

Green Behavior and Intention to Charity on Disposal of Baby Equipment Products

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Abstract. An effort to reuse products that are no longer used is one example of environmentally friendly behaviour. A mother's effort to recycle baby equipment products is also another example of environmentally friendly behavior. The purpose of this study to understand the impact of awareness the environment and recycling behavior on giving to family or friends disposal behavior, donating to charity disposal behavior, and recycling behavior. This study involved 216 respondents. Analytical technique used is structural equation modeling (SEM). The result of this study shows that awareness of the environment does have an impact to giving to family or friends behavior and recycling behavior, where recycling behavior has an impact on economic disposal behavior and giving to family or friends behavior, while awareness of the environment has no impact on donating to charity disposal behavior and recycling behavior has no impact on donating to charity disposal behavior. Hopefully, the result to this study brings contribution to the development of green marketing concept.

Keywords: environment, recycling behavior, donating, economic disposal behavior.

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INTRODUCTION

Total population of Indonesia keeps on growing year by year. Data from National Population and Family Planning Agency of Indonesia shows that, every year, there are approximately 4.2 million up to 4.8 million babies born in Indonesia (Munafe, 2019). The large amount of baby birth rate increases market potential of baby products into an interesting segment to pay attention to. However, as babies grow up, baby equipment products are rarely used or even not being used any longer, which boosts baby equipment products disposal behavior.

Disposal behavior is a consumer behavior in making decision when the product is at the stage of no longer being used by consumer (Laitala, 2014). Research on environmental responsibility has been started in the 1970s and 1980s, when a few consumers realized the serious impact of products on the environment (Handriana and Ambara, 2016). Instead, the environmental conditions are very complex and dynamic; companies tend to explore to improve innovation (Winarno and Tjahjadi, 2017; Firmenich, 2019; Kim et al., 2019; Celik, 2019). Consumers with awareness of environment choose not to dispose their unused products in a way that might damage the environment with the perception that stopping the usage of the product will damage the environment. However, consumers need to keep on fulfilling their needs and so, products that they no longer use will pile up and needs to be removed. Bianchi and Birtwistle (2010) Suggest that consumers with awareness of the environment will dispose their unusable products in a way that does not damage the environment by giving those products to their friends or close family and donate them to charity institution. Moreover, environmentally friendly disposal can be done through recycling or reusing products to be sold, given to family or close friends, and donated (Winarno and Tjahjadi, 2017). According to Handriana and Ambara (2016) awareness of the environment factor affects consumer disposal behavior that is not damaging to the environment by giving those unused products to family or close friends and donating them to charity institutions.

THEORETICAL BACKGROUND

Disposal Behavior

Disposal behavior is a consumer behavior in making decision when the product is at the stage of no longer being used by consumer. Disposing behavior is an act of removing something, which is the final stage of clothes' life with the current owner, regardless those clothes will end up as waste, intended to be

recycled, or being reused (Laitala, 2014). There are five motivation factors that influence consumers to dispose products, which include environment, economy, charity, comfort issues, and unavailable information (Bianchi and Birtwistle, 2010). Where consumers decide that products are no longer being used (Bianchi and Birtwistle, 2011), people can store those goods while others might throw them away permanently. This condition can be grouped into three categories: (a) keeping the products, (b) throwing them away temporarily, and (c) disposing them permanently.

Awareness of the Environment

Stern (2000) defines environmentalism as the tendency to act on pro-environment purpose. Pro-environment behavior includes buying and disposing behavior in consuming products. Environmental buying includes buying environmentally friendly products (green products) while environmental disposal behavior focuses on reduction of household waste and promoting recycle and reuse behavior (Joung and Park, 2013). Issues regarding environment have become important issues. Moreover, this increases motivation to recycle (Belli, 2007).

Consumers with positive attitude toward environment participate in clothes recycling such as reselling, donating, or giving those clothes to family and friends (Bianchi and Birtwistle, 2010) and tell this behavior to their family and friends (Winarno and Tjahjadi, 2017).

Recycling Behavior

Recycling is one of so many solid waste management strategies which include activities such as sorting, compiling, processing, distributing, and creating second hand products/ materials, main components in modern waste management, and third part in 4R (Reduce, Reuse, Recycle, and Replace) waste hierarchy process. Consumers who usually recycle materials such as plastic, glass, or paper are more likely to recycle their clothes. Consumers with concern of environment make an effort to dispose their products in a way that will not damage the environment. Moreover, awareness of the environment is linked to recycling behavior (Department for Environment Food and Rural Affairs, 2008). Recycling and reusing bring advantages in sustainable economic and social aspects, such as jobs and incomes generated from reselling textiles (Morgan and Birtwistle, 2019)

Economic Disposal Behavior

Selling unwanted products is one of recycling behavior which bring monetary value to the owner so that consumers can buy other products needed (Cuc and Vidovic, 2011). Consumer disposal behavior is done through selling unwanted clothes to bring monetary advantage, help others through donation, save materials by reusing, bring comfort by throwing products away, and the unavailability of information regarding recycle (Bianchi and Birtwistle, 2010).

Giving to Family or Friends Disposal Behavior

According to Handriana and Ambara (2016), awareness of the environment factor influences disposal behavior by consumers that is not damaging to the environment by giving away unused products to family or close friends and donating them to charity institutions. Giving products to relatives, friends, or acquaintances bring relational value (Denegri-Knott and Molesworth, 2009) while throwing away products brings easiness that saves time and effort (Bianchi and Birtwistle, 2010). Products disposal outside of household by giving away, throwing away, or selling them might give spaces in bedroom and cupboard as well as bring functional value (Department for Environment Food and Rural Affairs, 2008).

Donating to Charity Disposal Behavior

According to Türe (2014), consumers feel better after donating goods they no longer use. Donation is done when clothes are given to organization rather than given to friends or family. These organizations are mostly non-profit with charity purpose while some others might be for-profit organizations. There is no economic benefit to donors. Reasons to donating clothes include the unwillingness to waste clothes, helping the poor, and considering environmental aspects (Ha-Brookshire and Hodges, 2009).

Relationship Between Variables

Awareness of the Environment and Giving to Family or Friends Disposal Behavior

Environmental awareness factors influence the act of disposal carried out by consumers not to damage the surrounding environment by providing products that are no longer used by family or closest friends and donating these products to charitable activities (Handriana and Ambara 2016). Psychologically,

disposing clothes by giving to friends or close family allows individuals to switch to new life stages such as getting variations, avoiding waste and feeling ethical or moral benefits to help someone (Baker, 2011)

H1: Awareness of the environment positively impacts giving to family or friends disposal behavior

Awareness of the Environment and Donating to Charity Disposal Behavior

When consumers dispose of products that have not been used and do not want to damage the environment, consumers will provide these products to people who are more in need without expecting a reward or commonly called donating unused products to organizations or charitable activities. Donations are used when clothing is given to the organization, not to friends or family. These organizations are usually non-profit with charity goals without economic benefits for donors (Morgan and Birtwistle, 2019). Reasons for donating clothing include not wanting to waste clothes to use, helping poor people and, to a small degree, also environmental considerations (Ha-Brookshire and Hodges, 2009).

H2: Awareness of the environment positively impacts donating to charity disposal behavior.

Recycling Behavior and Economic Disposal Behavior

Consumers who will dispose of their unused products by recycling such as reuse or reuse items that can still be used will prefer to dispose of these unused products by selling through different channels such as flea markets or social media (Laitala, 2014), so that the goods it provides profits for consumers who later from the sale can be bought back products that will be used to meet current or future needs or commonly referred to as economic reasons, economic disposal behavior is also expected to have functional value for others and not waste the product not used (Department for Environment Food and Rural Affairs, 2008). Unwanted product sales are one of the recycling behaviors that produce monetary value for the owner so that consumers can buy other products needed (Cuc and Vidovic, 2011).

H3: Recycling behavior positively impact economic disposal behavior

Recycling Behavior and Giving to Family or Friends Disposal Behavior

Consumers who are concerned about the environment are more likely to make efforts to dispose of their products in ways that do not damage the environment (Türe, 2014). Recycling and reuse are useful for economic and social aspects of sustainability, such as work and income from resale textiles (Morgan and Birtwistle, 2019). One way to dispose by not damaging the environment is by using reuse (Handriana and Ambara, 2016) one of the reuse that can be done is by giving to family or close friends, this behavior is chosen by mothers who have babies on the grounds that the product is given unused can increase relational value with recipients of unused products.

H4: Recycling behavior positively impact giving to family or friends disposal behavior.

Recycling Behavior and Donating to Charity Disposal Behavior

Recycling behavior is positively related to disposal methods such as donating to charity (Department for Environment Food and Rural Affairs, 2008). This means that consumers who usually recycle plastic, glass or paper are more likely to recycle their clothes. According to Bianchi and Birtwistle (2010), consumers feel better after donating clothes that they no longer use.

H5: Recycling behavior positively impact donating to charity disposal behavior.

Awareness of the Environment and Recycling Behavior

There is a significant positive relationship between environmental consumer awareness and sustainable disposal behavior (Department for Environment Food and Rural Affairs, 2008). This means that consumers who are aware of environmental issues are more likely to make efforts to dispose of their textile clothing in ways that do not damage the environment. Consumers who are aware of environmental damage will dispose of their unused products by recycling these items with the assumption that recycling will not damage the environment.

H6: Awareness of the environment positively impacts recycling behavior.

Model of Analysis

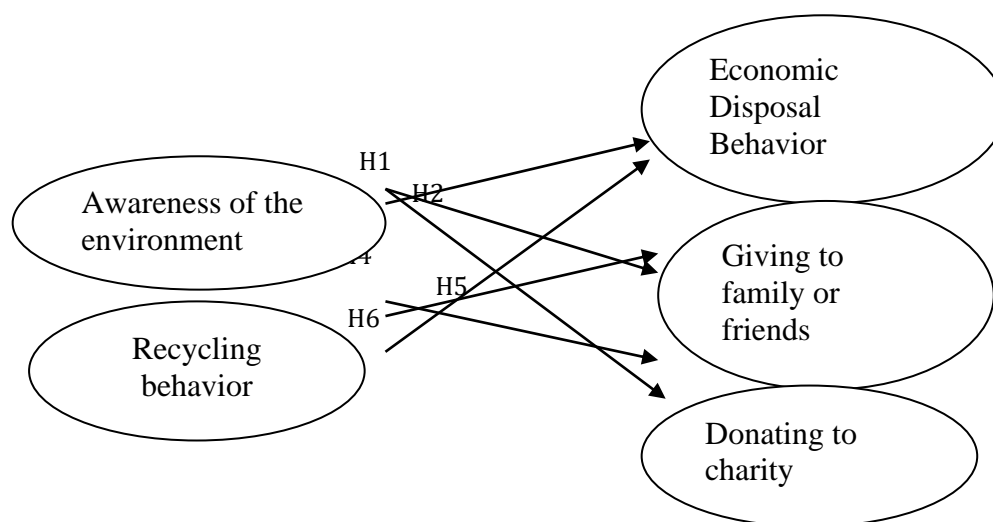


Figure 1: *Model of analysis*

Research Method

In this study, exogenous variables include awareness of the environment and recycling behavior while endogenous variables include economic disposal behavior, giving to family or friends' disposal behavior, and donating to charity disposal behavior. Indicators within each variable are measured using 5-point Likert scale. Moreover, sampling technique used is purposive sampling. This study involved 216 respondents. Criteria for selected sample are 18 to 45 year old housewives. Analytical technique used in this research is Structural Equation Modeling (SEM).

RESULT AND DISCUSSION

Analysis of Measurement Model

In measurement model, convergent validity test, discriminant validity, and reliability test are done. The result of the tests can be seen in the table below. The data processing shows that all research indicators have standardized regression weight of above 0.6, which indicate that convergent validity for all research variables are fulfilled. Reliability test also shows that all variables have Average Variance Extracted (AVE) of above 0.5. This indicates that all variables in this study are reliable. Meanwhile, convergent validity test result can be seen in Table 1. This table shows that square root value of AVE is higher than correlation among latent variables. It can be concluded that indicators are different from other indicators and discriminant validity is fulfilled.

Table 1. *Result of Correlation among Each Indicators and Square Root AVE*

Variable	AE	RB	ED	DD	GD	AVE
AE	0.725	0.576	0.558	-0.041	0.469	0.525
RB	0.576	0.774	0.694	0.088	0.525	0.599
ED	0.558	0.579	0.755	-0.019	0.571	0.570
DD	-0.041	0.088	-0.019	0.745	-0.010	0.555
GD	0.469	0.525	0.571	-0.010	0.742	0.551

Analysis of Structural Model

Goodness of Fit Model Test

Table 2. *Result of Goodness of Fit Full Structural Model*

Criterion	Critical Value	The Result of Testing Model	Result
Chi-Square	Expected to be small	181.917	Not Good
CMIN/DF	≤ 2.00	1.366	Good
RMSEA	≤ 0.08	0.041	Good

GFI	≥ 0.90	0.922	Good
AGFI	≥ 0.90	0.888	Not Good
TLI	≥ 0.95	0.969	Good
CFI	≥ 0.90	0.976	Good

Based on Table 2, structural model fit shows CMIN/DF, RMSEA, GFI, TLI, and CFI. These indexes of fitness shows conclude that the structural models fulfilled criterion of goodness of fit (GoF).

Causal and Hypotheses Test

Table 4. *Result of Causal and Hypotheses Test*

Hypothesis	Explanation	C.R	P value	Result
H1	Awareness of the Environment → Giving to family or Friends Disposal Behavior	3.254	0.001	Supported
H2	Awareness of the Environment → Donating to Charity Disposal Behavior	-0.940	0.347	Rejected
H3	Recycling Behavior → Economic Disposal Behavior	6.926	0.000	Supported
H4	Recycling Behavior → Giving to family or Friends Disposal Behavior	4.171	0.000	Supported
H5	Recycling Behavior → Donating to Charity Disposal Behavior	1.008	0.313	Rejected
H6	Awareness of the Environment → Recycling Behavior	6.232	0.000	Supported

Table 4 shows that four hypotheses, which are H1, H3, H4, and H6, are supported. Meanwhile, H2 and H5 are unsupported. The four supported hypotheses have p value of under 0.05 and critical ratio (CR) of above 1.65.

DISCUSSION

Awareness of the environment positively impacts giving to family or friends disposal behavior on mothers who have disposed their baby equipment products by selling, giving away, or donating those baby equipment products. Stern (2000) defines environmentalism as the tendency to act on pro-environment purpose. Pro-environment behavior includes buying and disposing behavior in consuming products. Environmental buying includes buying environmentally friendly products (green products) while environmental disposal behavior focuses on reduction of household waste and promoting recycle and reuse behavior (Joung and Park, 2013). This shows that mothers with unused baby equipment products will give those products to family or close friends as a reason for those mothers to throw away products without damaging the environment (Handriana and Ambara, 2016).

In this study, the second hypothesis is unsupported which means that awareness of the environment has no impact on donating to charity behavior. This might happen due to consumers' awareness of environment have no impact on charity giving. This study is supported by study of Cruz-Cárdenas et al., (2016) who stated that people with awareness of the environment do not have to act pro-environment if they saw that others show no such behavior. This finding is explained by the fact that donating to charity is a relatively new phenomenon with various findings on previous researches in terms of age in donating behavior (Winarno and Tjahjadi, 2017).

Recycling behavior positively impacts economic disposal behavior. Previous researches show that consumers with positive attitude toward recycling will dispose their unused products in a way that will not damage the environment, such as reselling those products through social media, giving them to close family, or donating those (Handriana and Ambara, 2016). Selling unwanted products is one recycling behavior that brings monetary value to the owner so that consumers can buy other products needed (Cuc and Vidovic, 2011) Therefore, a mother who dispose their baby equipment products that they no longer use will reduce unused products that fill spaces within their houses and replace them with money by selling those products directly or through social media to buy baby equipment products that are needed currently or in the near future.

The fourth hypothesis in this research is supported, which means that recycling behavior is proven true to have positive impact on giving to family or friends disposal behavior. Consumers with positive attitude toward recycling will dispose their unused products in a way that will not damage the

environment such as reselling them through social media, giving them to close family, or donating the unused products (Handriana and Ambara, 2016). Disposing unused products by giving them to friends or close family can save the current owner's time and effort (Bianchi and Birtwistle, 2010) and therefore, the disposed goods will bring functional value which is freeing spaces in bedrooms and cupboards (Department for Environment Food and Rural Affairs, 2008). Moreover, clothing disposal by giving them to friends and family gives the individual the chance to switch to a new life phase, such as getting variation, avoiding profuse spending, and receiving ethical or moral benefit by helping others (Baker, 2011).

Differ from previous research (Department for Environment Food and Rural Affairs, 2008) which state that recycling behavior positively impacts donating to charity activity, this study shows that recycling behavior has no impact on donating to charity disposal behavior. This might happen due to a mother who wishes to dispose unused baby equipment products prefers storing them rather than donating them since those baby equipment products might have certain values to the mother so that she might prefer storing those products than disposing them.

The sixth hypothesis testing shows that awareness of the environment positively impacts recycling behavior on mothers who have never disposed their baby equipment products by selling, giving away, or donating unused baby equipment products. Environmental disposal behavior focuses on reducing household waste and promoting recycling and reusing activities (Joung and Park, 2013). This shows that a mother who wishes to dispose their unused baby equipment products and has awareness of the environment will choose to dispose those products in a way that will not damage the environment, which is by recycling those unused products. Consumers with positive attitude toward recycling will dispose their unused products in a way that will not damage the environment, such as reselling those products through social media, giving them to close family, or donating those (Handriana and Ambara, 2016).

Study Implications

In developed countries, society awareness to act environmentally friendly is starting to grow which is why topic about green behavior is an interesting theme to be studied of in those countries. In this study, research samples are women (mothers), and future researches are suggested to involve the husbands as respondents in the research. Meanwhile, business owners of baby equipment products need to involve themselves into facilitating reselling unused baby equipment products to other consumers with the intention to buy those second hand products. Charity institutions can start developing campaigns or public service announcement regarding societal awareness to donate their unused baby equipment products.

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