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Motivational Factor Analysis Intention To Buy Recycled Products: Self Determination Theory Concepts

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ABSTRACT

Business opportunities have opened, and public awareness of the importance of waste management is increasing. However, the research results have not proven the main factors motivating consumers to purchase recycled products. Motivation is an important thing in influencing the intention to buy recycled products. Confirmatory factor analysis was carried out to examine motivation with the concept of self-determination theory (SDT). The study involved 110 respondents using a random probability sampling method to analyze confirmatory factors. The SPSS 25 calculator is used. The results explaining the 2 factors should be removed because they are not suitable for viewing purchase motivation. The findings show that motivation does not use the 6 continuums of SDT but only produces 3 variables, namely motivation, external regulation, and intrinsic development, which are all factors that foster a feeling of pleasure towards recycled products. Intrinsic development is a new variable that deserves to be re-examined. The values of recycled products must be put forward in building motivation so that the intention to purchase recycled products can be formed so that the marketing of recycled products matches their market goals.

Keywords : *Self-determination, Motivation, buying, attention, factor*

1. Introduction

Confirmatory factor analysis needs to be carried out to examine motivational variables that are suitable for use in recycling product campaigns as products that have economic value as well as being beneficial for protecting the world's ecology. Concerns about the impact of global climate change, the distribution of greenhouse gas emissions by the industrial sector around the world are factors starting to develop public awareness so that products that have an impact on reducing environmental impacts become opportunities (Ionescu, 2020) (Ionescu, 2019) .

Many also share the growing concern about dumping textile waste around the world because the carbon released by factories accelerates global warming due to mass production and excessive consumption (Ionescu, 2020) . Public awareness grows and develops in tandem with public awareness of various environmental issues, greenhouse emission issues, accumulation issues. So that products designed in an effort to overcome environmental problems become one of the consumers' concerns. Consumer concern about the problems of the energy crisis, climate change, and environmental problems is growing (Skogen et al., 2018) . Business opportunities for recycling products in the future are also due to the growing and developing public awareness about the environment (Guo & Ya, 2015) .

Business opportunities have opened, public awareness of the importance of waste management is increasing. However, the research results have not proven what are the main factors that motivate consumers to purchase recycled products. Motivation is an important thing in influencing the intention to buy recycled products. To see the motivational factors we use self-determination theory in measuring the intention to buy recycled products.

Recycled products are products that are designed with a foundation of environmental concern and saving the earth by using unused or waste items. Recycled products can be remanufactured, namely making recycled products into new products with new product quality and quantity (Guo & Ya, 2015). We can find out from observations of plastic waste products

that can be recycled into new products such as plastic grocery wrap or photo frames. The process of making recycled products into new products has uncertain costs. If the waste raw material is in good condition, the recycling process requires a small fee, but if the waste condition is bad, it does not match the product requirements, the costs incurred are also high. This uncertainty (Guo & Ya, 2015)has a different impact on price and quality, so of course this has an impact on consumers. Requires consumer motivation in the process of purchasing recycled products which become environmental awareness campaigns.

Community motivation as an important thing that builds intention to buy recycled products needs to be studied. What motivational indicators support knowing recycling purchase intentions. The problem of this research is to examine the application of self-determination theory to motivation to purchase recycled products and to develop and validate a multidimensional measure of purchase intention of recycled products.

1.1. Recycled Products

Recycling is a process by which used or waste products and materials are repaired, reused, reused, renewed, improved and reproduced in a creative way to add value to the compositional elements (G et al., 2019) . Recycled product is a compound word that comes from “upgrade” and “recycling”; the recycling process renovates and transforms waste or useless products and upgrades them into products that are more valuable than the original. In other words, recycling can be described as reinventing existing products into new products by adding ideas and redesigning existing products to provide new value, not just recycling waste products (Bigliardi et al., 2020) .

Recycled products are products that are designed with a foundation of environmental concern and saving the earth by using unused or waste items. Recycled products can be remanufactured, namely making recycled products into new products with new product quality and quantity (Guo & Ya, 2015). to avoid wasting potentially useful materials by utilizing existing materials. Since recycled products can reduce the consumption of new materials in manufactured products, recycled products can contribute to reducing energy consumption, air pollution, water pollution and even greenhouse gas emissions resulting from the use of new raw materials (Bigliardi et al., 2020).

1.2. Self Determination Theory

Motivation is a determining factor in purchase intention. Motivation becomes a trigger when someone tries to fulfill the desires, needs and expectations of consumers. The desire to fulfill these needs that drive gives humans the power to fulfill them in certain circumstances and at certain times (Kotler, Philip., Keller, 2008) . Motivation comes from human beings so that the things needed are achieved with various efforts. From this theory, as a basis for seeking business opportunities, it stems from various human needs that are always evolving, varying according to certain conditions and times (Azizah, 2023) . Motivation is the key factors that affect consumer response fundamentally (Kotler & Zaltman, 1971) .

The starting point for understanding consumer intentions so as to obtain an overview of intentions for making purchasing decisions in this case for recycled products is motivation (Kotler, Philip., Keller, 2008) . One theory in looking at motivation is the theory of self-determination theory as a theory capable of predicting motivation across a continuum ranging from someone who has no motivation to autonomous regulation (Ryan & Deci, 2020) . SDT provides a basic conceptualization framework for psychologically developing human needs according to human autonomous conditions (Azizah, 2022) .

This theory started with a narrow focus on intrinsic motivation but has grown over time to include both intrinsic and extrinsic motivation and given rise to new perspectives (Ryan & Deci, 2019) . Self-determination theory (SDT) is a broad framework for understanding the factors that

facilitate or undermine intrinsic motivation, autonomous extrinsic motivation (Ryan & Deci, 2020).

Self-determination theory (Ryan & Deci, 2017) emerged from the organizational behavior literature arguing that autonomous motivation has a stronger effect in facilitating engagement than controlled motivation. Behavior driven by self-interest is motivated by intrinsic motivation, thus indicating autonomous motivation (Deci & Ryan, 1980). Conversely, extrinsic motivation is included in controlled motivation because it requires instruments between activities and different values such as rewards, so that satisfaction comes from the extrinsic values of activities.

Self-determination theory proposes that people are more likely to persist with behavior that is internally motivated or externally motivated. (Ryan, 1995)More specifically, as this theory illustrates, motivation is a continuum of self-determination with different types of motivation ranging from amotivation (characterized by inaction or complete absence of intention to act because such activity is not recognized or valued) to autonomous behavior and intrinsically motivated (characterized by acting for the interest, pleasure, and innate satisfaction derived from the activity) (Ryan & Deci, 2020). Between these extremes are four levels of extrinsically motivated behavior that range from least to most autonomous. The least autonomous, labeled "externally regulated," include behavior performed to achieve external rewards (eg, purchases as a result of discounts, rebates or other promotions). A further, slightly more autonomous form of extrinsic motivation is "regulation of introjection", which includes behavior performed to avoid feelings of guilt or inflate one's ego (eg, buying recycled products out of embarrassment when ignoring the environment). A more autonomous form of extrinsic motivation is “identified regulation”, in which the individual views behavior as personally important and valuable (for example, by making a purchase he feels he is contributing to the safety of the world). The most autonomous form of extrinsic motivation is labeled "unified regulation", in which behavior is not only seen as important, but also seen as consistent with, or part of, a larger self-constructing system of values and needs (e.g., buying recycled products according to my life goals to always be useful).(Ryan & Deci, 2019)

These six different regulatory styles are not seen as stages of development; rather, past experience and current environmental mental factors allow an individual to occupy any point along the continuum. Hence, although it might be expected that committed consumers would support more autonomous forms of motivation. Consistent with self-determination theory, internal motivation is associated with better outcomes in various environmental campaigns. Furthermore, the notion of a motivational continuum has also been supported. Given the previous success of self-determination theory in advancing our understanding of motivation for health-related and prosocial behavior the aim of this study was to examine the applicability of this theory to blood donation motivation. Therefore, we developed and validated a Survey of purchase intention of recycled products based on six regulatory styles of self-determination theory.

1.3. Latent Variable Self Determination Theory

The SDT theory is the most comprehensive theory about the complexity of human motivation (den Broeck et al., 2021) (Van den Broeck et al., 2016) . The range of the continuum is interesting so that we can examine the motivation of the intention to buy recycled products, starting from someone who has motivation, starting from amotivation, that is, someone who has no motivation to someone who has intrinsic motivation within himself. The exposure of motivation according to SDT which becomes a latent variable is:

The definition of amotivation is someone who has no motivation, lacks motivation (van den Broeck et al., 2016). Amotivation is motivation by not thinking about it (France, 2017) . Someone who doesn't think about products or doesn't understand about product recycling can do an activity, they might appreciate the activity. (van den Broeck et al., 2021a). Thus, this type of motivation does not stem from a perceived lack of efficacy or possibility, but rather from indifference about the relevant activity or outcome; one does not care to act (Ryan & Deci,

2017). Amotivation has indicators of perceived lack of competence, lack of value, feeling irrelevant.(Ryan & Deci, 2020)

External regulation is motivation caused by rewards or punishments given (Gilal et al., 2019a) External regulation concerns behavior driven by externally imposed rewards and punishments and is a form of motivation that is normally experienced as controlled and not autonomous (Ryan & Deci, 2020). External regulation is a form of extrinsic motivation that depends on certain external contingencies having indicators as motivation due to rewards, punishments, acts of obedience(Ryan & Deci, 2017)

The third is introjected regulation, which is the motivation that arises because of the strength of the ego. Shame for not doing it because the environment around you does. An example of this motivation is choosing to remain silent at a seminar rather than speaking but losing face(van den Broeck et al., 2021b)

The fourth is identified regulation is motivation because it is considered important and has values that are in accordance with itself.(France, 2017)

Fifth , integrated regulation has values that are believed to be self-needs (Engström & Elg, 2015) (Engström & Elg, 2015). This motivation is because it is in accordance with the purpose of his life someone who does something according to the purpose of his life (France, 2017).

Sixth is intrinsic motivation, namely motivation arises because pleasure describes a person's natural tendencies, pleasure is fundamental for cognitive and social development, and is a source of enjoyment throughout life (Engström & Elg, 2015). Motivation that arises because of satisfaction, comfort(France, 2017)

2. Research Methods

2.1. Population and Sample

This research is a quantitative research method using confirmatory factor analysis assisted by the SPSS release 25 program aid calculator. Confirmatory factor analysis is a technique in which a priori, theories and concepts are known or determined in advance by the indicators to be used in the study. The factors that will be analyzed, first made a number of factors that will be formed and which variables are included in the factors that are formed. Therefore, for the use of confirmatory factor analysis, the purpose is known in advance.

Samples were taken using the *probability sampling method* by providing equal opportunities for each respondent. Samples were distributed via wa, facebook and instagram groups with google forms and also distributed through respondents who wanted to fill in directly. From this distribution, 110 answers were obtained which were processed using data collection techniques using a questionnaire or questionnaire with closed questions and answers from the alternatives provided by the researcher (Uma, 2006). The alternative is using a Likert scale, namely the range used is 1 = Strongly disagree, 2 = Disagree, 3 = Neutral / Disagree, 4 = Agree, 5 = Strongly agree.

3. Research Results

3.1 Instrument Feasibility Test Method

The research was conducted by first looking at the feasibility test of the instrument. The following will display the 18 indicators in Table 1 below. The research instrument used in this study was a questionnaire instrument for the public who wished to give their opinion about recycled products. The test is described as follows:

Validity Test

Test the validity of the questionnaire by calculating the correlation of each statement (item) with the total score. The instrument in this study consisted of 18 questions representing

the complete variable continuum of self-determination theory. The statement is formed from six factors, namely amotivation, external regulation, identified regulation, introjected regulation, integration regulation, intrinsic regulation.

Following are the results of the validity test with the Pearson Correlation formula or by looking at the anti-image correlation value in the SPSS 1 calculating tool

Table 1: Instrument Variable Symbols and Their Validity Values

Variable	Indicator	No. grain	Symbol	Correlation Value	Results
Amotivation	Never thought	1	X1.1	.600 [a]	Fulfilled
	Do not understand	2	X1.2	.649 [a]	Fulfilled
	Don't know	3	X1.3	.678 [a]	Fulfilled
external	Forced	4	X2.1	.843 [a]	Fulfilled
	Present	5	X2.2	.703 [a]	Fulfilled
	Penalty	6	X2.3	.690 [a]	Fulfilled
Introjected	Uncomfortable	7	X3.1	.800 [a]	Fulfilled
	Feel guilty	8	X3.2	.416 [a]	Fulfilled
	Embarrassed	9	X3.3	.938 [a]	Fulfilled
Identified	Helping the lungs of the world	10	X4.1	.877 [a]	Fulfilled
	The value of the earth is healthier	11	X4.2	.898 [a]	Fulfilled
	Reduce waste	12	X4.3	.939 [a]	Fulfilled
Integration	Goals are useful	13	X5.1	.879 [a]	Fulfilled
	Important thing	14	X5.2	.936 [a]	Fulfilled
	Solve pollution	15	X5.3	.887 [a]	Fulfilled
intrinsic	Like	16	X6.1	.900 [a]	Fulfilled
	enjoy	17	X6.2	.909 [a]	Fulfilled
	Hobby	18	X6.3	.600 [a]	Fulfilled

Data source: SPSS 25 data processed

Statement items are declared valid if the correlation value obtained from the output of SPSS 25.0 is more than table r at a significance level of 0.05 with a total of 110 samples, namely 0.55 (Hair, 2010). Based on Table 1 above, it can be seen that each statement in the research instrument is valid, this can be seen from the correlation value for each statement to the total score which is more than the value of table r for a large sample of 110 respondents. From these results, it can be concluded that the research instrument is valid.

3.2 Confirmatory Factor Analysis

The first thing to do in conducting confirmatory factor analysis is to test the validity by using factor analysis which refers to the results of the Keizer-Meyer Olkin (KMO) Measure of Sampling Adequacy calculations. Calculations were performed using the SPSS version 17.0. The criterion for the adequacy of the KMO value is more than 0.5, so items that have a KMO value of less than 0.5 are reduced or eliminated, namely by eliminating statement items that have the smallest value, in this case can be seen in the Anti-Image Correlation.

3.2.1 Test the validity of stage 1

Testing is carried out in several stages until all statement items are found to be in valid condition or have a KMO value of more than 0.5. The following presents the output of SPSS version 17.0 on validity testing using confirmatory factor analysis based on KMO and Barlett's Test values.

Table 2 Calculation results of KMO and Bartlett's Test

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measures of Sampling Adequacy.		.838
Bartlett's Test of Sphericity	approx. Chi-Square	1379,283
	df	153
	Sig.	.000

Data source: SPSS 25 data processed

Hypothesis Hypothesis testing:

According to table 2, the results of the KMO and Barlett's Test calculations are 0.838, which is greater than 0.5 and has a value of 0.000 or is significant so that the working hypothesis is accepted. The conclusion is that 83.8% of the factors of self-determination theory can explain the construct so that Self-Determination Theory can be used to measure the intention to purchase recycled products.

The next analysis is to examine the Measure of Sampling Adequacy (MSA). This aims to find out whether the indicators in the complete continuum of Self Determination Theory can be used as a whole, so it can be seen from the sampling process that they are adequate or not, which can be seen from the Anti-Image Correlation (...[a]). A low MSA value is a consideration for removing this variable at the next analysis stage. MSA values range from 0 to 1, with the following criteria:

- MSA = 1, meaning that the variable can be predicted without error by other variables
- MSA > 0.5, meaning that the variable can still be predicted and analyzed further
- MSA < 0.5, meaning that the variable cannot be predicted and cannot be analyzed further, so that the variable must be reduced or removed from the model.

The MSA value in the stage 1 validity test gives an output of the MSA value in the Anti-Image Correlation column (...[a]) which moves diagonally from the top left. There is one indicator that has an MSA value of less than 0.5, namely indicator X32 or feeling guilty if you don't buy recycled products with an MSA value of 0.487, so the variable feeling guilty must be removed and then tested for validity again without it.

3.2.2 Stage 2 validity test

Testing in stage 2 was carried out due to invalid variables in the model being studied and re-testing these variables was carried out. The following presents the output of SPSS version 17.0 on validity testing using confirmatory factor analysis based on KMO and Barlett's Test values.

Table 3 Calculation results of KMO and Barlett's Test

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measures of Sampling Adequacy.		.854
Bartlett's Test of Sphericity	approx. Chi-Square	1300,394
	df	136
	Sig.	.000

Data source: SPSS 25 data processed

According to table 3, the results of the calculation of the KMO and Barlett's Test are 0.854, which is greater than 0.5 and has a value of 0.000 or is significant so that the working hypothesis is accepted. The conclusion is that 85.4% of the factors of self-determination theory can explain the construct so that Self-Determination Theory can be used to measure the intention to purchase recycled products.

Hypothesis testing stage 2:

Stage 2 also examines the Measure of Sampling Adequacy (MSA). The output of SPSS version 17.0 describes the MSA value in the Anti-Image Correlation column (...a) it turns out that an indicator appears that does not match the other variables because it has an MSA value of less than 0.5, namely the X33 indicator or the shy indicator. Buying things is not related to embarrassment towards others. The MSA value is 0.416, and because of that, it is necessary to test the validity again without the X33 variable or an indicator of embarrassment if you don't buy.

3.2.3 Stage 3 validity test

The validity test of stage 3 is carried out on follow-up in stage 2. The X33 variable has the smallest MSA value, so it needs to be removed and re-tested on other variables. The following presents the output of SPSS version 17.0 for validity testing using confirmatory factor analysis based on KMO and Barlett's Test values.

Table 4 Calculation results of KMO and Barlett's Test

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measures of Sampling Adequacy.		.869
Bartlett's Test of Sphericity	approx. Chi-Square	1259,742
	df	120
	Sig.	.000

Data source: SPSS 25 data processed

Based on Table 4, the value of KMO = 0.869 is obtained with a Significance = 0.000. The conclusion is that 86.9% of the factors of self-determination theory can explain the construct so that Self-Determination Theory can be used to measure the intention to purchase recycled products. This means that the sample is adequate for further analysis or 86.9% of the variance can be explained by these factors.

Hypothesis testing stage 3:

Based on Table 4, the value of KMO = 0.869 is obtained with a Significance = 0.000. The conclusion is that 86.9% of the factors of self-determination theory can explain the construct so that Self-Determination Theory can be used to measure the intention to purchase recycled products. This means that the sample is adequate for further analysis or 86.9% of the variance can be explained by these factors.

Checking the validity test of 3 Measure of Sampling Adequacy (MSA) needs to be done to find out whether the sampling process is sufficient or not by looking at the Anti-Image Correlation (...[a]). The MSA value in the stage 3 validity test. The output of SPSS version 17.0 describes the MSA value of all indicators in the Anti-Image Correlation column (...[a]) which is more than 0.5, meaning that this variable can be further analyzed.

3.3 Self-determination theory indicators in measuring the intention to purchase recycled products

Based on the results of the instrument is valid and reliable, so that further analysis can be carried out as needed in confirmatory factor analysis. In the following, things that need to be explained in the confirmatory factor analysis will be presented.

3.3.1 Communalities

Communalities are the total variance explained by the extracted factors. In the confirmatory factor analysis, only the common variance is extracted, so it is not wrong if the common variance value is less than one. This is because the common variance comes from the total variance minus the specific variance and error variance.

The following shows the output of SPSS version 17.0 for communalities.

Table 5 Results of Communalities, Component Matrix Results, and Component Rotation

Communalities			Component Matrix [a]				Rotated Component Matrix [a]			
	Initial	Extraction		Components				Components		
				1	2	3		1	2	3
X1.1	1,000	0.599	X1.1			0.750	X1.1			0.769
X1.2	1,000	0.756	X1.2			0.850	X1.2			0.867
X1.3	1,000	0.760	X1.3			0.862	X1.3			0.869
X2.1	1,000	0.711	X2.1		0.766		X2.1		0.839	
X2.2	1,000	0.825	X2.2		0.815		X2.2		0.902	
X2.3	1,000	0.839	X2.3		0.831		X2.3		0.907	

X3.1	1,000	0.398	X3.1				X3.1		0.561	
X4.1	1,000	0.580	X4.1	0.743			X4.1	0.745		
X4.2	1,000	0.859	X4.2	0.900			X4.2	0.915		
X4.3	1,000	0.819	X4.3	0.859			X4.3	0.902		
X5.1	1,000	0.737	X5.1	0.835			X5.1	0.836		
X5.2	1,000	0.656	X5.2	0.766			X5.2	0.791		
X5.3	1,000	0.821	X5.3	0.893			X5.3	0.897		
X6.1	1,000	0.704	X6.1	0.825			X6.1	0.806		
X6.2	1,000	0.733	X6.2	0.840			X6.2	0.829		
X6.3	1,000	0.544	X6.3	0.735			X6.3	0.718		
Extraction Method: Principal Component Analysis.			Extraction Method: Principal Component Analysis. a. 3 components extracted.				Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. [a]			
							a. Rotation converged in 4 iterations.			

Source : output of SPSS

Based on Table 5 from the extraction results, the variance in variable 1 is 0.429, meaning that 42.9% of the variance of variable 1 can be explained by the factors to be formed. Variable 2 is 0.599, meaning that 59.9% of the variance of variable 2 can be explained by the factors that will be formed. And so on until variable 16, which explains 0.544 to 54.4% of the variance of variable 16, can be explained by the factors to be formed.

3.3.2 Total Variances Explained

In Total Variance Explained, what needs to be considered is an eigenvalue that is more than 1, this is because an eigenvalue that is less than 1 is not significant. Based on these outputs, there are 18 variable indicators included in the confirmatory factor analysis. Judging from the eigenvalues which are more than 1, there are 16 indicators formed. This means that from the 2 indicators used by previous researchers to build instruments in this study, they have been extracted or reduced to 16 indicators.

3.3.3 Rotated Factor Matrix

Rotated Factor Matrix is the result of rotation of the factor matrix. This aims to show a clearer and more real distribution of variables compared to if the rotation is not carried out. The limiting figure (cut of point) is more than 0.5. Based on the output results of SPSS version 25.0, these results can be explained one by one based on the many variables used according to table 5.

4. Discussion

Data analysis it can be seen that the variables used to predict the intention to purchase recycled products consist of 3 variables. The continuum variable of self-determination theory consists of 6 variables namely amotivation, external regulation, introjected regulation, identified regulation, integration regulation and intrinsic regulation into 3 variables namely amotivation, external regulation and intrinsic development. The rotations obtained are the findings in this study. The 6 continuums suggested by SDT are formed into 3 variables, namely:

Amovation is a clear and unshakable variable built with indicators of not understanding, not thinking about and not knowing being able to identify amotivation variables so that these things can be used to research recycled products. There are people who don't understand, don't think about and don't know about recycled products. Amotivation which consists of indicators Didn't think, Don't understand, Don't know. Amotivation is a motivational framework in which a person is interested because it is not based on any particular reason. Research that fits this variable is (Gilal et al., 2019b), (Rosli & Saleh, 2022) and (Williams et al., 2019), (Manger et al., 2020), (France, 2014). Amotivation is someone's initial motivation when buying but without any particular consideration. Formed with items X11, X12, and X13.

The second variable that is developed is external regulation which consists of a combination of external regulation and introjected regulation. External consisting of forced indicators, gifts, sanctions. And Introjected regulation consists of feeling uncomfortable, feeling guilty and ashamed if you don't buy recycled products. Introjected regulation as a regulation that occurs because of a feeling of pressure, ego from various outside influences. Recycling purchases are not motivated by discomfort or motivated by guilt. The results of the study explain that motivation due to shame when not buying recycled products is a real item, namely item X33. Research that is consistent with this variable is from (Rahi & Abd. Ghani, 2019), (Widyarini & Gunawan, 2018), (Manger et al., 2020) explaining that external motivation marked by gifts has an influence on intentions (Gilal et al ., 2019b), (Rosli & Saleh, 2022), (France, 2014), (Williams et al., 2019) provide research results that external regulation has a significant effect on behavior. Items that form external regulation are X21, X22, X23. An intrjected variable that has an indicator

The important values of recycled products must be put forward in building motivation so that the intention to purchase recycled products can be formed so that the marketing of recycled products matches their market goals. Values such as buying recycled products will help the world's lungs, recycled products make the earth healthier, and recycled products reduce waste. The motivation is because purchasing recycling is in accordance with life goals so that it will always be more useful, buying recycled is an important thing to do, recycling is the first step to solving world pollution is also a motivation that builds purchase intentions. This will give fans a feeling of liking recycled products, recycling creates something useful from waste, fun creative recycled products will give consumers confidence to buy recycled products.

The third aggregation consists of the variables identified regulation, integration regulation and intrinsic regulation. Identified regulation, integration regulation and intrinsic regulation become a more effective variable. This is in accordance with Ryan and Deci's opinion that SDT can coordinate its principles and findings in one theory, but also integrates that theory within the larger life sciences framework, the goal of which is in accordance with the philosophical foundation of its organism (Ryan & Deci, 2019).

Intrinsic development becomes a new variable that describes a person's motivation to develop into a feeling of pleasure. This is the result of a rotation of the findings of this study where regulation is identified with indicators of helping the lungs of the world, making the earth healthier, reducing waste. An important finding in this research is identified regulation which is an indication because social values are the main factor in purchasing recycled materials. Identified items are represented by X41, X42, X43. The Integration regulation variable is the next variable which is combined into an intrinsic development variable. This variable has indicators of the purpose of being useful, recycling products is important, and the belief that products are able to solve pollution. Representative items are X41, X52, X53. The last variable that is combined is Intrinsic: Liking, Enjoying, Hobbies with items X51, X52, X53.

5. Conclusion

The result of this study is that self-determination theory can be used to measure the purchase of recycled products. The six continuum variables suggested by SDT amotivation,

external regulation, introjected regulation, identified regulation, integration regulation, and intrinsic regulation are rotated into three variables, namely amotivation, external regulation, and intrinsic development. Intrinsic development as a new variable resulting from the merger provides an explanation that the values embedded in a person towards recycled products provide motivation to build purchase intentions.

However, the three variables found in this study need to be researched to determine their effectiveness in purchasing, especially the purchase of recycled products. Subsequent research with variables from SDT is interesting because campaigns for recycled products are needed so that consumers are more motivated to intend to buy recycled products as one of the answers to environmental and waste problems in the world.

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