



STUDENT'S INTENTION TOWARDS SUSTAINABLE AND RESPONSIBLE CLOTHING CONSUMPTION

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ABSTRACT

The textile industry is contributing a lot to the climate change since human consumptions on textile is very high. This articles aims to measure the influence of student's sustainability knowledge and demographic profiles to their intention on buying sustainability product. Students from the same faculty completed an online survey with a total of 315 valid response that assesed the purchasing level, reasons, priorities, as well as some sustainable behaviour that the respondent might have. An ordinal regression used with employing the SPSS 16 software and $p=0.05$. Results suggest that the most significant factors affecting the students purchasing intention on sustainable products was whether their consider sustainable material as priority when purchasing textile products or not.

Keywords: *sustainable behavior, ordinal regression, textile industry.*

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1. INTRODUCTION

Originally, clothing is a basic need as it functions as body covers and extreme weather protection. Currently, clothes have more function such as religious expression, social status and identification, decoration, etc. As the clothes function grow, the demand and the variety of clothing also grow. It is predicted that in 2025 the global apparel market value will reach USD 2.25 Trillion, increasing 50% from the 2020 market value (Shanbandeh, 2021).

This increasing market value off course bring benefits, for example it creates more job. However, there are still a lot of problems in clothing industry such as abusive workplace and underpaid workers (Research and Markets, 2021), consumed a lot of water (UN, 2019), produced a lot of carbon emission (Chan, Choi, Cai, & Shen, 2020) , and left a huge global waste problem (Young, 2020)

In the previous studies that related to sustainable and responsible consumptions, there are several factors affecting customer decisions and behaviour. The first one is knowledge on sustainability. (Chen, Sujanto, Tseng, Fujii, & Lim, 2021) found that knowledge on environmental issues, problem's effect, and solutions are affecting customer willingness to buy more sustainable food product. Whereas (Peña-Vincesa, Solakisb, & Guillenc, 2020) also found the same pattern when measuring the customer willingness to buy or rent second-hand baby apparel in Spain. A service industry like banking also significantly affected by customer environmental consciousness and awareness (Taneja & Ali, 2021)

The second factor affecting customer sustainable decisions is the demographic profiles such as gender, age, and income level. Previous research suggest that women more willing to purchase sustainable goods (Stern, Dhietz, & Kalof, 1993) even though the price is more expensive (N.Kreidler & Joseph-Mathews, 2009). Other studies also shows that higher purchasing power affecting the decision to buy more sustainable products (Straughan & Roberts, 1999). However, some studies suggest that demographic profiles are not really effective to measure customer sustainable awareness (Diamantopoulos, Schlegelmilch, Sinkovics, & Bohlen, 2003) (Kinnear, Taylor, & Ahmed, 1974)

In the terms of age, a study found that young people tend to be more open with sustainability concept (Darling, Heller, & Tablada, 2009), while other study suggest otherwise (Vining & Ebreo, 1990). However, According to (Eurostat, 2021), people from the age group of 16-24 has the highest proportion of buying clothes, shoes and other accessory through online platform compared to other age group as it scores 71%. While in Indonesia, 30% of e-commerce customer who bought fashion products come from people aged 18-25 years old (Tempo.co, 2020). Both statistics shows that People from this age group are mostly a student on high school or university.

This paper aims to study the effect of sustainability knowledge and demographic profiles of students to their willingness to buy sustainable products.

2. METHOD

2.1 Data Collection

The data used in this paper were obtained from a survey to the first year students in the Faculty of Advanced Technology and Multidiscipline Universitas Airlangga who were enrolled in the green technology course. The survey was conducted via an online form. A total of 326 feedbacks were received from 400 students. After careful review, only 315 were complete and thus can used in this study.

Table 1. Quantitative information of the sample

Sex	Male	190
	Female	125
Income (pocket money)/month	≤IDR 1. Million	276
	IDR 1.001-2 Million	36
	IDR 2.001-4 Million	2
	> IDR 4 Million	1
Occupation	Student	315
Age	16-24	315

The characteristics of the respondent are shown in the table 1. According to the table, all of the respondent are fall in the age category of 16-24 and most of the respondent were men as it accounts for 60%. As for the income, we explain to the students that they can count their pocket money as their income. The data shows that 87% of them have under IDR 1 million per month.

2.2 Variable

As mentioned in the introduction section, this study aims to measure the influence of

knowledge on sustainability and the demographic profile of the students to their intention to buy sustainability product. The measurement includes their price acceptance towards sustainable products compared to non-sustainable product since the product tends to cost higher (Owens, 2021).

This study measure student’s knowledge on sustainability based on 3 parameters. The question is inclusively related to the context of fashion/clothing industry. The first one is whether the students know that fashion industry produce the second highest pollution in the world after the oil and gas industry (Sadida, 2020). The next question is asking whether the students aware that it takes a very long time for textile to decompose (Brown, 2021) and the last is whether the students are aware that most of textiles are not recycled and ended up in landfill (Beall, 2020).

For the demographic aspects, we are taking account the gender and income level and not occupation and age, because they have the same occupation and falls within the same age range. We also taking account the frequency of their clothes shopping in a year to measure the student’s purchasing power since most of them still live with their parents.

2.3 Outcome Definition

The end point of this study was we would like to know what is the price level of sustainable product’s that students are willing to buy compared to non-sustainable options since non sustainable products are currently cheaper (Owens, 2021). We separate the student willingness to buy into 5 categories: a. chooses non-sustainable product because it’s cheaper, b. willing to buy sustainable product at less than 10% price difference, c. willing to buy sustainable product at 10-25% price difference, d. willing to buy sustainable product at 25-50% price difference, and e.willing to buy sustainable product at more than 50% price difference.

2.4 Data Analysis

We further analyzed the data to find which factors are affecting the student’s willingness to buy sustainable product as well as its price level compared to the non-sustainable product using the Ordinal Regression. The statistical analysis was performed using SPSS 16 (IBM) and p value less than 0.05 two sided was categorized as significant

3. RESULTS AND DISCUSSION

After processing the questionnaire data on the SPSS 16 software, we got a total of 7 factors (Knowledge on textile industry mostly end up in land fill, Knowledge on Textile Waste is Hard to Decompose, Knowledge on Textile Waste is contributing to the pollution, is sustainable priority always a consent when buying clothes, gender, how student recycled a damaged clothes and reason on purchasing clothes) that can be processed into further analysis. A sigma under 0.05 was shown on figure 1. Meaning that the final model gives a significant improvement over the baseline intercept-only model. The case processing summary and the list of factors are presented on table 2.

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	722.463			
Final	675.976	46.487	16	.000

Figure 1. Model Fitting Information Results

	Chi-Square	df	Sig.
Pearson	809.957	756	.085
Deviance	569.148	756	1.000

Link function: Logit.

Figure 2..Goodness of Fit Test Results

The goodness of fit results also suggests that the model is good since the p is greater than 0.05 for both of the rows. However, after carefully looking at the parameter estimates results as shown in table 2, we could see that most of the factors have value greater than p=0.05. The only factors that has p value greater than P=0.05 is whether the sustainable material is priority when buying clothes.

The purchasing power of students (represented in questionnaire as income level and clothes purchasing intensity in a year) does not include in the analysis as most of them on the same level and when we try to analyze it with other factors, the model does not fit as the significance level was greater than 0.05. We also asked students whether they ever and or might buy a second hand clothes. However, this factors also had to be removed from the analysis since it made the model unfit.

4. CONCLUSION

This paper examined factors affecting students' decision on purchasing sustainable textile products compared to a non-sustainable product since it is mostly cost higher by conducting survey to the second year of faculty of engineering students. It is found that sustainable material consideration when purchasing textile

product is highly affecting the intention of purchasing sustainable textile product. Further research to explore factors that encouraging students to buy sustainable products will be required.

Table 2. Case Processing Summary and Parameter Estimates using Ordinary Regression with Multiple Variable

	Margin al %		Estimate	Std. Error	Wald	d f	Sig.	95% Confidence Interval	
								Lower Bound	Upper Bound
Threshold									
Willingness	23%	<10%	-2.414	0.528	20.879	1	0.0000	-3.45	-1.379
	38%	<25%	-0.032	0.473	0.005	1	0.9460	-0.959	0.895
	26%	<50%	1.777	0.484	13.48	1	0.0000	0.828	2.725
	10%	>50%	3.538	0.513	47.50	1	0.0000	2.532	4.544
Location									
Reason on Buying Clothes	2%	Tren	-0.621	0.739	0.706	1	0.4010	-2.069	0.827
	25%	Unfit Clothes	0.159	0.294	0.293	1	0.5880	-0.417	0.735
	16%	Events	-0.091	0.337	0.073	1	0.7870	-0.751	0.569
	10%	Discount	-0.293	0.401	0.533	1	0.4650	-1.079	0.493
	17%	Interesting Style	0.085	0.338	0.064	1	0.8010	-0.578	0.748
	4%	Outdated Clothes	1.698	0.608	7.799	1	0.0050	0.506	2.889
	26%	Torn Clothes	0a	.	.	0	.	.	.
Sustainable Material as Priority	9%	No	2.503	0.488	26.309	1	0.0000	1.546	3.459
	18%	Seldom	1.699	0.405	17.59	1	0.0000	0.905	2.493
	44%	Sometimes	1.321	0.349	14.35	1	0.0000	0.638	2.005
	16%	Most of the time	0.873	0.402	4.725	1	0.0300	0.086	1.66
	13%	Always	0a	.	.	0	.	.	.

	Margin al %		Estimat e	Std. Error	Wald	d f	Sig.	95% Confidence Interval	
Textile Recycle Behaviour	73%	Repair	-0.061	0.245	0.063	1	0.802 0	-0.541	0.419
	2%	Never	-1.853	0.894	4.297	1	0.038 0	-3.606	-0.101
	26%	Turn into other thing	0a	.	.	0	.	.	.
Sex	60%	Male	-0.199	0.228	0.759	1	0.384 0	-0.646	0.248
	40%	Female	0a	.	.	0	.	.	.
Knowledg e on Textile Waste is Mostly Endedup in Landfill	26%	No	-0.312	0.273	1.31	1	0.252 0	-0.847	0.223
	74%	Yes	0a	.	.	0	.	.	.
Knowledg e on Textile Industry Creates a Lot of Pollution	44%	No	0.022	0.234	0.009	1	0.926 0	-0.438	0.481
	57%	Yes	0a	.	.	0	.	.	.
Knowledg e on Textile Waste is Hard to Decompos e	22%	No	0.135	0.303	0.2	1	0.655 0	-0.458	0.729
	78%	Yes	0a	.	.	0	.	.	.
Link function: Logit.									
a. This parameter is set to zero because it is redundant.									

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