

# Analysis of Green Product Knowledge, Green Behavior and Green Consumers of Indonesian Students (Case Study for Universities in Surabaya)

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*Abstract* - Nowadays, environmental damages become hardly to be solved. It happened by many factors like lack of information about green products, human lifestyle that unaware or even don't care about the environment, and there' still paradigms that green product or green consumerism aligned with high cost.

This study shows that students have sufficient knowledge related to green products. Green behavior of students is tends to improve by start from a simple things in their daily activities. In other hands, whenever decide to buy products; not all those students aware with green products in order to make them adopt green lifestyle. The students with high financial capability are more aware buy green products than others.

*Key-words:* green product, green behavior, green consumers

## I. INTRODUCTION

Today, Consumerism runs so deep in modern society it has effectively produced subconscious driving forces that help to steer our behavior. For many people, a key driving force in life is to accumulate wealth and then spend it, taking full advantage of all the goods and services available.

Customer's concern for environmental has become one of the most important issues in every aspect of people's lifestyles. Market for environmentally-friendly goods and services are becoming increasingly common. As we know, green lifestyles or green behaviors are specific lifestyle choices that reduce personal environmental impact and help ensure consumption of resources is sustainable at a society level. A fully green lifestyle involves ethical choices over a broad range of behaviors.

The human lifestyle that not concern about environment can be influence by technology development. If the technology doesn't well develop and not focus to create green technology/green process/green products, it will push the society more far away from green lifestyle. Green lifestyle became familiar and well accepted in developed countries than in developing countries. There are a lot of studies to find the trigger factors that influences society to adopt this lifestyle. This paper focuses on students in the university. Like Indonesia, students in big cities like Surabaya have a high degree of access to get information than others.

Unfortunately, customers who have concern to green lifestyles still limited because they still have skepticism over the green products, higher prices, lower quality, lack of information, etc. For every piece of information that people receive about the need to do something to help the environment, there must be a hundred promoting the opposite sort of behavior. Campaigns to encourage and persuade the public to adopt green behaviors must be framed in terms that make sense to them, according to their own values and motivations. In this paper tries to find out what dominant factors that support society to be green consumer.

## II. GREEN PRODUCTS, GREEN BEHAVIOUR, AND GREEN CONSUMERS

Green Product is eco-friendly products or products that in their planning and process with technique have less impact to environment, even in production process, distribution, and consumption.

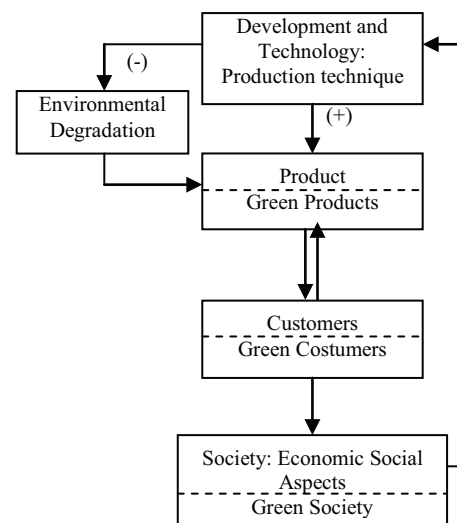


Fig. 1. Conceptual model for Green Products (Nugrahadi) [10]

Based on Engel, A consumer behavior is an action that direct involved to get things, consumptions, and to use those things (product or services), including decision process before and follow that decision. [2]. Concern for the environment or green behavior has become one of the most important issues of the 1990s. In developed countries like Europe and the United

States, companies realized that consumers will buy products or not based upon environmental considerations and consumers like this usually said as green consumers. This phenomenon, referred to as Green Marketing, involves the marketing response to the design, production, packaging, use and disposal of products. [4]

Green marketing has grown and changed dramatically in the past few decades. It began as an effort by marketers and managers to label their products as “recyclable” or “environmentally friendly,” and over the years, has come to encompass much more. [7]

### III. DATA ANALYSIS

In the questioners, we give weight for every answer of indicators, i.e. 1 = never or very unimportant or strongly disagree, 2 = rarely or unimportant or disagree, 3 = neutral, 4 = usual or important or agree, 5 = always or very important or strongly agree. In this study, we also did analysis was combined from students in 2 groups based on different level of cost spend in universities. Group 1 is consist of students that study in low cost universities and group 2 is a students in high cost university with 100 samples for every group.

#### A. Green Behavior

From Table 1, shows that study instrument (questioners) is reliable because the value  $\alpha$  Cronbach more than 0.8. In general, respondents perception on purchase decision, habits, and recycling are tend to neutral, it means they just do that action sometimes.

From Fig. 2, Group 2 tends to buy less packaging product, buy food product from a local store buy high efficiency bulbs to save energy, and buy energy efficient household than group 1. In other hands, more than 50% respondents didn't buy recycled papers, it happens because many reasons like difficult to find that products even more the quality is poor to use.

TABLE 1  
FACTOR SOLUTION FOR BEHAVIOR DATA

Variables	Indicators/Measurements	Standard Deviation	Means	$\alpha$ Cronbach
Purchase decisions	Avoid Aerosol Product	1.33	3.00	0.99
	Buy Organic Product			
	Buy Less Packaging Product			
	Buy food Product from a local store			
	Buy High Efficiency bulbs to save energy			
	Buy energy efficient household appliances			
	Buy recycled toilet paper			
	Buy recycled writing paper			

TABLE 1 (CONTINUE)  
FACTOR SOLUTION FOR BEHAVIOUR DATA

Variables	Indicators/Measurements	Standard Deviation	Means	$\alpha$ Cronbach
Habits	Use environmentally friendly detergents	1.22	3.12	0.89
	Use save water in the bathroom by taking a shower or only filling the bath half way up			
	Reuse glass bottles and jars for save			
	Wait until wait until I have a full load before putting on the washing machine			
	Turn off the tap whilst cleaning my teeth			
	Switch off lights in unoccupied rooms			
	Avoid keeping the tap running when washing dishes			
	Turn off the water/ shower when 'Soaping up'.			
	Reuse bag shopping			
	Reuse paper remain if can use again			
Recycling	Reuse paper remains if can use again	1.95	2.60	0.98
	Donate clothes to charity			
	Donate book if not use again			
	Recycle glass			
	Recycle newspaper			
	Recycle cane			
	Recycle plastic bottle			

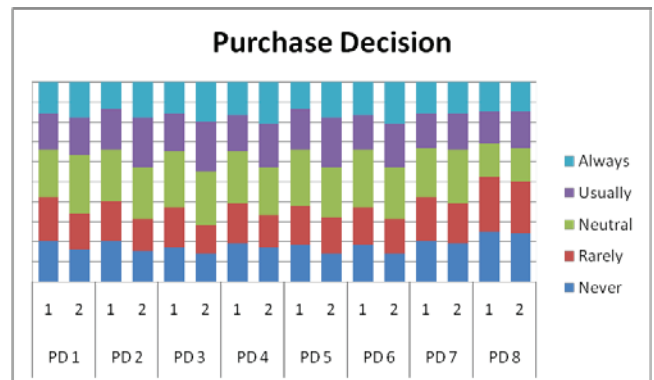


Fig. 2. Purchase Decision; PD 1: Avoid Aerosol Product, PD2: Buy Organic Product, PD3: Buy Less Packaging Product, PD4: Buy food Product from a local store, PD5: Buy High Efficiency bulbs to save energy. PD6: Buy energy efficient household appliances, PD7: Buy recycled toilet paper, PD8: Buy recycled writing paper.

From Fig. 3, we see that around 60% respondents don't have green habits and the rest 40% have green habits. Fig. 4 provides information that respondents' behaviors related reuse or recycle still low (>50%) particularly in recycle glass, recycle newspaper, and recycle cane.

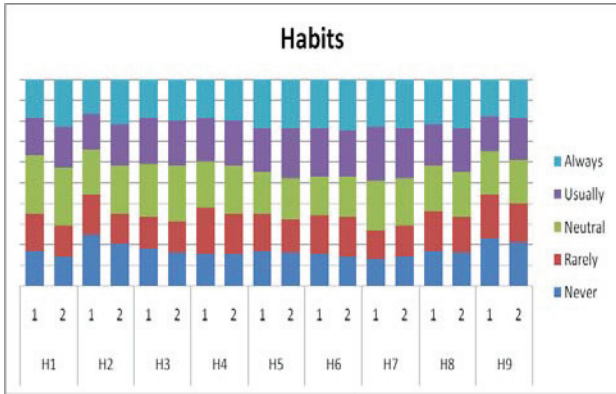


Fig. 3. Habits, H1: Use environmentally friendly detergents, H2: Use save in the bathroom by taking a shower or only filling the bath half way up, H3: Reuse glass bottles and jars for save, H4:Wait until I have a full load before putting on the washing machine,H5: Turn off the tap whilst cleaning my teeth, H6: Switch off lights in unoccupied rooms, H7: Avoid keeping the tap running when washing dishes, H8: Turn off the water/ shower when ‘Soaping up’, H9: Reuse bag shopping.

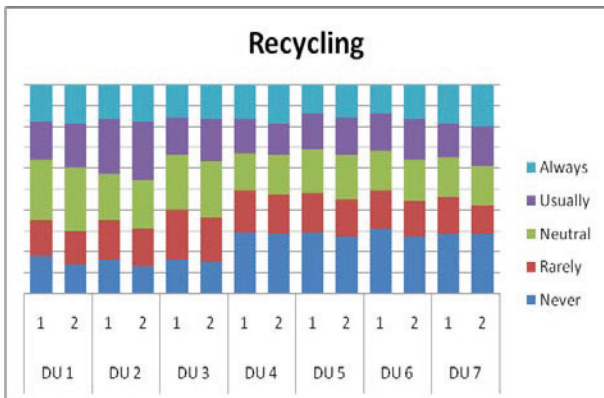


Fig. 4. Recycling, DU1: Reuse paper remains if can use again, DU2: Donate clothes to charity, DU3: Donate book if not use again, DU4: Recycle glass, DU5: Recycle newspaper, DU6: Recycle cane, DU7: recycle plastic bottle.

A. Characteristic Consumers

In analyze characteristic consumers, this study focus on income, involve in group/community, and type of communities for every groups.

TABLE 2  
INCOME AND COMMUNITY

	Income ( IDR) (x 100,000)					Community	
	2-5	5-10	10-20	20-30	>30	Yes	No
Group 1	12%	30%	37%	16%	5%	41%	59%
Group 2	5%	12%	31%	36%	16%	55%	45%

In Table 2, there’s different significant between income group1 and group 2. In group 1, the majority income (67%) is between IDR 500,000 until 2,000,000 and in group 2, between IDR 1,000,000 until 3,000,000 (67%). Besides that, the respondents in group 1 that

involved in community groups are lower than group 2 and the different is about 15 %. It can be assumed that students who have high income more have capacity, opportunity, and time than group 1.

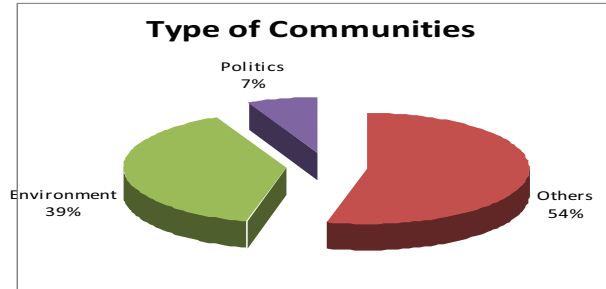


Fig. 5. Type of Communities

Communities are consisting as 3 types of community, Politics, Environment, and others. From respondents, we got that more than 50% involved in other communities outside politics and environment communities. The lowest community is politics, it only 7 %. It means politics community is not interesting community to joint with and in developing countries like Indonesia, level of participating societies in politics not to high because people thinks politics only for politicians.

B. Social Factors

From Table 3, shows that social factors above are reliable because the value  $\alpha$  Cronbach more than 0.8. In general, respondents’ perception on altruistic and conservative is more care to environment than others.

TABLE 3  
SOCIAL FACTORS

Variable	Indicators/ Measurements	Standard Deviation	Means	$\alpha$ Cronbach
Altruistic	Loyalty	0.95	4.19	0.99
	Honoring Parent			
	Equality			
	Social Justice			
	Enjoying Life			
	Helpful			
Openness to change	Hard at Work	1.03	3.56	0.96
	Varied Life			
	Exciting Life			
	Curious			
	Social Environmental			
Conservative	Social Order	0.86	4.06	0.99
	Obdience			
	Authority			
	Unity			
Egoism	Wealth	0.98	3.61	0.98
	Social Power			
	Influential			
	Authority			
	Luxurious			

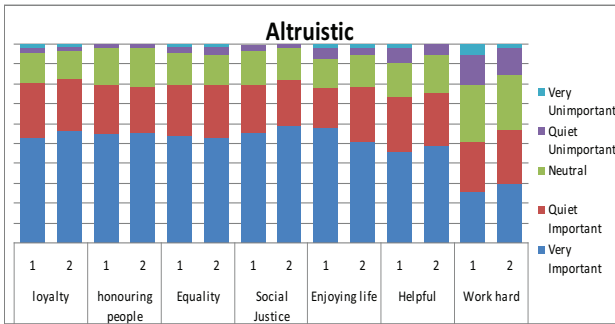


Fig. 6. Altruistic

From Fig. 6 provides information that the lower indicators in altruistic is work hard. We can see that only small amount of people thinks that work is very important for altruistic.

For openness to change, Fig. 7, both respondent think is important (almost 50%) from each indicator. It happens to indicator in conservative (Fig. 8).

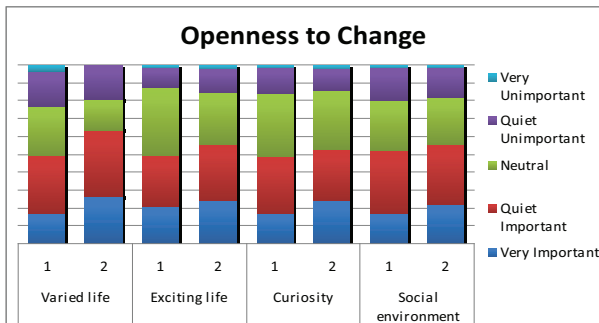


Fig. 7. Openness to Change

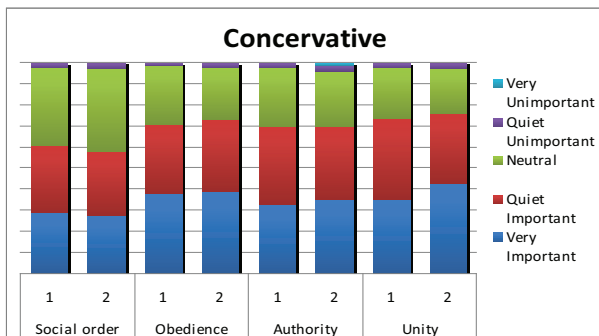


Fig. 8. Conservative

Fig. 9 provides information that respondents' social factors in egoistic varied for every group and every indicators. For example, respondents from group 1 are more open and care than group 2. In group 1, wealth and influence indicators are not important than group 2

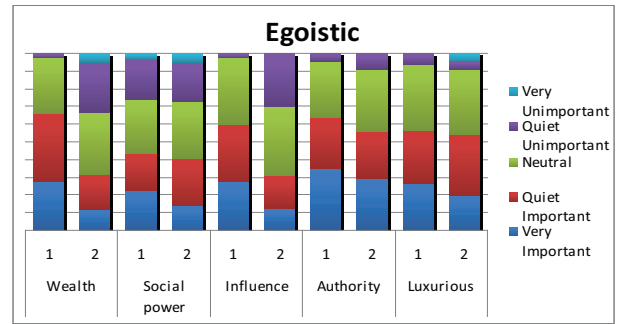


Fig. 9. Egoistic

C. Psychology Factors

TABLE 3  
PSYCHOLOGY FACTORS

Variable	Indicators/ Measurements	Standard deviation	Mean	$\alpha$ Cronbach
Outcome Beliefs	Good Economics	0.91	4	0.89
	Energy Beliefs			
	Response Efficacy			
	Waste Beliefs			
Trust and responsibility	Government responsibility	1.06	3.47	0.94
	Trust in Environmental			
	Environmental group information			
Price	Price of Eco-friendly	1.17	2.8	0.87
	Important of Price			
	Prefer eco-friendly produce			
	Willing to pay more			
Green Consumer Beliefs	Health Concerns	1.02	3.61	0.88
	Safety Concerns			
	Important of local product			
	Green Consumer Beliefs			

From Table 3, we classified psychology factors in 4 variables. For variable outcome beliefs, trust and responsibility, and green consumer beliefs show that majority of respondents agree with the indicators for each variable. The study instrument (questioners) is reliable because the value  $\alpha$  Cronbach more than 0.8.

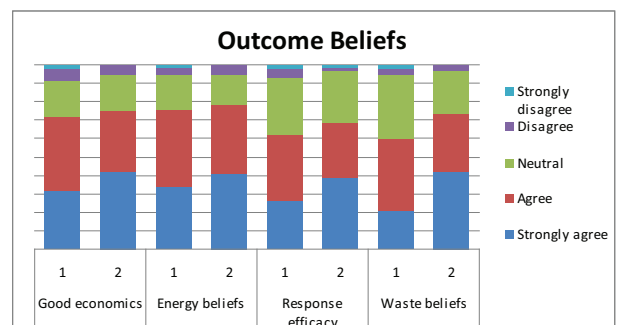


Fig. 10. Outcome Beliefs

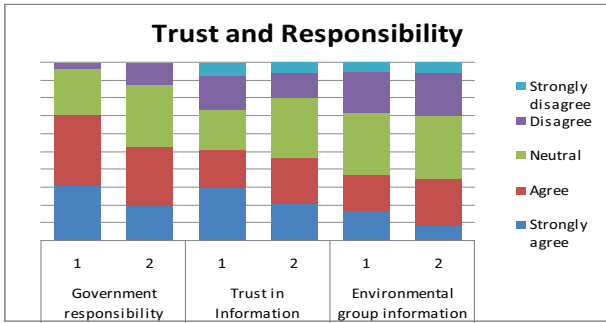


Fig. 11. Trust and Responsibility

Fig. 10 shows that Group 1 and 2 strongly agree for all indicators.

From Fig. 11, group 1 strongly agrees that government must have responsibility to influence green lifestyle than other variable. It can be assumed most people think that government takes main roles. It's impact to respondent perception on information and environmental group or third party become low.



Fig. 12. Price

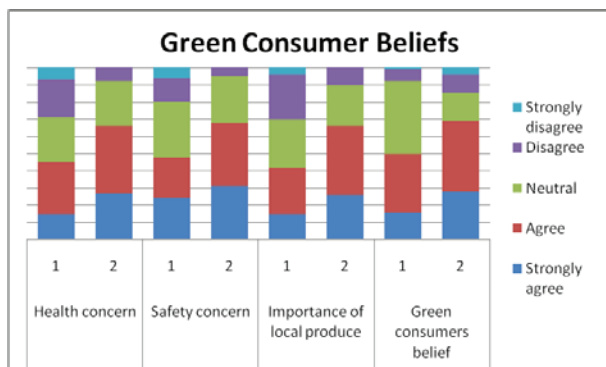


Fig. 13. Green Consumer Beliefs

From Fig. 12, Group 2 more concern to get green products even price is more expensive and the willing to pay more than group 1. In general, both groups still low commitment to follow green lifestyle because price. Finally, at Fig. 13, group 2 that have high economic level more concern on health, safety, local content and green consumers compare to group 1. It seems has relationship with income level and price.

#### IV. CONCLUSION

All movements or changing in a lifestyle are process in order to be able to combine those actions by having the same perception on the meaning of consumption, not just a word and not only focus on activities which don't have any correlation with the environment. It must be correlated with something bigger such as social value and human psychology.

The green product has some factors which represent a decision of someone to buy, habit, and recycle to goods which are not used. Most people are buying goods without put green as a consideration. University students in both groups have same level of perception about green products and green behavior but students in middle or high economic level more concern and adopt green lifestyle. In other hands, there is perception in society that green product mostly is more expensive than regular ones.

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