

Sinaga, Anton Atno Parluhutan; Sitorus, Sunday Ade

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Kontakt/Contact

ZBW – Leibniz-Informationszentrum Wirtschaft/Leibniz Information Centre for Economics
Düsternbrooker Weg 120
24105 Kiel (Germany)
E-Mail: [rights\[at\]zbw.eu](mailto:rights[at]zbw.eu)
<https://www.zbw.eu/>

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The Role of Consumer Attitude and Renewable Energy towards Environmental Friendly Policies in the Intention to Comply With the Paid Plastic Environmental Friendly Policy

Anton Atno Parluhutan Sinaga^{1*}, Sunday Ade Sitorus²

¹Methodist University of Indonesia, Medan, Indonesia, ²HKBP Nommensen University, Medan, Indonesia.

*Email: antonmethodist@gmail.com

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ABSTRACT

The purpose of this study is to determine the effect of consumer attitudes and renewable energy on the intention to comply with the paid plastic environmentally friendly policy in North Sumatra Province through the environmental friendly policy variable made by the Government as a moderator variable. In this study the variables used are exogenous variables, namely consumer attitudes and renewable energy, while the endogenous variables are intention to comply with the paid plastic eco-friendly policy in North Sumatra Province and the moderator variable is environmentally friendly policies made by the Government. In this study, the data taken were adult population data in North Sumatra Province in 2020 who used as much as of plastic 4,177,004 souls. The research method used in this study is a quantitative descriptive research method using data analysis, namely path analysis using PLS 3.0 software. Based on the results of the research analysis, the conclusion of this study is partially that only consumer attitude variables affect the intention to comply with paid plastic environmentally friendly policies in North Sumatra Province and consumer attitudes and renewable energy variables affect environmentally friendly policy variables. Simultaneously, consumer attitudes and renewable energy variables affect the intention to comply with the paid plastic environmentally friendly policy in North Sumatra Province with the environmental friendly policy variable as the moderator variable. Through the results of the research that has been stated above, the adults of North Sumatra will have the intention to obey and obey all environmentally friendly policies that are carried out, such as creating renewable energy, these policies are very useful so that the people of North Sumatra are protected from the dangers of environmental damage and disasters, nature that will happen if you still use energy from fossils that can pollute the land, sea and air.

Keywords: Consumer Attitude, Renewable Energy, Intention to Comply With Environmentally Friendly Policies, Environmentally Friendly Policies

JEL Classifications: E42, E60, E71

1. INTRODUCTION

In the era of free trade or globalization, economic actors in various parts of the world are required to conduct trade between countries without setting impeding boundaries, such as the abolition of boundaries that hinder the economy, such as the imposition of strict import and export tariffs, the determination of export and import taxes, as well as the determination of high tariffs on certain products from various countries, which has already occurred in the

range of 2020-2021 when the trade war between the United States and China occurred. In addition, in carrying out free trade activities an agreement appears that will allow a country to reduce carbon emissions, where these carbon emissions cause global warming, as well as environmental damage due to excessive use of fossil energy. Reducing carbon emissions is one of the environmentally friendly policies in order to maintain world harmony and harmony, preserve the world's environment, and keep mankind from doing things that can cause increased global warming, thereby causing

climate change as a result of the use of materials from natural sources. fossils that can damage various joints of the environment, not only the land, but also the sea and air (Hanif et al., 2019).

The use of fossil energy today is very worrying for the world's population, not only residents in urban areas, but also very worried about the population in rural areas, where this fossil energy causes pollution, not only soil pollution, but can also cause sea and air pollution, where the use of fossil energy This contributes 70% to global warming and climate change (Khan et al., 2019). Governments in various parts of the world are united and want to do something to prevent global warming and climate change by forming the Paris Agreement Cooperation, where this agreement explains that each country is required to reduce the level of carbon emissions or the greenhouse effect in accordance with the targets set in their respective countries. -each country, in order to limit the increase in temperature by 2°C (Atinkut et al., 2020). To prevent climate change, each country must implement environmentally friendly policies, where this policy can be carried out by increasing the use of renewable energy and reducing the use of energy or fuels from animals and fossils, where energy or fossil fuels can pollute the air and make Earth's temperature increases every year (White et al., 2019). There are still many countries that are egocentric and don't pay attention to the agreement to reduce carbon emissions, where there are still countries that don't care about the impacts caused by global warming and climate change, where the earth's temperature will rise, there are unclear seasonal changes in various places countries, as well as the melting of the ice surface in the North Pole and in the Greenland area, so that it will have an impact on massive sea level rises that will endanger some of the islands in the world (Prakash et al., 2019). With the impact that is very detrimental to the world's population, it is necessary to have a strong commitment and prevent egocentricity to save the world and also save humanity from extreme disasters that will hit the world if environmentally friendly policies, such as creating renewable energy that does not pollute the soil, air and sea is implemented and executed well and comprehensively. Indonesia is one of the countries that follow this Paris Agreement, where Indonesia must comply with every item of this agreement to prevent things that are detrimental to the Indonesian population, where the Government must slowly implement this environmentally friendly policy and must gradually abandon the use of natural materials. Non-environmentally friendly fuels, such as fuel oil and natural gas. Environmentally friendly policies that are slowly being implemented are the conversion from the use of kerosene to gas, the elimination of the use of gasoline, slowly reducing the consumption of fossil fuels, such as diesel and will replace them with environmentally friendly fuels, such as fuel from palm oil (Bio Fuel) and fuel from plastic that does not pollute the environment (Ekasari and Zaini, 2020). Plastic is one of the necessities that Indonesian people need to wrap something, as a packaging material for food and non-food products and also serves for food storage. In a function that is already very good, there are parties who abuse plastic by throwing plastic in the wrong place, throwing plastic carelessly, resulting in pollution of the existing environment, As has been seen in Indonesia, the emergence of floods, landslides and plastic waste pollution which made the Government initially come up with the idea to prevent

such pollution, then paid plastic was applied to consumers who wanted to wrap something using plastic or packaging when going shopping at traditional markets and supermarkets. At first this policy was widely supported by environmental organizations, but the attitude of consumers who did not agree with the policy so that the Government did not implement it directly, but the policy was handed over to the regions, so that the regions had implemented it, and some did not apply it. This is because it still follows the desires and wishes of the community that paid plastic policies are very detrimental to people with low incomes.

Due to the very attitude of consumers to spend money to pay for the use of plastic in shopping centres and other places, this policy cannot be applied in various regions or regions, where this policy can be applied to people who have empathy and awareness that the use of paid plastic will prevent the occurrence of environmental damage, so that the role of consumers becomes very important to create a healthy climate and an undamaged environment, so that the environment becomes clean and beautiful, and free from plastic waste pollution. For example, Jakarta is one of the provinces in Indonesia that implements a paid plastic policy when consumers are going to buy something by wrapping goods or giving packaging to products, where this policy can be implemented properly because of the attitude of consumers who are aware of the cleanliness and environmental sustainability of Jakarta so that the capital city can be clean and tidy and not polluted with plastic waste and prevent environmental damage. In addition, paid plastic can be a substitute for fossil energy to prevent climate change, where paid plastic is used to limit the use of single-use plastics, where the role of plastic as a counterweight to the use of renewable energy can prevent and reduce carbon emissions, so this paid plastic is a temporary solution for prevention of damage to nature and the environment caused by human activities that pollute the land, sea and air. North Sumatra Province has several shopping places, where consumers who always shop at shopping centres in the North Sumatra Province need a place to put groceries such as plastic. During the period of 2020, the population of North Sumatra Province was around 14,703,532, where the number of adults was around 4,177,004 people who often shopped and used plastic as a place to wrap something or product packaging.

North Sumatra Province is one of the provinces that implement a paid plastic policy in the territory of Indonesia, where the average consumer attitude with the existence of this paid plastic application tends not to support efforts to prevent increasing global warming and climate change, where there are still some residents in the Sumatra region. North Sumatra, so that they do not have full intention and awareness to comply with environmentally friendly policies through paid plastic policies, so it can be said that the adult population in the North Sumatra region does not yet have the awareness to balance fossil energy into renewable energy through paid plastic policies made by the Government, so that later can prevent North Sumatra Province from things that can damage the regional environment in North Sumatra Province. The purpose of this study is to determine the effect of consumer attitudes and renewable energy on the intention to comply with the paid plastic environmentally friendly policy in North Sumatra

Province through the environmental friendly policy variable made by the Government as a moderator variable.

2. LITERATURE REVIEW

2.1. Consumer Attitude

Consumer attitude is the willingness of consumers to increase the consumption of goods and services in order to use products appropriately and efficiently (Al-Harabsheh et al., 2019). The attitude of consumer behavior describes an effort to obtain goods and services by paying attention to aspects that will make him always able to take an attitude in the process of obtaining these goods and services (Ahmad et al., 2021). Consumer attitude is a study conducted to find out the actions of consumers whether they want to consume the product or not (Bugge et al., 2019). Consumer attitude is something that needs to be studied so that later the business that will be developed can make consumers behave to use the product as well as possible (Kasayanond et al., 2019). Consumer attitudes, product use policy is an effort made in an effort to buy and use the resulting product so that the product is known by consumers, so that it can be a thorough consideration for consumers whether the product is useful and can be used for consumers or not (Rich, 2018). The factors that influence consumer attitudes in paying plastic environmentally friendly policies are as follows: Condition of goods due to policy, consumer interest, consumer response to policy, social influence, awareness in consumers' minds of policy (van Riel et al., 2021).

2.2. Renewable Energy

Renewable energy is a natural energy source and is able to renew itself continuously and is used for wider purposes because it does not include materials that damage the environment (Popovic et al., 2019). Renewable energy is a natural energy source and can be used continuously and cannot be used up because it is very beneficial for the community (Agyeman and Badugu, 2017). Renewable energy comes from nature, where this energy comes from available sources from nature, it can be from plants, semi-used goods, to goods that are free and found in nature (Nadia et al., 2021). Renewable energy is a basic need for humans that comes from nature, is free and is everywhere and is used to prevent natural destruction (Arafah et al., 2018; Destek and Aslan, 2017; Destek and Sinha, 2020). Renewable energy is an energy that is intended for the benefit of society, where this energy is needed to overcome problems that exist on earth, such as natural damage and global warming, and climate change (Spranz et al., 2018). Renewable energy is an alternative energy that is intended to replace fossil energy that disturbs and damages the environment, and can be renewed for the greater benefit and for the benefit of mankind (Yacob et al., 2019). The factors that affect the need for renewable energy are as follows: Old energy cannot be renewed, excessive consumption of fossil energy, High population growth, Large energy subsidies, The existence of alternative energy sources (Zutshi et al., 2016).

2.3. Environmentally Friendly Policy

Environmentally friendly policy is a policy that is regulated so that later it can be used to prevent problems related to the emergence of seeds of damage in the environment (Khansa and

Widiastuti, 2022). Environmentally friendly policy is a policy that is made to prevent environmental damage by implementing processes that produce from various sources in nature (Andaç and Güzel, 2017). Environmentally friendly policy is a policy that leads to environmental preservation, where this policy is carried out to prevent ecosystem damage that will lead to environmental destruction (Ćwiąkała-Małys and Mościbrodzka, 2019). Environmentally friendly policies can be utilized not only by the government, but also by humans and society in their daily lives, so that in implementing these policies the community can create a beautiful and sustainable environment and prevent natural damage (Hwang and Choi, 2018). The factors that influence environmentally friendly policies are as follows: environmental conditions, things that can harm society and the environment, quality of the environment, public awareness of environmental sustainability (Urbinati et al., 2019).

2.4. Intention to Comply With Policy

The intention to comply with the policy is something that the community realizes is important to be obeyed in order to achieve the benefit and the policy is indeed appropriate for the benefit of the community (Kim and Yun, 2019). The intention to comply with the policy is a right that is carried out to submit to a policy that is indeed beneficial to the community (Yacob et al., 2019). Intention to comply with policies is a human psychology to obey the rules and something that is made to improve the welfare of mankind (Lee et al., 2018). People who have the intention to comply with a government policy must have the attention and attitude to always obey the existing rules and also to what is the object of a policy that has been set (Mohd et al., 2018). The factors that influence the intention of the community to comply with government policies are as follows: What the community wants, Something that the community needs, Desire to improve community welfare, Desire to facilitate services to the community (Tomşa et al., 2021).

3. RESEARCH METHODS

The research method used is descriptive quantitative. quantitative descriptive method is a method used by analyzing and describing all the constraints and obstacles as well as problems in research in order to find a solutive solution. The data analysis is carried out by using the path analysis method using PLS (Kock, 2018). Path analysis is a data analysis used to determine the direct and indirect effects between several variables. In this study, the variables used are exogenous variables, namely consumer attitudes and renewable energy, while the endogenous variables are variables intention to comply with the paid plastic eco-friendly policy in North Sumatra Province and the moderator variable is environmentally friendly policies made by the Government (Pişirir et al., 2020).

In this study, the data taken were adult population data in North Sumatra Province in 2020 who used as much as plastic 4,177,004 souls, and analysis of the data using path analysis through the PLS 3.0 program. The population of this study is paid plastic users who are sourced from the adult population in North Sumatra Province in 2020 amounting to 4,177,004 people, the sampling technique in this study uses the simple random sampling method, simple random sampling method is a research method carried out by determining

how many samples from the universe of the population are selected randomly each sample has an equal chance of being selected as a sample, the number of samples can be calculated by the slovin formula namely (Usakli and Kucukergin, 2018).

$$n = N / (1 + (N \times e^2))$$

$$n = 4,177,004 / (1 + (4,177,004 \times 0.05^2))$$

$$n = 399 \text{ samples.}$$

4. RESEARCH RESULTS

To find out the output results via PLS, it can be explained in the following Bootstrapping Model Figure 1:

Information:

Exogenous Variables: Consumer Attitudes (SK) and Renewable Energy (ET).

Endogenous Variables: Intention to Comply with Environmentally Friendly Policies (NUPTKRL).

Moderator variable: Environmentally Friendly Policy (KRL).

4.1. Convergent Validity

Convergent validity data processing is a test carried out to obtain results that state the results of the data processing can be said

to be valid, the condition for the outer loading value is greater than a significance of 0.7 (Pişirir et al., 2020), the results of data processing from the convergent validity test can be seen in Table 1:

Based on Table 1, it can be concluded that the results of data processing or the outer loading value of several variables are greater than 0.70, it can be concluded that the distribution of the results of data processing through the convergent validity test of several variables can be said to have a valid data distribution and is suitable for use for other data processing.

4.2. Average Variant Extracted (AVE)

The results of the AVE analysis data processing can be seen in Table 2.

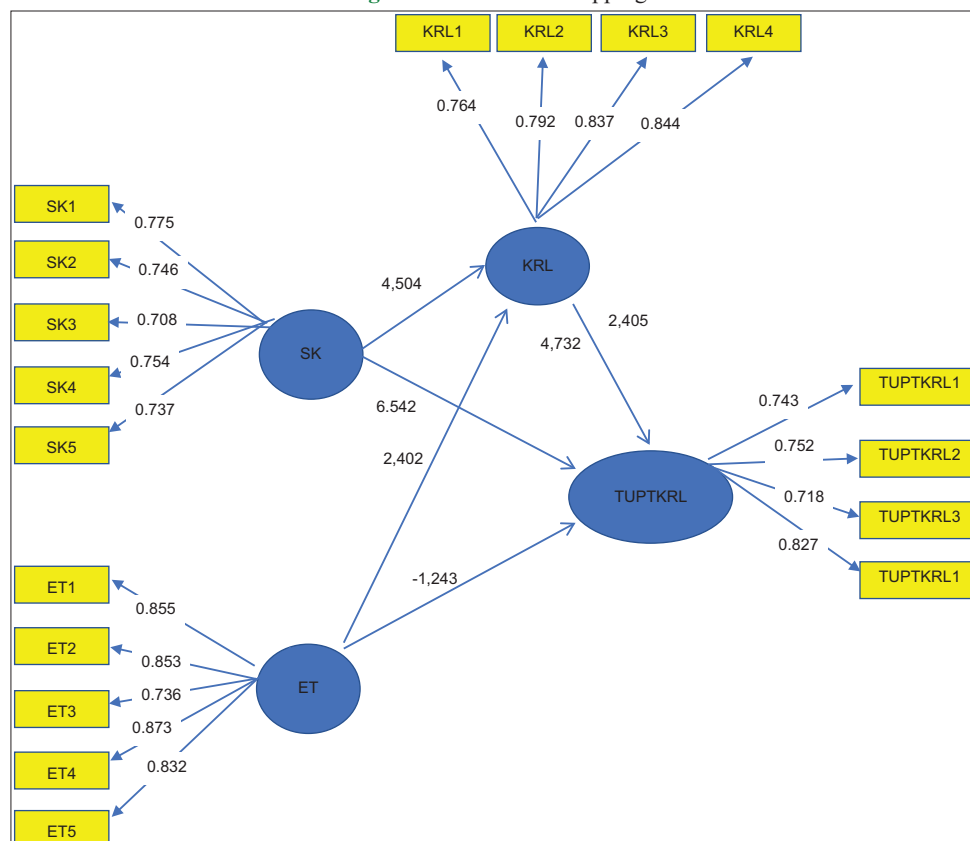
Based on Table 2, it can be explained that the results of data processing for the Average Variant Extracted value have a value greater than 0.5, which means that the distribution of data from existing variables has accurate data acceleration, so it is necessary to continue with further data testing.

4.3. Composite Reliability Test

For the results of testing the data from the composite reliability test, it can be seen in Table 3:

Based on Table 3, it can be explained that the value of the data processing results from the composite reliability test results is >0.6 , which means that all variables have a high level of reliability and are feasible for further testing.

Figure 1: Model bootstrapping



4.4. Path Coefficient Test

Path coefficient test is the result of data testing to find out how strong the direct or indirect influence is between variables (Kurniawan and Wahyuningsih, 2018). The path coefficient test results can be seen in the R2 value or R Square value which can be analyzed according to Tables 4-8:

Based on Table 5, it can be explained that the R Square value of the consumer attitude variable is 83.2, which means that the percentage change in consumer attitudes of 83.2% can be explained by the intention variable to comply with environmentally friendly policies and the remaining 16.8% can be explained by other variables not explained in this study.

Based on Table 5, it can be explained that the R Square value of the renewable energy variable is 80.8, which means that the percentage of the amount of renewable energy produced is 62.8% which can be explained by the intention to comply with environmentally friendly policies and the remaining 37.2% can be explained by other variables that are not explained in this study.

Table 1: Convergent validity test

Variable	Indicator	Outer loading
Consumer attitude (X1)	SK 1	0.775
	SK 2	0.746
	SK 3	0.708
	SK 4	0.754
	SK 5	0.737
Renewable energy (X2)	ET1	0.855
	ET 2	0.853
	ET 3	0.736
	ET 4	0.873
	ET 5	0.832
Intention to comply with environmentally friendly policies (Y)	TUPTKRL 1	0.743
	TUPTKRL 2	0.752
	TUPTKRL 3	0.718
	TUPTKRL 4	0.827
Environmentally friendly policy (Z)	KRL 1	0.764
	KRL 2	0.792
	KRL 3	0.837
	KRL 4	0.844

Source: Data Processing Results With PLS 3.0, 2022

Table 2: AVE test

Variable	AVE
Consumer Attitude (X1)	0.640
Renewable Energy (X2)	0.556
Intention to Comply with Environmentally Friendly Policies (Y)	0.623
Environmentally Friendly Policy (Z)	0.722

Source: Data Processing Results With PLS 3.0, 2022

Table 3: Composite reliability test

Variable	Composite reliability
Consumer attitude (X1)	0.863
Renewable energy (X2)	0.866
Intention to comply with environmentally friendly policies (Y)	0.872
Environmentally friendly policy (Z)	0.747

Source: Data Processing Results With PLS 3.0, 2022

Based on Table 6, it can be explained that the R Square value of the consumer attitude variable is 83.5, which means that the percentage of changing consumer attitudes of 83.5% can be explained by the environmental friendly policy variable and the remaining 16.5% can be explained by other variables not described in this study.

Based on Table 7, it can be explained that the R Square value of the renewable energy variable is 80.6, which means that the percentage of the amount of renewable energy created is 80.6% which can be explained by the environmental friendly policy variable and the remaining 19.4% can be explained by the variable. Others not described in this study.

Based on Table 8, it can be explained that the R Square value of the environmentally friendly policy variable is 83.3, which means that the percentage of improvement in environmentally friendly policies of 83.3% can be explained by the intention to comply with environmentally friendly policies and the remaining 16.7%. can be explained by other variables that are not explained in this study.

4.5. Hypothesis Testing

To explain the results of hypothesis testing can be seen in Table 9.

Based on Table 9, it can be explained that only the consumer attitude variable affects the intention to comply with the paid

Table 4: Test of R square variable X1 against Y

Variable	R square
Consumer attitude (X1)	0.832
Intention to comply with environmentally friendly policies (Y)	0.811

Source: Data Processing Results With PLS 3.0, 2022

Table 5: Test of R square variable X2 against Y

Variable	R square
Renewable energy (X2)	0.628
Intention to comply with environmentally friendly policies (Y)	0.621

Source: Data Processing Results With PLS 3.0, 2022

Table 6: Test of R square variable X1 against Z

Variable	R Square
Consumer attitude (X1)	0.835
Environmentally friendly policy (Z)	0.810

Source: Data Processing Results With PLS 3.0, 2022

Table 7: Test of R square variable X2 against Z

Variable	R square
Renewable energy (X2)	0.806
Environmentally friendly policy (Z)	0.623

Source: Data Processing Results With PLS 3.0, 2022

Table 8: R Square test of variable Z against Y

Variable	R Square
Environmentally friendly policy (Z)	0.833
Intention to comply with environmentally friendly policies (Y)	0.825

Source: Data Processing Results With PLS 3.0, 2022

Table 9: Hypothesis testing

Hypothesis	Influence	T-Statistics	P-value	Results
H1	Influence of consumer attitudes towards the intention to comply with environmentally friendly policies	6.542	0.000	Received
H2	Effects of renewable energy towards the intention to comply with environmentally friendly policies	-1,243	0.203	Rejected
H3	Influence of consumer attitudes towards environmentally friendly policies	4,504	0.000	Received
H4	Effects of renewable energy towards environmentally friendly policies	2,402	0.002	Received
H5	Influence of consumer attitudes on the intention to comply with environmentally friendly policies with environmentally friendly policy variables as moderating variables	4,732	0.001	Received
H6	Effects of renewable energy on the intention to comply with environmentally friendly policies with environmentally friendly policy variables as moderating variables	2.045	0.000	Received

Source: Data Processing Results With PLS 3.0, 2022

plastic environmentally friendly policy in North Sumatra Province and the consumer attitude variable and renewable energy partially affect the environmentally friendly policy variable. Simultaneously, consumer attitudes and renewable energy variables affect the intention to comply with the paid plastic environmentally friendly policy in North Sumatra Province with the environmental friendly policy variable as the moderator variable.

5. DISCUSSION

Based on the results of the t-test for the consumer attitude variable, it can be seen that the t-test value of 6.542 is greater than the significance value of 0.05, consumer attitudes affect the intention to comply with paid plastic environmentally friendly policies in North Sumatra Province, explained that the intention to comply with any environmentally friendly policy by the government of a country can be seen from the attitude of consumers in responding to the policy, if the policy is very useful, then consumers as citizens in a region or country will obey, obey and follow the policy (Rich, 2018). On the other hand, if the policy is not useful and tends to harm consumers (society), then consumers will not obey, obey and follow the policy. In addition, the results of the t-test for consumer attitudes can be seen that the t-test value of 4.504 is greater than a significance value of 0.05, consumer attitudes affect environmentally friendly policies, research. This study explains that consumer attitudes in supporting environmentally friendly policies can be seen from the intention to always obey and obey the policy, this environmentally friendly policy will prevent and protect the community from environmental damage, such as floods, landslides, and other natural disasters.

The results of the t-test regarding consumer attitudes can be seen that the t-test value of 4.732 is greater than a significance value of 0.05, which means that consumer attitudes affect the intention to comply with paid plastic environmentally friendly policies in North Sumatra Province with environmentally friendly policy variables as moderator variables (He et al., 2019; Jaelani et al., 2017). The good attitude of consumers to comply with environmentally friendly policies can be seen from the willingness to obey and obey the policies implemented to prevent global warming. Based on the results of the t-test for renewable energy variables, it can be seen that the t-test value of -1.243 is smaller

than the significance value of 0.05, which means that the renewable energy variable affects the variable of intention to comply with paid plastic environmentally friendly policies in North Sumatra Province (Al-Harashsheh et al., 2019). Renewable energy that is created and is part of an environmentally friendly policy does not make consumers as citizens of a country or region to comply with environmentally friendly policies, because this renewable energy takes a long time to be managed and created perfectly to meet alternative energy needs, so that currently consumers are not too sure that renewable energy will benefit society (Kim and Yun, 2019).

In addition, the results of the t-test for renewable energy variables, the t-test value of 2.402 is greater than the significance value of 0.05, which means that the renewable energy variable affects the environmental friendly policy variable, Environmentally friendly policies that are useful for finding alternative energy are highly adhered to and adhered to by consumers as citizens, consumers will always follow what the policy is to protect residents and consumers to prevent environmental damage and climate change (Hwang and Choi, 2018). The results of the t-test for renewable energy variables, the t-test value of 2.540 is greater than the significance value of 0.05, which means that the renewable energy variable affects the intention to comply with the paid plastic environmentally friendly policy in North Sumatra Province with the environmentally friendly policy variable as a variable. moderator, Renewable energy and environmentally friendly policies become a single unit, this policy affects the ability of a country or region to protect its citizens from natural damage that will harm the citizens of that country, so that citizens as consumers of renewable energy users will tend to be obedient and obedient and will follow all environmentally friendly policies made by the State (Nadia et al., 2022).

6. CONCLUSION

Based on the results of the research analysis, the conclusion of this study is partially that only consumer attitude variables affect the intention to comply with paid plastic environmentally friendly policies in North Sumatra Province and consumer attitudes and renewable energy variables affect environmentally friendly policy variables. Simultaneously, consumer attitudes and renewable energy variables affect the intention to comply with

the paid plastic environmentally friendly policy in North Sumatra Province with the environmental friendly policy variable as the moderator variable. Through the results of the research that has been stated above, the adults of North Sumatra will have the intention to obey and obey all environmentally friendly policies that are carried out, such as creating renewable energy, these policies are very useful so that the people of North Sumatra are protected from the dangers of environmental damage and disasters. Nature that will occur if they still use fossil fuels that can pollute the land, sea and air.

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