done. Validity test was done by comparing the Factor Loading value of each statement with the Standard Factor Loading. The results of the validity test on 24 indicator items were all above 0.4, then all indicators were declared as valid. Furthermore, the reliability test was conducted and the results showed that all the instruments in each variable had Cronbach's Alpha value which higher than 0.6 meaning that all the instruments used in the research variables were reliable.

## **3 Results and Discussion**

This study tested 7 (seven) hypotheses, the hypothesis testing was done using statistical method, namely structural equation model (SEM) analysis. According to Sekaran and Bougie, this method can predict changes in the dependent variables which are associated with changes that occur in the independent variable [33].

Before testing the hypothesis, a goodness of fit test was done, the test results showed that there was an absolute fit measure, as the main requirement of p-value of 0.000, therefore it was concluded that this model was poor fit. Another goodness of fit test was done by analyzing the ECVI of 4.154 (it met the requirement to be close to the saturated value compared to the independent) and RMSEA of  $0.094 < 0.1$ , it is concluded that this model was goodness of fit. The criteria were based on the Incremental Fit Measure IFI 0.747, NFI 0.655, TLI 0.713, CFI 0.743 and RFI 0.614 (less than 0.9) so that it is concluded as poor fit. The criteria which based on the Parsimonious Fit Measure by considering the normed chi square (CMIN/DF) of 2,791 (it met the lower limit of 1 and the upper limit of 5) and the AIC of 843,354 (it met the requirement to be closer to the saturated value than independent) so that it can be concluded that this model was goodness of fit.

The first hypothesis examined the effect of altruistic value on the new ecological paradigm. The results of this hypothesis test had an estimate value of -0.057 with a p-value of  $0.576 > 0.05$ , meaning that H1 was not supported. Therefore, it can be concluded that altruistic value had no influence on the new ecological paradigm.

The second hypothesis had an estimate value of 0.375 with a p-value of 0.000 0.05, meaning that H2 was supported. It can be concluded that hedonic value has a positive

influence on the new ecological paradigm. The third hypothesis had an estimate value of 0.581 with a p-value of 0.000 0.05, meaning that H3 was supported. Therefore, it can be concluded that the new ecological paradigm had a positive influence on personal norm. The fourth hypothesis had an estimate value of 0.633 with a p-value of 0.000 0.05, meaning that H4 was supported. Therefore, it can be concluded that personal norm had a positive influence on green purchase behavior.

**Table 1.** The Results of Hypothesis Test

| <b>Hypotheses</b>   | <b>Estimation</b> | <b>p-value</b> | <b>Decision</b>  |
|---|-------------------|----------------|------------------|
| H1: There is positive influence between altruistic value on new ecological paradigm | -0.057            | 0.576          | H1 not supported |
| H2: There is positive influence between hedonic value on new ecological paradigm    | 0.375             | 0.000          | H2 is supported  |
| H3: There is positive influence between new ecological paradigm on personal norm    | 0.581             | 0.000          | H3 is supported  |
| H4: There is positive influence between personal norm on green purchase behavior    | 0.633             | 0.000          | H4 is supported  |

Next, analyzing the hypothesis test with the presence of mediating variable. The fifth hypothesis examined the influence of altruistic value on personal norm through new ecological paradigm. From the table 2, it can be seen that there was influence of altruistic value on new ecological paradigm (p-value = 0.064; condition (a) did not meet the requirement). In conclusion, H5 was not supported. Altruistic value did not affect personal norm when it was mediated by new ecological paradigm. The H6 test was supported. In the table 2, it can be seen that in the first model, there was an effect of hedonic value on personal norm (p-value = 0.000) and became fixed (significant) in the second model (p-value = 0.000; so that it met the requirement (c)). The condition in which there was influence of hedonic value on the new ecological paradigm (p-value = 0.000; condition (a) was fulfilled) and the condition in which there was influence of new ecological paradigm on personal norm and the condition in which there was an influence of new ecological paradigm on personal norm (p-value = 0.000; conditional on (b) was also fulfilled in the second model). H7 was supported. In table 3 above, it can be seen that in the first model, there was influence of new ecological paradigm on green purchase behavior (p-value = 0.002) and it was (not significant) in model two (p-value = 0.590; so that it still met the requirement (c)). The condition in which there was influence of new ecological paradigm on personal norm (p-value = 0.000; condition (a) was fulfilled) and the condition in which that there was influence of personal norm on green purchase behavior (p-value = 0.000; condition (b) was also fulfilled in model two).

**Table 2.** The Results of Mediation Variable Hypothesis

| <b>Model</b>  | <b>Estimation</b> | <b>P-value</b> | <b>Conclusion</b>  |
|---|-------------------|----------------|--|
| H5: There was positive influence of altruistic value on personal norm through new ecological paradigm |                   |                |  |
| Model 1 ( <i>Direct</i> )   |                   |                |  |
| There was positive influence between altruistic value (X) on personal norm (Y)                        | 0.306             | 0.000          | Condition (c) was fulfilled if it became Significant.)           |
| Model 2 ( <i>Indirect</i> )   |                   |                |  |
| There was positive influence between altruistic value (X) on new ecological                           | 0.120             | 0.112          | Condition (a) was not fulfilled because it was not Significant.) |

| Model   | Estimation | P-value | Conclusion   |
|---|------------|---------|--|
| paradigm (intervening)  |            |         |  |
| There was positive influence between new ecological paradigm (intervening) on personal norm (Y)                     | 0.229      | 0.000   | Condition (b) is fulfilled (if it became Significant.)         |
| There was positive influence between altruistic value (X) on personal norm (Y)                                      | 0,284      | 0.000   | Condition (c) was fulfilled (to be Sig / otherwise Sig)        |
| H6: There was positive effect of hedonic value on personal norm through new ecological paradigm                     |            |         |  |
| Model 1 ( <i>Direct</i> )   |            |         |  |
| There was positive influence between hedonic value (X) on personal norm (Y)   | 0.255      | 0.000   | Condition (a) was fulfilled (if it became Sig.)                |
| Model 2 ( <i>Indirect</i> )   |            |         |  |
| There was positive influence between hedonic value (X) on new ecological paradigm (intervening)                     | 0.274      | 0.000   | Condition (c) was fulfilled (if it became Sig.)                |
| There is an influence positive relationship between the new ecological paradigm (Intervening) and personal norm (Y) | 0.214      | 0.000   | Condition (b) was fulfilled (if it became Sig.)                |
| There was positive influence between hedonic value (X) on personal norm (Y)   | 0.199      | 0.000   | Condition (c) was fulfilled (if it became Sig / otherwise Sig) |
| H7: There was positive effect of new ecological paradigm on green purchases behavior through personal norm          |            |         |  |
| Model 1 ( <i>Direct</i> )   |            |         |  |
| There was positive influence between new ecological paradigm (X) on green purchases behavior (Y)                    | 0.557      | 0.002   | Condition (c) was fulfilled (if it became Sig / otherwise Sig) |
| Model 2 ( <i>Indirect</i> )   |            |         |  |
| There was positive influence between new ecological paradigm (X) on personal norm (Intervening)                     | 0.442      | 0.000   | Condition (a) was fulfilled (if it became Sig.)                |
| There was positive influence between personal norm (intervening) on green purchases behavior (Y).                   | 1.014      | 0.000   | Condition (b) was fulfilled if it became Sig / otherwise Sig)  |
| There was positive influence between the new ecological paradigm (X) on green purchases behavior (Y)                | 0.086      | 0.590   | Condition (c) was fulfilled (if it became Sig.)                |

#### 4 Conclusion, Implication and Suggestions

Based on the results of hypothesis test that had been done, it can be concluded that hedonic value, new ecological paradigm and personal norm are factors that form green purchase behavior. Meanwhile, altruistic value, either directly or indirectly, it does not influence the new ecological paradigm and personal norm. Lacking attention of Indonesian people to environment is one of the reasons why altruistic value does not become influencing factor. Altruistic value encourage consumer behavior which has responsible for environment when consuming natural immune vitamin because it influences consumers' decision-making processes based on benefits for society and the environment itself [12], [34].

The implication of this research suggests that pharmaceutical companies, in order to increase the consumers of green purchase behavior, especially immune vitamin products containing natural ingredients during the COVID-19 pandemic, companies must give the influence of hedonic value. Providing value which will be received by individuals based on pleasure. For example, presenting influencers using same immune vitamin products to get their attention. Some suggestions for further researchers, First the research which conducted at this time is the product of pharmaceutical industry. Further research can examine the food and beverage industry products, or online retail products. Second, further research can add pro-environmental belief variable Jaini et al. and Bruhn, as a mediating variable between the altruistic value variable and new ecological paradigm [6], [35].

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