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CONSUMER BEHAVIOUR | RESEARCH ARTICLES

Purchase Intention of Environmentally Friendly Milk Bottles: Role of Product Knowledge and Environmental Concern

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Abstract: Environmental pollution poses a significant global challenge. The use of environmentally friendly milk bottles can minimize the impact of pollution and is a safer choice, especially for infants. This study aimed to analyze the effect of product knowledge and environmental concerns on the purchase intention of environmentally friendly milk bottles. Employing a quantitative approach, the study involved 100 respondents selected through purposive sampling. The findings show the simultaneous impact of product knowledge and environmental concerns on the intention to purchase environmentally friendly milk bottles. This implies that higher consumer knowledge about the product and increased environmental awareness is positively correlated with a greater inclination to buy environmentally friendly milk bottles. The implication of this study underscores the importance of promoting awareness and education regarding the use of environmentally friendly products to enhance consumer intentions toward such products.

Keywords: environmental concern, product knowledge, purchase intention

JEL Classification: D83, E23, L67, Q57

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PUBLIC INTEREST STATEMENT

The challenges faced in this study include the need for more environmentally friendly milk bottles today. The study shows that consumers who have a view of concern for the environment prefer to use environmentally friendly products compared to conventional products, so it is expected that information about environmentally friendly products can be included on the product, in addition to the importance of efforts to socialize the use of environmentally friendly products in order to increase purchase intent towards environmentally friendly products. The results of this study can be used as reference material for the public to understand the usefulness of environmentally friendly milk bottle products, which are considered safer for consumption and friendly to the environment.





1. Introduction

The birth rate in Indonesia is on an upward trend, ranking fourth globally, following the United States (Worldometer, 2021). Data from the Central Bureau of Statistics in 2017, reveals that Insdonesia's average woman of childbearing age has more than two children. Milk bottles have become essential items in countries with high birth rates. Milk bottles are necessary for mothers with infant-aged children, especially for those who are employed or opt for formula milk. It is crucial to consider the contents of the milk bottle because the milk preparation process often involves an initial heating stage. During this heating stage, compounds from the milk bottle can be mixed with milk for baby consumption. Bisphenol A (BPA) is a joint compound found in plastic. According to the Ministry of Health of the Republic of Indonesia (2015), BPA exposure can occur through packaging or containers containing such compounds. Therefore, when heated, it may adversely affect the food or liquid stored therein.

Companies are encouraged to increase consumer participation in environmental knowledge and concerns. The first is the development of various marketing strategies that can attract consumers while providing solutions to environmental problems. Currently, green products are an example of a strategy designed by companies. According to Ariyanti and Iriani (2014), green products are industrial products produced using environmentally friendly technology that does not burden the environment. Lin and Huang (2012) mentioned that green products were created in an effort to solve problems related to waste, noise, and environmental damage in general and are a way to produce more valuable products and services.

Consumer intention to buy a product can be based on a number of factors, one of which is an understanding of the product or product knowledge. Information about a product is essential because it can increase consumer understanding and influence product purchase intentions. According to Lin & Lin (2007), consumers with higher product knowledge have a higher purchase intent than consumers with lower product knowledge. Rini et al. (2017) suggested that this purchase intention can occur when a consumer is interested in specific product information. Information about a product is obtained through advertisements, the experience of people who use the product, or the urgent need for a particular product. Product knowledge is a collection of product information including product categories, brands, product terms, product attributes or features, product prices, and reviews from consumers who have used the product (Saputro et al., 2016).

Engel et al. (1994) stated that the driving factors for a consumer to form purchase intentions and knowledge about products contained in individual factors are also environmental factors, including culture, social class, family, and circumstances when purchasing products. Currently, environmental damage is often discussed by all circles of society because the impact of widespread environmental damage is felt by humans and concerns about the future of humankind.

Environmental pollution problems arise from activities carried out by people in an environmentally unfriendly way that contributes to environmental problems, especially global warming (Rini et al., 2017). Environmental concerns lead to a person's pro-environmental behavior, which encourages them to behave in an environmentally friendly manner. If consumers have a positive attitude toward environmental problems, their behavior or focus is to obtain help that leads to environmental awareness and concern (Laksmi & Wardana, 2015).

The annual volume of DKI Jakarta waste that ended at the Bantar Gebang landfill at the end of 2018 increased by 10.2% or 2.73 million tons compared with the previous year of 2.47 million tons in 2017 (Akbar, 2019). In addition, data from the Ministry of Environment indicate that most sources of waste are household waste, with a total of 38.3%. In contrast, data on plastic waste occupies the second position with the highest distribution of waste by type, reaching a total of 17.2% (Ministry of Environment and Forestry, 2020). Over time, if the problem is not resolved or reduced, environmental conditions will be further aggravated in the future.

Certain companies have incorporated the concept of environmentally friendly products into manufacturing milk bottles. Nevertheless, products bearing green labels typically command a higher price because of the use of high-quality materials, which may dampen purchase intent (Savitri et al., 2016). The introduction of innovative products is not necessarily accompanied by a corresponding increase in consumer purchase intentions centered on environmental considerations.

Product knowledge and environmental awareness were selected as the variables in this study because they can become determinant factors for mothers in purchasing milk bottle products for their children to minimize the impact of environmental pollution, and environmentally friendly products are considered safer for consumption, especially for babies. Therefore, it is essential for mothers to have environmental awareness in tackling pollution problems by increasing their knowledge about environmentally friendly milk bottle products before buying milk bottles that are safe for their children to consumers.

2. Literature Review

The author found the results of previous research conducted by Park and Oh (2014) using a survey of 330 male and female fashion consumers aged 20 to 40 years who purchased environmentally friendly fashion products. This study shows that ecofriendly attitudes affect purchase intention. This is in accordance with the results of research conducted by Laksmi and Wardana (2015) that environmental awareness positively and significantly influences purchase intention.

Green purchase refers to the idea that, in addition to criteria such as price and efficiency, consumers pay attention to environmental issues, such as minimizing harmful environmental effects and enhancing resource efficiency when they want to buy something (Kordshouli & Boozanjani, 2012). The behavior of consumers who support the environment differs from the general purchase behavior. General purchase behavior is based on the evaluation of costs and benefits (Zarei & Mirzaei, 2022).

Roberti's (2014) study indicates consumption patterns in line with what students learn from their families. The patterns taught by their mothers include selecting the type of outlet and the type of product or brand purchased, the purpose of which is to optimize the price and quality of the product according to family values and lifestyle.

Research conducted by Manuarang and Mawardi (2018) showed that product knowledge significantly affects purchase intention. This opinion is also in line with research conducted by Lin and Lin (2007), that the higher the consumer's product knowledge, the more purchase intent.

In addition, Fadliyah (2021) explains that the fact that advertisements are quite informative and convincing can explain why there is a significant relationship between belief in the truth of advertisements and consumer behavior toward branded products. Remembering advertising content is important because the source of product information significantly influences consumers' behavior as savvy consumers (Setianingrum & Yuliati, 2017).

3. Conceptual Framework

Knowledge of the product owned by the consumer can be a determining factor for consumers in making purchases of products before they make purchases first. The purchase intention of a product arises because of an impulse or motivation from within the consumer, which is preceded by the process of extracting information, from the process of extracting information that makes consumers have knowledge about a particular product. Consumers' knowledge of products can also be influenced by environmental awareness. Consumers with a high level of awareness about maintaining a healthy environment tend to find safe and environmentally friendly products for consumption.

Consumers' environmental awareness affects product selection during the purchasing process. Consumers with high environmental awareness tend to choose eco-friendly products; even though they are valued as more expensive, they are willing to spend more money to preserve the environment. This study was conducted to determine the extent of the influence of knowledge about milk bottle products and environmental awareness on the intention to purchase environmentally friendly milk bottle products. In this case, research was conducted on mothers with children aged 0 months to 2 years who use milk bottles as a tool for babies to consume milk.

The first hypothesis was that product knowledge influences purchase intentions for environmentally friendly milk bottle products. The second hypothesis was that environmental concerns influence the intention to purchase environmentally friendly milk bottle products. The third hypothesis was that product knowledge and environmental concerns influence the intention to purchase environmentally friendly milk bottle products. Based on the literature review, the conceptual framework of this study is presented in Figure 1.

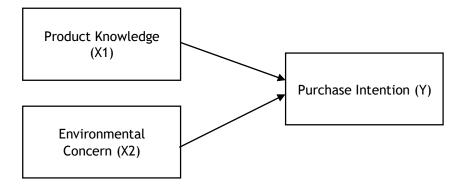


Figure 1. Conceptual framework



4. Methods

4.1 Participant

The population in this study are mothers of children under two years old around the East Jakarta Area. Given the uncertainty of daily milk bottle consumers in East Jakarta and the absence of precise figures, 100 respondents were included in the study. According to Sugiyono's (2018) recommendation, the chosen sample size falls within the appropriate range for research, typically from 30 to 500. Furthermore, if the research involves multivariate analysis, such as correlation or multiple regression, the sample size is determined to be ten times the number of variables. In addition, Rea and Parker (2014) stated that a sample size of at least 100 leads to a sample distribution that approaches a standard curve. A purposive sampling method was employed, selecting subjects or samples based on specific criteria. The sample characteristics for this study included residence in the East Jakarta area, having children aged 0-2 years, and breastfeeding children using milk bottles.

4.2 Measurement

The data obtained in this study was based on three questionnaires. The product knowledge questionnaire was adapted from research conducted by Braunsberger et al. (2008) to measure consumer product knowledge. Product knowledge is information received and stored in the consumer's memory as an indication of the product that has been communicated by the marketer, which can be measured using dimensions taken from the product knowledge category, namely, subjective and objective knowledge. The total number of indicators was 16, with a Likert scale ranging from one to four. The Environmental concern questionnaire was adapted from the International Social Survey Program (ISSP) based on research by Franzen and Vogl (2013) to measure environmental concern. Environmental concern is a person's committed attitude towards environmental issues as an effort to repair damage to the existing natural environment, which can be measured using the dimensions of the conative, cognitive, and emotional components. The total number of indicators was 18, with a Likert scale ranging from one to four.

The purchase intention questionnaire was adapted based on research conducted by Hosein (2015) to measure purchase intention. Purchase intention is a process of interest within the consumer before making a purchase based on comparisons, which are used as alternatives and can be measured using dimensions such as interest, attendance, information, evaluation, and intention. The total number of indicators was 18, with a Likert scale ranging from one to four.

Based on the validity test, there were three invalid items for the product knowledge instrument, two for the environmental concern instrument, and two for the purchase intent instrument. After removing invalid items, the correlation coefficient results ranged from 0.407 to 0.944, showing that the correlation value was more significant than 0.3, indicating that the indicator was valid. Reliability testing in this study was performed using Cronbach's Alpha (α). Whether a variable is reliable can be concluded if it shows a Cronbach Alpha (α) value of > 0.7 (Ghozali, 2013). Table 1 shows that the measurement of all the variables from the questionnaire in this study was reliable. This is shown by the Cronbach's alpha (α) value results for each variable, which are greater than 0.7.

Table 1. Reliability test results

Variables	Cronbach alpha	Conclusions	
Product knowledge	0.951	Reliable	
Environmental concern	0.944	Reliable	
Purchase intention	0.960	Reliable	

A normality test was performed to determine whether the data distribution used for each variable was in the normal category. The normality test used in this study was the estimation error of Lilliefors at α = 0.05. The calculation results of the product knowledge normality test (X1) on purchase intention (Y) show that t-value (0.083) \leq t-table (0.094), indicating that the sample data are typically distributed. The results of normality between environmental concern (X2) and purchase intention (Y) show that the t-value (0.070) \leq t-table (0.094) indicates that the sample data come from a normally distributed population.

Multicollinearity testing was used to determine whether a correlation among the independent variables was found in studies using multiple regression models. The presence or absence of collinearity among independent variables can be detected by examining the value of the tolerance and Variance Inflation Factor (VIF) (Sabrudin & Suhendra, 2019).

Table 2. Multicollinearity test results

Variables	Tolerance	Bright
Product knowledge	0.629	1.590
Environmental concern	0.629	1.590

Based on Table 2 of this study's multicollinearity testing results, the tolerance value was 0.629 < 1.0, and the VIF value was 1.590 < 10. So, it can be said that in this study, there are no symptoms of multicollinearity in the regression model.

The heteroskedasticity test was carried out to determine the variance inequality from the residual of one observation to another in the regression model research. Suppose the observation variance is still referred to as homoscedasticity, whereas if the observations are different, it is called heteroscedasticity (Ghozali, 2013). Table 3 shows that the product knowledge variables have a value of $0.440 \ge 0.05$. Furthermore, the variables had a significance value of $0.722 \ge 0.05$ for environmental concerns. Thus, symptoms of heteroskedasticity were not observed in this study.

Table 3. Heteroskedasticity test results

Variable	Sig	Border	Results
Product knowledge	0.440	0.05	No heteroskedasticity
Environmental concern	0.722	0.05	No heteroskedasticity

4.3 Analysis

In this study, data collection techniques used primary data sources obtained through instruments in the form of questionnaires and secondary data obtained through articles, journals, and books. The questionnaire was distributed on several platforms, such as WhatsApp, Instagram, and Facebook.

Respondents were asked to fill in or choose answers that were in accordance with the reality of their lives. Then, the instrument was used to determine the influence



of product knowledge and environmental concern on the purchase intention of environmentally friendly milk bottle products. Furthermore, the research questionnaires were categorized using the cut-off point method. Tam and Tummala (2001) defined the cut-off point method as a method that ascertains the degree of need criteria, whether essential or not. A questionnaire containing existing criteria was distributed to several respondents with experience and expertise in the inventory to be assessed. The scores obtained from the analysis of the indicators were summed and converted into an index. The data were then divided into three categories: low (< 60), moderate (index 60-80), and high (> 80). The point cut-off method was carried out with a categorization formula according to the category value: the number of scores + index score × 100.

5. Findings

In this study, the respondents were 21-41 years old (Table 4). The age categorization of respondents in this study refers to Al-Amin and Juniati (2017), which is divided into late adolescence (age-17-25 years, early adulthood (age-26-35 years, and late adulthood (age-36-41 years). The highest age of the respondents was in the early adulthood category, with an age range of 26-35 years (58%).

Table 4. Characteristics of the respondents

Characteristics	n	%	
Age			
Late teens (17-25 yo)	28	28	
Early adulthood (26-35 yo)	58	58	
Late adulthood (36-45 yo)	14	14	
Education			
Junior high school	6	6	
Senior high school	54	54	
Diploma	10	10	
Bachelor	30	30	
Income			
Low	24	24	
Moderate	44	44	
High	32	32	

The distribution of the respondents' educational data is presented in Table 4. Respondents with the most recent high school education (54%) were the largest group. Respondents with the most recent junior high school education (6%) were the least educated.

Table 4 also shows that respondents' income data are categorized into three groups: the low-income group (<IDR 2,000,000), the moderate-income group (IDR 2,000,000 - IDR 5,000,000), and the high-income group (>IDR 5,000,000). Based on Table 4, respondents' age of income in low-income groups was 24%, moderate income was 44%, and high income was 32%. This finding proves that some respondents had moderate income levels (44%).

5.1 Purchase Intention

Based on Figure 2, it can be seen that the highest age of high purchase intention is found in the interest dimension, reaching 63.0%. This indicates that most consumers shape their purchase intentions based on their interest in a product. This inference was drawn from respondents' reactions to statement items, such as expressing interest

in studying environmentally friendly milk bottles, gaining knowledge about environmentally friendly concepts in milk bottles, and understanding the risks associated with using milk bottles containing harmful compounds (such as bisphenol-A compounds). Figure 2 illustrates the data distribution across the dimensions for the purchase intention.

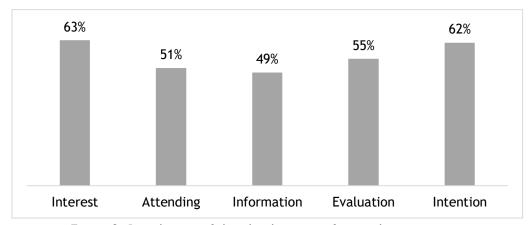


Figure 2. Distribution of data by dimension for purchase intention

By analyzing the frequency distribution for the purchase intent variable, it was determined that more than half of the respondents (57%) received high purchase intention results. Additionally, the respondents demonstrated moderate purchase intention (36%) and low purchase intention (7%). These findings indicate a high level of purchase intention for environmentally friendly milk bottle products in East Jakarta, as evidenced by the high scores across the five indicators of purchase intention measurement: interest, attendance, information, evaluation, and intention.

5.2 Product Knowledge

Examining Figure 3, it is evident that the age of respondents' product knowledge in the objective knowledge dimension was 53%, surpassing the age result for the subjective knowledge dimension, which was 38%. From these findings, it can be inferred that most consumers acquire product knowledge grounded in the objective aspects of a product. This is attributed to the fact that objective knowledge represents factual information about the product, in contrast to subjective knowledge, which hinges on consumer perceptions.

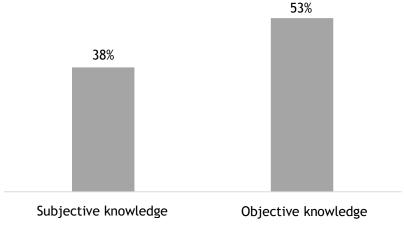


Figure 3. Data distribution by dimension for product knowledge



Based on the results of the frequency distribution for product knowledge variables, it was found that the majority of respondents (45%) obtained similar results, falling within the high and moderate categories of product knowledge. Meanwhile, 10% of the respondents fell in the low category.

5.5 Environmental Concern

Based on Figure 4, it is evident that the cognitive component dimension recorded the highest age of respondents' environmental concerns (59%). This suggests that the majority of consumers develop environmental concerns based on the information they receive, leading to the formation of thoughts regarding the environment.

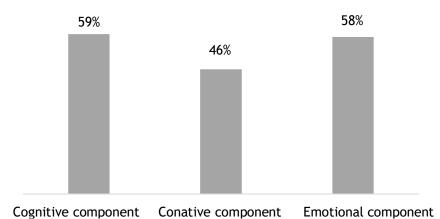


Figure 4. Distribution of data by dimension for environmental concern

Based on the results of the frequency distribution for environmental concern variables, half of the respondents received high environmental concern results (53%). Approximately four out of ten respondents had moderate environmental concerns, and only 6% of respondents had low environmental concerns. Consumers with environmental concerns tend to buy and use environmentally friendly products.

Based on Table 1, a p-value of 0.000 < 0.05 which means that there is a linear influence of product knowledge variables and environmental concern on purchase intention, which means that there is a significant influence of product knowledge and environmental concern variables on purchase intention. This also means that product knowledge and environmental concerns simultaneously influence purchase intention.

The first hypothesis test shows that product knowledge affects purchase intention with a regression coefficient value of 0.573 (p-value < 0.05), which means that every unit increase in product knowledge increases purchase intention by 0.573. This finding implies that product knowledge can influence consumers' purchase intentions. Moreover, the second hypothesis test shows that environmental concern affects purchase intention with a regression coefficient value of 0.524 (p-value < 0.05), which means that every unit increase in the environmental concern variable increases purchase intention by 0.524.

The initial hypothesis examination indicates that product knowledge has a significant impact on purchase intention, as evidenced by the regression coefficient of 0.573 (p-value < 0.05). This signifies that for each unit increase in the product knowledge variable, there is a corresponding increase in purchase intention of 0.573 units. This

underscores the influence of product knowledge on shaping consumers' purchase intentions. Additionally, the second hypothesis test reveals that environmental concern significantly affects purchase intention, as indicated by a regression coefficient of 0.524 (p-value < 0.05). This implies that with each unit increase in the environmental concern variable, there is a corresponding increase in purchase intention of 0.524 units.

Table 5. Analysis of variance (ANOVA)

Model	Sum of	df	Mean of	F	Sig.
	squares		squares		-
Regression	5599.029	2	2799.515	115.274	0.000b
Residual	2355.721	97	24.286		
Total	7954.750	99			

Note: Dependent Variable: purchase intention (Y); predictors: (constant), environmental concern (X_2) , and product knowledge (X_1) .

The third hypothesis test shows that product knowledge and the environmental concern variable have a simultaneous effect on purchase intention, with a double correlation coefficient value (Ry.12) of 0.839 and f-value = 115.274, and a p-value of 0.000 < 0.05, which means that the double correlation coefficient between product knowledge and environmental concern with purchase intention is significant. The result of calculating the value of the coefficient of determination is 0.704, which means that 70.4% of purchase intention (Y) can be explained by product knowledge (X1) and environmental concern (X2). Thus, it can be concluded that the influence of product knowledge and environmental concern on purchase intention was 70.4%. The remaining 29.6% were explained by other variables that were not included in the study.

6. Discussion

The results of this study showed that the majority of respondents were in the early adulthood category, with an age range of to 26-35 years. One of the tasks at this time is to educate or nurture children because this period is the peak of physical developmental maturity, as well as a transition period from dependence to independence (Jannah et al., 2021). Based on the results, there was a relationship between the age of the respondents and high purchase intention. This is because early adulthood can make its own choices, including the choice to choose specific products to form the desire to buy in the form of intentions. In addition, the majority of the respondents' education was high school. Based on the results of the chi-square test, education was associated with high purchase intention. The higher the level of education, the greater the knowledge obtained, which increases the purchase intention. Most respondents had a moderate income level. Based on the results of the chi-squared test, there was no relationship between income and purchase intention. Thus, low, moderate, and high-income groups are not always followed by high purchase intention.

This study shows that product knowledge affects purchase intention and that the more information consumers receive about a product, the more it will increase their purchase intention. In line with this opinion (Annisa & Wijaya, 2019), the basis for consumer decision-making is when they have information. In addition, the results of Manuarang and Mawardi (2018) also show that product knowledge significantly affects purchase intention, with an adjusted R Square value of 0.508 or 50.8%. Based on the results of the research conducted and the results of previous research, it can be concluded that product knowledge has a positive influence on purchase intention.

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That is, the higher the product knowledge owned by consumers, the higher the level of purchase intention, especially for environmentally friendly milk bottle products. Product knowledge has two dimensions: subjective and objective.

The subjective knowledge dimension describes the extent to which respondents' knowledge of a product refers to consumers' perceptions of their product knowledge. In this study, respondents' subjective knowledge was obtained through indicators of their feeling of knowing about the product based on their memory, their views about their knowledge of the product to others, and the intensity of respondents about the product. According to the results of research conducted on the subjective knowledge dimension, the objective knowledge dimension is the amount, type, and structure of information received by consumers in their memory or refers to the extent to which consumers know a product in reality. Objective knowledge relates to the consumer's actual knowledge or actual knowledge. In this study, respondents' subjective knowledge was obtained through indicators of their actual knowledge of the usefulness of milk bottles and their actual knowledge of the composition of milk bottles. According to the results of research conducted in the objective knowledge dimension, some respondents have objective knowledge about the product. The results show that consumers' product knowledge is more significant in the objective knowledge dimension. This is because objective knowledge is actual knowledge about the product, in contrast to subjective knowledge, which relies on consumer perception.

Product knowledge is the communication carried out by marketers to provide instructions on the products they offer to consumers (Wardhana & Iba, 2014). Product knowledge for consumers refers to the information received and stored in the consumer memory in the form of a clue to the product communicated by marketers. This knowledge can be considered when choosing products that will be purchased or used by consumers. This is in line with the opinion of Manuarang and Mawardi (2018) that higher consumer knowledge of a product can increase their ability to make choices. Based on the results of this study, we conclude that product knowledge can affect consumers' purchase intentions. The more information consumers receive about a product, the more it will increase product knowledge, which can increase consumer purchase intention. In line with Annisa and Wijaya's (2019) opinion, consumers will generally make choices after obtaining information that forms the basis for decision-making. Therefore, it is crucial for consumers to increase their knowledge of their products in order to choose products with certainty.

Other results show that environmental concern affects purchase intention; in other words, increasing consumer concern for the environment will increase consumer intention to buy or use green products because green products are considered safer for consumption and do not cause damage to the environment. In line with this opinion (Rusniati & Rahmawati, 2019), environmentally friendly products do not negatively impact human health or pose a potential danger to the environment. Consumers who are concerned about the environment prefer green products to conventional ones.

The results of research that are relevant to the results of this study, namely research conducted by Nilasari and Kusumadewi (2016), show that environmental concern has a positive and significant effect on the intention to buy green products. In addition, research conducted by Saraswati and Suprapti (2015) shows that concern for the environment has a positive effect on the purchase intention of environmentally friendly products. Based on the results of the research conducted and those of previous studies, it can be concluded that environmental concern has a positive influence on purchasing intentions. That is, the higher the environmental concern a

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person has, the higher the level of purchase intention, especially for environmentally friendly milk bottle products. Environmental concern is an attitude and action that seeks to prevent damage to the surrounding natural environment and develop efforts to repair the natural damage that has occurred (Mukminin, 2014). Environmental concern refers to an attitude of commitment shown by someone to environmental issues as an effort to repair the damage that occurs in the natural environment. The use of products with environmentally friendly labels, commonly called green products (green products), is an effort to overcome environmental damage.

The results of Hypothesis 3 show that product knowledge and environmental concerns affect the purchase intention. These findings are in line with Rusniati and Rahmawati (2019), which state that green products are environment-friendly products made with the aim of anticipating sustainable environmental damage. Therefore, it is essential for consumers to increase their environmental awareness and prefer environmentally friendly products to conventional products. Environmental concerns have three dimensions, namely, cognitive, conative, and emotional. The cognitive component dimension indicates that a person has rational insights into an environmental problem (Franzen & Vogl, 2013). In this study, the cognitive component of the respondents was obtained through indicators of knowledge about the environment, skills that improve with the respondents' behavior towards the environment, and information received by respondents regarding environmental issues. According to the results of the research, the majority of respondents were in the high category in the cognitive component dimension. The conative component dimension means that a person is willing to do something about something that will result in an action (Franzen & Vogl, 2013). In this study, the respondents' conative component was obtained through indicators of their actions in an effort to preserve the environment and their activities in daily life.

Based on the results of this study, it was shown that, in the conative component dimension, the majority of respondents were in the high category. The emotional component refers to emotional reactions arising from environmental problems (Franzen & Vogl, 2013). In this study, the emotional component of respondents was obtained through indicators of feelings of worry about the environment in the present and future. The results of the research showed that, in the emotional component dimension, the majority of respondents were in the high category. The results show that consumers' environmental concerns were more significant in the cognitive component dimension. This is because increasing information about environmental sustainability and damage can increase consumers' insight into the environment to form a level of concern. In line with Cruz and Prabawani (2017), increasing environmentally friendly consumption can be achieved by increasing consumers' environmental awareness through the use of information that can foster consumers' cognitive attitudes, which can help reduce the impact on the environment.

Based on the results of this study, it can be said that the higher the level of consumer concern for the environment, the higher the intention to buy or use green products, because green products are considered safer for consumption and do not cause damage to the environment. In line with Rusniati and Rahmawati (2019), green products do not cause adverse effects on human health and do not have the potential to damage the environment. Thus, consumers who are concerned about the environment prefer green products to conventional ones. Consumers' knowledge of products is formed through information received by consumers about products, which ultimately forms consumer knowledge that is considered when choosing products to be purchased. The more information received, the more knowledge consumers have about their products. In addition, consumers' environmental concerns influence the

purchase of goods. Thus, consumers who are concerned about the environment prefer environmentally friendly products. Research conducted by Fannani and Najib (2020) explains that social media has a significant and positive effect on consumers' attention, interest, and search factors. Consumers' knowledge of products is formed through the information they receive from the products.

Based on this information, it finally forms knowledge that is remembered by consumers, so that it can be a reference when choosing a product to buy. The amount of information received further increases consumers' knowledge of a product. In addition, consumers' environmental concerns influence the purchase of goods. Concern about the environment refers to a consumer's view of life that is more concerned about the environment, so consumers with environmental concerns tend to decide to consume products labeled as environmentally friendly as well. The limitations of this study include the limited number of instruments and sample size. We hope that this study will be redeveloped.

7. Conclusion

The findings of this study indicate that respondents predominantly fall within the high and moderate categories of product knowledge, with environmental concerns predominantly falling into the high category. Likewise, most respondents expressed a high level of intention to purchase environmentally friendly milk bottle products. The results of the multiple regression test suggest that both product knowledge and environmental concerns significantly influence the intention to purchase environmentally friendly milk bottle products.

8. Recommendation

Product knowledge and environmental concerns are crucial in shaping the intention to purchase environmentally friendly milk bottle products. Consumers with higher knowledge levels are more adept at making informed purchasing decisions. Therefore, companies should be encouraged to provide comprehensive and easily comprehensible product information. Similarly, consumers who prioritize environmental considerations tend to prefer environmentally friendly products to conventional ones. Consequently, it is recommended to incorporate information about product's environmental attributes and efforts to promote the adoption of environmentally friendly items. The outcomes of this study provide valuable information for the public, especially in understanding the benefits associated with environmentally friendly milk bottle products, which are perceived as safe for consumption and environmentally sustainable.

Citation information

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References

Akbar, A. (July 19, 2019). Volume
Sampah DKI Jakarta di TPST
Bantar Gebang, 2018. Portal
Statistik Sektoral Provinsi DKI
Jakarta. Retrieved from
https://statistik.jakarta.go.id/vo
lume-sampah-di-tpst-bantargebang-2018/

Al -Amin, M., & Juniati, D. (2017). Klasifikasi kelompok umur

- manusia berdasarkan analisis dimensi. *Jurnal Ilmiah Matematika*, 2(6), 1-10. Retrieved from https://ejournal.unesa.ac.id/ind ex.php/mathunesa/article/view/ 19398
- Annisa, I. T., &; Wijaya, A. P. (2019).
 Pengaruh Keterlibatan dan
 pengetahuan produk terhadap
 keputusan pembelian jamu
 masuk angin kemasan.
 Management Insight: Jurnal
 Ilmiah Manajemen, 14(2), 122137. https://orcid.org/00000001-7807-2969
- Ariyanti, K., & Iriani, S. S. (2014).

 Pengaruh persepsi nilai dan
 persepsi resiko terhadap niat beli
 kosmetik organik. *Jurnal Ilmu Manajemen*, 2(4), 1186-1196.
 Retrieved from
 https://ejournal.unesa.ac.id/ind
 ex.php/jim/article/view/10212
- Braunsberger, K., Buckler, R. B., & Luckett, M. (2008). Dimensions of total product knowledge in a service environment. *Journal of Services Marketing*, 22(7), 505-519. https://doi.org/10.1108/0887604 0810909640
- Cruz, M. U. M., & Prabawani, B. (2017). Environmentally friendly consumer: Green consumptionbehavior of Civitas Academica University of Diponegoro. *Journal of Business Administration*, 6(1), 39-47. http://dx.doi.org/https://doi.org/10.14710/jab.v6i1.16605
- Engel, J. F., Blackwell, R. D., & Miniard, P. W. (1994). Consumer Behavior (6th ed.). New York: Literacy Architecture.
- Fadliyah, H., Nurwahyuni, A., & Faradiba. (2021). Community consumption of traditional medicine and health supplements during the coronavirus disease-2019 pandemic. *Journal of Consumer Sciences*, 6(2), 92-110. https://doi.org/10.29244/jcs.6.2.92-110

- Fannani, S. I., & Najib, M. (2020). The effect of social media towards organic food literacy and purchase intention with aisas model. *Jurnal Manajemen & Agribisnis*, 17(3), 285-285.https://doi.org/10.17358/jma.17.3.285
- Franzen, A., & Vogl, D. (2013). Two decades of measuring environmental attitudes: a comparative analysis of 33 countries. *Global Environmental Change*, 23(5), 1001-1008. https://doi.org/10.1016/j.gloenv cha.2013.03.009
- Ghozali, I. (2013). Application of Multivariate Analysis with IBM SPSS 21 Program. Diponegoro: University Publishing Board.
- Hosein, N. Z. (2015). Measuring the purchase intention of visitors to the auto show. Journal of Management & Marketing Research, 9(1), 1-17. Retrieved from https://www.researchgate.net/publication/310505717_Measuring _behavior_after_attending_the_Auto_Show
- Jannah, M., Kamsani, S. R., & Ariffin, N. M. (2021). Perkembangan usia dewasa: Tugas dan hambatan pada korban konflik pasca damai. Bunayya: Jurnal Pendidikan Anak, 7(2), 115-143. https://doi.org/10.22373/bunayya.v7i2.10430
- Laksmi, A., & Wardana, I. (2015). The role of attitude in mediating the influence of environmental awareness on the purchase intention of eco-friendly products. *E-Journal of Management Udayana University*, 4(7), 253559. Retrieved from https://ojs.unud.ac.id/index.php/manajemen/article/view/12566
- Lin, N. H., & Lin, B. S. (2007). The effect of brand image and product knowledge on purchase intention moderated by price discount. *Journal of International Management*

- Studies, 2(2), 121-132. Retrieved from
- https://www.semanticscholar.or g/paper/The-Effect-of-Brand-Image-and-Product-Knowledgeon-Lin-
- Lin/6d4b19b0c0bd9e71622e65eff f18575ee376b3c8
- Lin, P. C., & Huang, Y. H. (2012). The influence factors on choice behavior regarding green products based on the theory of consumption values. *Journal of Cleaner Production*, 22(1), 11-18. https://doi.org/10.1016/j.jclepr o.2011.10.002
- Manuarang, R. N., & Mawardi, M. K. (2018). Pengaruh product knowledge terhadap purchase intention (survei pada pengunjung toko buku UB Press, Kota Malang). Jurnal Administrasi Bisnis (JAB), 55(3), 41-47. Retrieved from http://administrasibisnis.student journal.ub.ac.id/index.php/jab/article/view/2299
- Ministry of Environment and Forestry. (2020). SIPSN: Garbage composition graph. Ministry of Environment and Forestry. Retrieved from https://sipsn.menlhk.go.id/sipsn/
- Ministry of Health of the Republic of Indonesia. (2015). Dangers of Bisphenol A. Retrieved from http://ik.pom.go.id/v2014/artik el/Bahaya-paparan-Bisphenol-A.pdf
- Mukminin, A. (2014). Strategi pembentukan karakter peduli lingkungan di sekolah adiwiyata mandiri. *Ta'dib: Jurnal Pendidikan Islam*, 19(02), 227-252.
 - https://doi.org/https://doi.org/ 10.19109/td.v19i02.16
- Nilasari, H., Putu, N., & Kusumadewi, M. W. (2016). Peran sikap dalam memediasi pengaruh kepedulian lingkungan terhadap niat beli kosmetik hijau merek The Body

- Shop (Doctoral dissertation, Udayana University).
- Park, S. H., & Oh, K. W. (2014).
 Environmental knowledge, ecofriendly attitude and purchase
 intention about eco-friendly
 fashion products of fashion
 consumers. Fashion & Textile
 Research Journal, 16(1), 91-100.
 https://doi.org/10.5805/SFTI.20
 14.16.1.91
- Kordshouli, H. R., & Boozanjani, A. A. (2012). Investigating the effect of green marketing mix on consumers green purchase decision (study in consumers of Shiraz Pegah Dairy Product Company). New Marketing View Journal, 2(2),165-180. Retrieved from https://nmrj.ui.ac.ir/article_175 94.htm
- Rea, L. M., & Parker, R. A. (2014).

 Designing and Conducting Survey
 Research: A Comprehensive
 Guide. New York: John Wiley &
 Sons
- Rini, A. S., Sukaatmadja, I. P. G., & Giantari, I. G. A. K. (2017).

 Pengaruh pengetahuan lingkungan dan kepedulian lingkungan terhadap sikap dan niat beli produk hijau "The Body Shop" di Kota Denpasar. *E-Jurnal Ekonomi dan Bisnis Universitas Udayana*, 6(1), 137-166.

 Retrieved from https://ojs.unud.ac.id/index.php/EEB/article/view/23972
- Roberti, G. (2014). The influence of family socialization on consumer choices of young people. A case study of female university students. Italian *Journal of Sociology of Education*, *6*(3), 41-69. https://doi.org/10.14658/pupjijse-2014-3-4
- Rusniati, R., & Rahmawati, R. (2019). Green product: the influence of product knowledge, purchasing knowledge and usage knowledge on purchasing decisions. Jurnal INTEKNA: Informasi Teknik dan

Niaga, 19(1), 60-68. Retrieved from

https://ejurnal.poliban.ac.id/ind ex.php/intekna/article/view/727

- Sabrudin, D., & Suhendra, E. S. (2019). Dampak akuntabilitas, transparansi dan profesionalisme paedagogik terhadap kinerja guru di SMKN 21 Jakarta. *Jurnal Nusantara*, 4(1), 38-52. https://doi.org/10.29407/nusamba.v4i1.12848
- Saputro, D., Rintayati, P., & Supeni, S. (2016). Hubungan pengetahuan lingkungan, tingkat sosial ekonomi dan tingkat pendidikan terhadap sikap peduli lingkungan (pada ibu rumah tangga di Desa Jati Agung Kecamatan Ambarawa Kabupaten Pringsewu Lampung Tahun 2015). *GeoEco Journal*, 2(2), 128-136. Retrieved from https://jurnal.uns.ac.id/GeoEco/article/view/8926
- Saraswaty, W., & Suprapti, N. W. S. (2015). Peran sikap dalam memediasi pengaruh kepedulian lingkungan terhadap niat beli produk ramah lingkungan (studi pada Produk Tupperware) (Doctoral dissertation, Udayana University).
- Savitri, M. H., Suhariyono, &;
 Kusumawati, A. (2016).
 Keberhasilan pembelian dan
 kepuasan konsumen (survei
 konsumen Tupperware Pada
 distributor resmi PT Adicitra
 Prima Kencana Malang). Journal
 of Business Administration,
 40(2), 7-16. Retrieved from
 http://administrasibisnis.student
 journal.ub.ac.id/index.php/jab/
 article/view/1601
- Setianingrum, M. F., & Yuliati, L. N. (2017). Effect of consumer awareness of education material, source of information, and value of materialism on behavior as a smart adolescent consumer.

 Journal of Consumer Sciences, 2(2), 41-56.

 https://doi.org/10.29244/jcs.2.2.41-56

JOURNAL OF CONSUMER SCIENCES

- Sugiyono. (2018). *Metode Penelitian Kuantitatif*. Bandung: Alfabeta.
- Tam, M. C., & Tummala, V. R. (2001). An application of the AHP in vendor selection of a telecommunications system. *Omega*, 29(2), 171-182. https://doi.org/10.1016/S0305-0483(00)00039-6
- Wardhana, A., & Iba, Z. (2014).

 Pengaruh penjualan personal
 terhadap pengetahuan produk
 dan implikasinya terhadap
 keputusan pembelian Mobil SUV
 premium di Jawa Barat. *Jurnal Kebangsaan*, 3(5), 1-10.
 Retrieved from
 https://ppsmm.uniki.ac.id/wpcontent/uploads/2021/05/Zainud
 din-Aditya.pdf
- Worldometer. (2021). Top 20 largest countries by population (live).
 Retrieved from https://www.worldometers.info/world-population/
- Zarei, G., & Mirzaei, K. (2022).
 Impact of perceived social responsibility on consumers' green perception and green behavior: the moderating role of personality traits. *Journal of Consumer Sciences*, 7(2), 168-188.

https://doi.org/10.29244/jcs.7.2 .168-188