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FACTORS INFLUENCING INTENTION TO ADOPT ENVIRONMENTALLY FRIENDLY CARS: A STUDY ON COMMUNITIES IN BALI PROVINCE, INDONESIA

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ABSTRACT
Bali, as a tourist area, uses transportation facilities quite a lot. However, sales of LCEV cars are relatively small because interest in this type of car is still low. People are still reluctant to switch to using LCEV cars due to various considerations. Therefore, this research aims to explain that government support and environmental concern moderate the influence of perceived value and subjective norms on the intention to adopt environmentally friendly cars in the people of Bali province using the Value-Based Adoption Model (VAM) approach. The aim of this research was completed using the Partial Least Square - Structural Equation Model (PLS-SEM) method. Data collection was carried out by distributing questionnaires to 200 respondents using purposive sampling techniques. The results of this study show that environmental Concern significantly influences and moderates subjective norms on the intention to adopt environmentally friendly cars. At the same time, government support is unable to influence people's intention to adopt. It is hoped that the results of this research can be a study for the automotive industry and the Bali Regional Government so that they can design appropriate strategies to increase people's intention to adopt environmentally friendly cars, such as LCEV vehicles so that the environment can be saved from pollution.

KEY WORDS
Perceived value, subjective norms, adoption intention, low carbon emission vehicle, value based adoption model.

The automotive industry plays an important role in the Indonesian economy and employment. In the economic sector, the contribution of the automotive industry to Indonesia's Gross Domestic Product (GDP) reached 16.10% in 2022. This is in line with the export value in the automotive industry, which increased by 60.7% in 2022, so this industry is called a foreign exchange hero. In the employment sector, this industry is able to absorb 1.5 million Indonesian workers, both direct and indirect workers. This industry, which is identical to motor vehicles and their repairs, is expected to help Indonesia advance and compete in the global market. However, the role of the automotive industry is not only seen from the two aspects above but also from the environmental aspect, namely the industry's ability to reduce carbon dioxide (CO2) emissions and maintain a sustainable environment. This condition has given rise to a trend of environmentally friendly vehicles, one of which is cars, both Low-Cost Green Cars (LCGC) and Low Carbon Emission Vehicles (LCEV). Although it has good environmental value, the demand for LCEV products is still relatively small. One of the market leaders, PT Toyota Astra Motor (TAM), was only able to sell 2,100 units of the 13 million units of hybrid car sales in the global market in the last ten years. Sales in Indonesia are only 0.016% compared to TAM's sales in the global market. This small number of sales shows that the LCEV car market in Indonesia is still far below average. Bali, as a tourism area, has a relatively high use of transportation facilities, but sales of electric vehicles have decreased from 36.01% in Q4 2022 to 32.27% in Q1 2023 (Bali Transportation Agency, May 2023). This fact reflects that people are still reluctant to switch to using LCEV cars due to various considerations. The Bali Provincial Government is targeting tourist attractions on the island of Bali to be required to use electric vehicles as an implementation of Bali Governor Regulation No. 45 of 2019 concerning Bali Clean Energy. One of the momentums for Bali to switch to electric vehicles was also strengthened by the G20 Presidency event held in Bali in November 2022, where delegates used electric vehicles. Bali is also targeting net zero

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emissions by 2045, so all vehicles must be electric vehicles, with a target of 35,560 buses, 401,159 trucks, 14,156,761 motorcycles, and 2,081,707 passenger cars. With this target, it is deemed necessary to determine the factors that influence the public's intention to adopt electric vehicles.

When adopting new products such as cars, people tend to consider the benefits and risks of the product. The benefits offered include fuel efficiency, durable car parts, reduced CO2 emissions, and driving pleasure. When viewed in terms of benefits, LCEV cars have various advantages over conventional cars. Likewise, LCEV cars also have disadvantages known as risks that will be accepted. The emergence of risk is an inhibiting factor that forms negative attitudes and reduces adoption intentions. The risks that are often faced are the relatively expensive cost of replacing batteries, short range, and lack of charging infrastructure provided.

The public's reluctance to adopt LCEV cars makes it challenging for the automotive industry and the government to realize environmentally friendly future vehicles in Indonesia and Bali, in particular. The industry must be creative and able to take advantage of current trends, namely the trend of environmentally friendly products. Pro-environmental traits have a positive influence on consumer attitudes towards LCEV cars, and people with high pro-environmental traits tend to be willing to adopt hybrid cars. This study was conducted to explain the influence of perceived value and subjective norm variables on the intention to adopt environmentally friendly cars, namely LCEV cars, which are moderated by government support and environmental Concerns. This study is expected to provide managerial implications for the automotive industry and the government to determine the values that potential communities want to obtain, both in terms of benefits and risks that hinder the intention to adopt LCEV cars. Specifically, this study aims to provide an overview of how the implementation of government regulations will be responded to in different ways by communities with different levels of environmental Concern so that the automotive industry and government can design the right strategy to foster the intention to adopt environmentally friendly cars. This topic is relevant to the researcher's field of expertise, namely marketing, especially consumer behavior. Thus, the results of this study provide theoretical benefits to the development of science, especially in the field of consumer behavior. The urgency of this study is to be a guideline for the automotive industry to be innovative in developing marketing strategies that are in accordance with the needs and abilities of the community and support the implementation of government regulations. The suitability of innovation development with the potential community it serves and supports the implementation of government regulations will allow Bali to be recognized as a net zero emissions area.

METHODS OF RESEARCH

This study is an associative study that aims to explain the role of government support and environmental attitudes in moderating the influence of perceived value and subjective norms on the intention to adopt environmentally friendly cars among the people of Bali Province. The location chosen for this study was Bali Province because these two locations are indicators of the progress of Balinese society as reflected in community mobility, different socio-economic backgrounds, such as the use of technology and social media, which are pretty intense, so they are considered to have higher environmental knowledge and awareness compared to other Balinese people. The subjects in this study were the people of Bali-Bali Province who did not yet have environmentally friendly cars. The object of this study is the influence of perceived value and subjective norms on the intention to adopt environmentally friendly cars, which are moderated by government support and environmental attitudes. In this study, the exogenous variables are the subjective norm variables and perceived value measured by perceived benefits and perceived risks. The dependent variable is the intention to adopt environmentally friendly cars. The moderating variables consist of government support and the community's environmental attitudes. The population in this study were the people of Bali Province who did not yet have environmentally friendly cars. The number of research respondents is not known for certain.

Therefore, the sampling technique used was purposive sampling to obtain representative respondents. Based on specific considerations, in this study, the number of samples used was 200 respondents with sampling using purposive sampling, namely samples taken with specific considerations in order to provide the desired information in accordance with the research problem (Rahyuda, 2016, p. 145). The sample criteria in this study were people who live in Bali Province, already have a driver's license (SIM), and have information about LCEV cars. The data collection method in this study was a questionnaire. This study uses descriptive statistics and inferential statistics, namely: P L S - S E M Analysis.

RESULTS AND DISCUSSION

Partial Least Square (PLS) is an analysis method that can be used for all data scales, does not require many assumptions, the sample size does not have to be large, can be used to prove theories, and can be used to develop relationships that do not yet have a strong theoretical basis. PLS is a powerful non-parametric statistical analysis method because it accommodates data from various scales of measurement without assuming the data must be on a specific measurement scale (Ghozali, 2014, p. 32).

There are two essential model evaluations in this test, namely the outer model and the inner model. The output results met convergent validity because the loading factor was above 0.60, so all variable statements were valid. From the perceived benefit variable, indicator X1.2 has the highest outer loadings value compared to other indicators, namely 0.789, so it can be explained that the indicator can reflect the perceived benefit variable. From the perceived risk variable, indicator X2.3 has the highest outer loadings value compared to other indicators, namely 0.833, so it can be explained that the indicator can reflect the perceived risk variable. From the perceived value variable, indicator X1.2 has the same outer loadings value, namely 0.799, so it can be explained that the indicator can reflect the perceived value variable. Indicator X3.2 reflects the subjective norm variable with an outer loadings value of 0.931. Indicator X3.2 reflects the subjective norm variable with an outer loadings value of 0.931. Indicator X4.2, with an outer loading value of 0.929, reflects the variable of government support; indicator X5.2, with an outer loading value of 0.929, reflects the variable of environmental Concern, and the variable of purchase intention is reflected by indicator Y2.3, with an outer loading value of 0.901.

Table 1 – *AVE* result

	Average Variance Extracted (AVE)
Government Support	0.863
Environmental Concern	0.852
Adoption Intention	0.793
Subjective Norm	0.718
Norm* Government Support	1.000
Norm* Environmental Concern	1.000
Per_val* Government Support	1.000
Per_val* Environmental Concern	1.000
Perceived Value	0.561

Source: Processed data, 2024.

The Average Variance Extracted (AVE) value is greater than 0.5, so it can be concluded that the model meets the validity requirements. The reliability test of the variables is measured by composite reliability, Rho Alpha, and Alpha Groanbach. The variables are declared reliable if the Cronbach's Alpha and Rho alpha values are > 0.70, and the composite reliability value is > 0.6. The reliability test of the model can be seen in Table 2 below. Based on Table 2, it can be seen that Cronbach's Alpha and Rho alpha values are > 0.70, and the composite reliability value of each variable has a value of> 0.60. This indicates that all variables in this study meet the reliability requirements. Based on Table 2 the VIF value of each variable has a value smaller than 5, so it can be concluded that this research model is free from multicollinearity. The results of the VIF test are shown in the Table 3.

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Table 2 – *Composite Reliability* Result

	Cronbach's Alpha	rho_A	Composite Reliability
Government Support	0.844	0.892	0.926
Environmental Concern	0.942	0.942	0.958
Adoption Intention	0.869	0.873	0.920
Subjective Norm	0.804	0.902	0.882
Norm* Government Support	1.000	1.000	1.000
Norm* Environmental Concern	1.000	1.000	1.000
Per_val* Government Support	1.000	1.000	1.000
Per_val* Environmental Concern	1.000	1.000	1.000
Perceived Value	0.842	0.845	0.884

Source: Processed data, 2024.

Table 3 – VIF Value

	VIF
Subjective Norm * Government Support	1.000
Subjective Norm * Environmental Concern	1.000
Perceived value * Government Support	1.000
Perceived Value * Environmental Concern	1.000
x1.1	1.238
x1.2	1.263
x1.3	1.321
x2.1	1.227
x2.2	1.630
x2.3	1.656
x3.1	1.329
x3.2	2.744
x3.3	2.847
x4.1	2.141
x4.2	2.141
x5.1	4.103
x5.2	4.281
x5.3	3.814
x5.4	3.789
y1	2.124
y2	2.404
Y3	2.394

Source: Processed data, 2024.

Table 4 – R square

	R Square	R Square Adjusted
Adoption Intention	0.863	0.857

Source: Processed data, 2024.

The R square is 0.857, which means that 85.70% of the intention to adopt environmentally friendly cars can be explained by the constructs that influence the variables, namely perceived value, subjective norms, government support, and environmental Concern. From the examination of the R2 value, it can be concluded that, in general, the predictive ability of this research model is good, as seen from the two variables that have R2 values above 50%.

Environmental Concern has a t-statistic value of 11.701 with a p-value of 0.000 <0.05, so H2 is accepted. This means that the higher the community's environmental Concern, the higher the intention to adopt environmentally friendly cars. Community environmental concern moderates subjective norms on adoption intentions and has a t-statistic value of 2.035 with a p-value of 0.04 <0.05, so H6 is accepted. This means that environmental Concerns are able to moderate subjective norms on people's intentions to adopt environmentally friendly cars. This condition shows that environmental concern variables, both direct and moderating, are able to influence people's intentions to adopt environmentally friendly cars. The results of this study also strengthen the results of previous research conducted by Namagembe (2021), which stated that environmental Concern plays an important role in building people's switching intentions. Similar results have also been

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obtained by Klabi and Binzafrah (2023), who stated that high environmental Concerns can lead to higher switching intentions. The results of this study are also supported by the results of research from Dash (2021), which found that the environmental care variable has a positive and significant effect on the variable of switching intention or adoption intention.

Table 5 – T statistics and P-values

	T Statistics	P Values	Information
Government Support -> Adoption Intention	0.113	0.910	Not Sig
Environmental Concern -> Adoption Intention	11.701	0.000	Sig
Subjective Norm -> Adoption Intention	0.383	0.702	Not sig
Perceived value -> Adoption Intention	0.730	0.466	Not sig
Norm *Government Support -> Adoption Intention	1.604	0.109	Not sig
Norm * Environmental Concern -> Adoption Intention	2.035	0.042	Sig
Perceived value *Government Support -> Adoption Intention	0.113	0.910	Not sig
Perceived Value * Environmental Concern -> Adoption Intention	0.986	0.325	Not sig

Source: Processed data, 2024.

The variables of government support, subjective norms, and perceived value show a p-value> 0.05; these three variables are unable to influence people's intention to adopt environmentally friendly cars. The results of this study contradict the results of previous research conducted by Jaiswal et al. (2022), which stated that subjective norms play an important role in building attitudes toward electric vehicles. Perceived value, as measured by perceived benefits and perceived risks, cannot influence people's intention to adopt environmentally friendly cars. The results of this study are in line with the results of previous research conducted by Dey and Chakravarty (2022), which stated that low-risk perception increases people's switching intention. These results are also in line with the results obtained by Ngoc et al. (2022), who stated that low-risk perception could increase the intention to switch to electric vehicles even higher.

CONCLUSION

This section presents the conclusions of the research results as follows: Perceived value, subjective norms, and government support are unable to influence the intention of the people of Bali Province to adopt environmentally friendly cars, while environmental Concern is able to influence the intention of the people of Bali Province to adopt environmentally friendly cars. Environmental Concern is able to moderate/strengthen the subjective norms of the people of Bali Province to adopt environmentally friendly cars. However, it does not moderate the perceived value of the intention of the people of Bali Province to adopt environmentally friendly cars. Government support is unable to moderate the Perceived value or subjective norms of the intention of the people of Bali Province to adopt environmentally friendly cars. From the results of this study, the following suggestions can be made to the relevant parties: The automotive industry is expected to be more intensive in conducting socialization with the public regarding the benefits and risks that may be experienced when using electric cars so that it can foster the intention of the public to adopt environmentally friendly cars. The government and its staff are expected to be able to be role models in using environmentally friendly vehicles and immediately provide facilities related to these vehicles so that they can foster the intention of the public to adopt environmentally friendly cars. For further researchers, they can use the results of this study as a reference by adding variables such as attitudes and perceived use and expanding the research area to obtain more accurate results.

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