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Cultural value model and ecological behavior: The influence of self transcendence and conservation on deforestation behavior of the Kanayant Dayak indigenous peoples

Revi Sesario[1*], Nurliza[2], Emi Roslinda[3], Eva Dolorosa[4]

[1]*Universitas Tanjungpura, Indonesia.*

Corresponding author: Revi Sesario (*Email: revi.sesario@gmail.com*)

Abstract

The global deforestation crisis is increasingly threatening environmental sustainability, especially in indigenous territories such as the Dayak Kanayant community. This study aims to analyze the influence of individual values, especially Self-Transcendence and Conservation, on the deforestation behavior of indigenous peoples. With a quantitative approach and an explanatory research type, data was collected from 74 respondents using a questionnaire, then analyzed using the Partial Least Square Structural Equation Modeling (PLS-SEM) method. The analysis results show that Self Transcendence has a significant effect on Deforestation Behavior of 0.520 with a t-statistic value of 5.499 or > 1.96 and a P Value of 0.000 or < 0.05. Thus, an increase in Self Transcendence will increase Deforestation Behavior by 52.0%. Changes in Self Transcendence will influence changes in Deforestation Behavior. The analysis results show that Conservation does not significantly influence Deforestation Behavior with a t-statistic value of 0.415 or < 1.96 and a P Value of 0.678 or > 0.05. Thus, changes in Conservation will not influence changes in Deforestation Behavior. These findings confirm that the values of concern for nature, spirituality, and adherence to indigenous norms play an important role in shaping environmentally friendly behavior among indigenous peoples. In conclusion, strengthening the cultural and spiritual values of local communities can be an effective strategy in forest conservation efforts. This research makes an important contribution to the development of environmental policies based on local wisdom and enriches the literature on the role of individual values in the ecological context of indigenous communities.

Keywords: Conservation, Deforestation behavior, Indigenous peoples Dayak Kanayant, Self-transcendence.

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1. Introduction

Deforestation is a very complex issue globally. One of the causes is driven by illegal logging [1] agricultural expansion [2] and expansion of oil palm plantations [3]. This crisis increases the effects of greenhouse gases that impact humans [4]. To mitigate the impact of deforestation, one of them is through indigenous peoples' knowledge [5] commonly known as TEK or traditional ecological knowledge [6].

The TEK dimension provides a comprehensive understanding of ecosystem dynamics and their relationship with community cultural norms [7, 8]. However, modernization has created a cultural shift that causes knowledge erosion [9] so an environmental management strategy that is in line with cultural norms is needed [10]. So to integrate traditional practices, humans are needed as agents of change as the foundation of sustainable environmental management.

This study highlights the importance of understanding the preservation of cultural heritage in the midst of the challenges of environmental change by indigenous peoples. Such cultural heritage is rooted in values such as responsibility, respect and reciprocity [11] and environmentally sensitive practices [12]. For example, the traditional practices and beliefs of the Kanayant Dayak indigenous people that shape their relationship with the environment [13] with values that contain elements of togetherness, affection, mutual cooperation, art, ritual and spirituality [14]. There is a gap in this study, namely how to know the value of the role of individuals in an indigenous community as an effort to preserve traditional knowledge.

While the integration of ancestral knowledge into modern research presents significant opportunities, it is important to overcome existing limitations. Effective and mutually beneficial collaboration models [15] and traditional models are known to promote ecological balance [16]. The incorporation of ancestral wisdom values increases adaptability in the face of socio-economic changes [17] and the integration of TEK values can be a solution for environmental management by indigenous peoples [18]. This involves identifying behavioral elements and developing strategies to address them.

This research aims to uncover the often unexplored basics of Dayak local psychological and cultural values about the role of individual values in indigenous communities towards the preservation of TEK and its relationship to conservation behavior. To understand the gap in the field in terms of knowing the influence of people's personal values as a form of effective initiative, researchers used the Theory of Individual Values Schwartz [19] and the Theory of Planned Behavior [20]. These ancestral knowledge models and values play an important role in contemporary decision-making of indigenous peoples, serving as the foundation of cultural identity, sustainability and social resilience in the midst of global challenges and the world's globalization.

There has not been much research that explicitly identifies and examines the relationship between individual values (such as self-transcendence and conservation) and efforts to preserve TEK in indigenous communities, particularly in the context of socio-economic and environmental change. Previous studies have tended to focus on models of collaboration or the integration of traditional values into modern policy but have not developed a behavioral framework that links the dimensions of individual values to environmental and cultural conservation behaviors on a micro scale. Thus, research is needed that examines the role of individual values as the foundation of behavioral change in the preservation of TEK, especially in indigenous communities such as Dayak Kanayant.

2. Method

2.1. Approaches and Types of Research

This study uses a quantitative approach with the type of explanatory research to test the causal relationship between variables through Structural Equation Modeling analysis [21].

2.2. Research Location and Time

The research was carried out in Landak Regency, West Kalimantan, which is the dominant area of smallholder oil palm plantations and is located in the Dayak Kanayatn customary area. The determination is based on the Decree of the Indonesian Ministry of Environment Number SK.7136/MENLHK-PSKL/PKTHA/KUM.1/8/2019 and the Decree of the Regent of Landak Number 660.1/103/HK-2019 concerning the Determination of the Binua Customary Law Community of Garoh Laman Garoh Village, Keranji Mancal. Data collection will be carried out in April–July 2025.

2.3. Population and Sample

Population is all elements that are the target objects of research [22]. This population is the entire Dayak Binua Laman Garoh indigenous people as many as 74 people. The population with the following criteria: 1) they have lived in the location for more than 15 years; 2) active in customary activities and 3) working as a farmer in the village where he lives.

3. Results and Discussion

3.1. Characteristics of Respondents

Table 1.
Descriptive Respondents 74 Farmers.

Information	Sum	Percentage
Gender		
Man	63	85,14
Woman	11	14,86
Status		
Members of Indigenous Peoples	68	91,89
Customary Administrator	6	8,11
Tenure		
5-10 Years	19	25,68
10-15 Years	15	20,27
> 15 Years	40	54,05
Customary Activity Level		
Highly Active	46	62,16
Active	17	22,97
Less Active	11	14,86
Income Levels		
RP < IDR 1,000,000	17	22,97
IDR 1,000,000–IDR 3,000,000	31	41,89
IDR 3,000,001–IDR 5,000,000	23	31,08
IDR > IDR5,000,000	3	4,05
Education Level		
No school	2	2,70
SD	15	20,27
SMP	9	12,16
High School/Vocational School	48	64,86
Number of dependents		
3 people	24	32,43
4 people	31	41,89
5 people	11	14,86
>5 people	8	10,81

This study involved as many as 74 respondents consisting of various demographic and sociocultural backgrounds. The following is a descriptive description and percentage of each variable:

3.1.1. Gender

Most of the respondents were men as many as 63 people (85.14%), while women only numbered 11 people (14.86%). This shows the dominance of male participation in the customary structures or activities observed.

3.1.2. Status in Indigenous Communities

The majority of respondents were members of ordinary indigenous peoples as many as 68 people (91.89%), while only 6 indigenous administrators (8.11%). This reflects that data collection targets more people in general than formal traditional figures.

3.1.3. Lifetime of Service in the Community

The distribution of working period showed that respondents with a working period of 5–10 years were 19 people (25.68%), 10–15 years were 15 people (20.27%), and those with a working period of more than 15 years dominated as many as 40 people (54.05%). This indicates that most of the respondents have long participated in the activities of indigenous communities.

3.1.4. Level of Activity in Customary Activities

The level of participation of respondents in customary activities varied: Very active as many as 46 people (62.16%), active as many as 17 people (22.97%) and less active as many as 11 people (14.86%). The majority of respondents were intensely involved in the implementation of customary activities.

3.1.5. Income Levels

The income level shows economic inequality among respondents: Income < IDR 1,000,000 for 17 people (22.97%), IDR 1,000,000 – IDR 3,000,000 for 31 people (41.89%), IDR 3,000,001 for IDR 5,000,000 for 23 people (31.08%), and > IDR 5,000,000 for only 3 people (4.05%). This indicates that most of the respondents are in the low to middle income category.

3.1.6. Education Level

The education level of the respondents was dominated by high school graduates: 2 people (2.70 people out of school), 15 elementary school people (20.27%), junior high school 9 people (12.16%), and high school/vocational school as many as 48 people (64.86%). This relatively low level of education may affect access to information and employment opportunities outside the traditional sector.

3.1.7. Number of Dependents

In terms of the number of family dependents: 3 people as many as 24 respondents (32.43%), 4 people as many as 31 respondents (41.89%), 5 people as many as 11 respondents (14.86%), and more than 5 people as many as 8 respondents (10.81%). The majority of respondents have a fairly high family burden of dependents, which can affect their economic and social priorities.

3.8. PLS-SEM Analysis Model

Partial Least Squares Structural Equation Modeling (PLS-SEM) is a variance-based structural modeling method used to analyze the causal relationship between latent constructs (variables that cannot be directly measured) and their indicators, as well as between constructs in a theoretical model. PLS-SEM is often used in exploratory research, with small to medium samples, and complex models, especially when data is not normally distributed or sample sizes are limited.

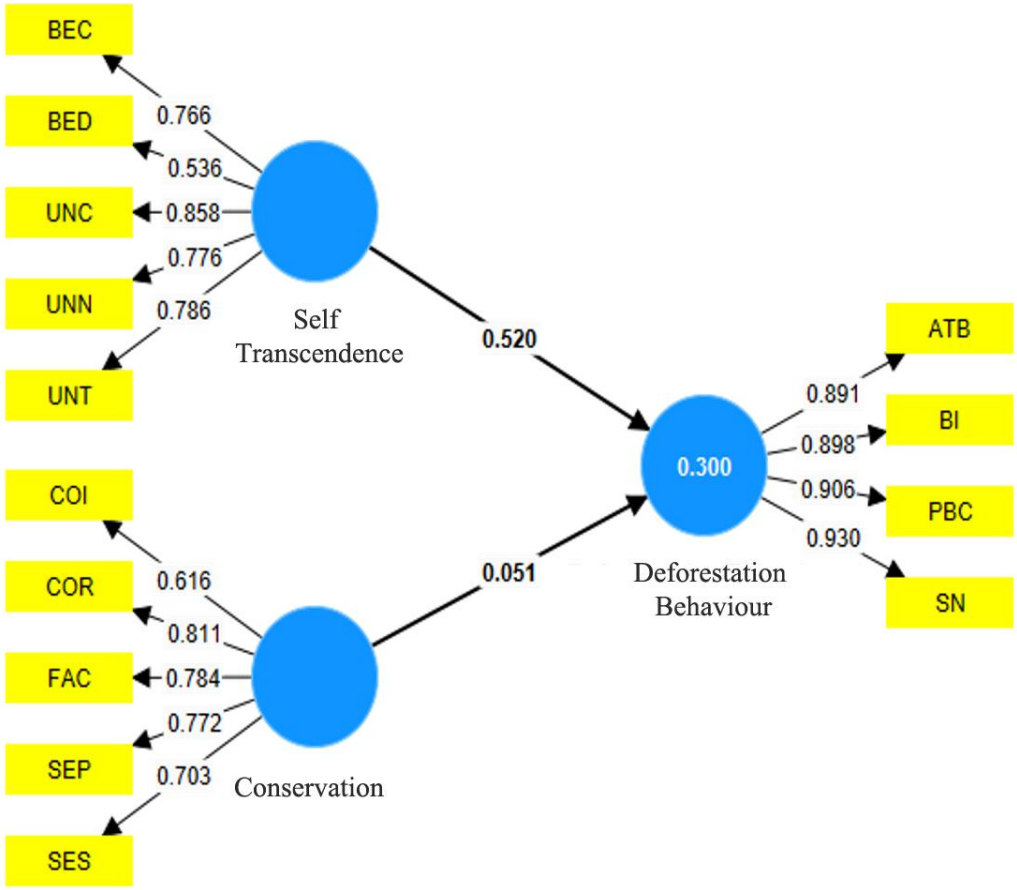

Figure 1.
Results of the SEM Model Test Phase 2.

Table 2.
Validity Test Using Outer Loading.

	Outer loadings
ATB <- Deforestation Behaviour	0.891
BEC <- Self Transcendence	0.766
BED <- Self Transcendence	0.536
BI <- Deforestation Behaviour	0.898
COI <- Conservation	0.616
COR <- Conservation	0.811
FAC <- Conservation	0.784
PBC <- Deforestation Behaviour	0.906
SEP <- Conservation	0.772
ITS <- Conservation	0.703
SN <- Deforestation Behaviour	0.930
UNC <- Self Transcendence	0.858
UNN <- Self Transcendence	0.776
UNT <- Self Transcendence	0.786

From the results of the analysis above, it shows that all items that make up the latent variable have an outer loading value of > 0.50. This shows the accuracy of variable measurements in building each indicator that is quite relevant. These results identify the consistency and reliability of the measurements used in assessing these variables. Thus, the results of this convergent validity analysis provide confidence in the quality of the measurement of the variables used in the study and confirm that the variables are effective.

3.9. I Discriminant Validity

3.9.1. AVE (Average Variance Extracted)

Disciminat validity measures how far a construct is really different from another. A high discriminant validity value provides evidence that a construct is unique and capable of capturing the phenomenon being measured. The AVE (Average Variance Extracted) value is used to determine the validity value of a construct. The AVE (Average Variance Extracted) criterion for a valid variable must be above 0.50.

Table 3.
Average variance extracted (AVE).

	Average variance extracted (AVE)
Conservation	0.548
Deforestation Behaviour	0.821
Self Transcendence	0.566

Based on the results of the validity analysis through the average variance extracted indicator, all variables are classified as valid because they have a value of > 0.50.

3.9.2. Fornell Criterion

Fornell & Larcker states that the fornell-larcker value is used to assess discriminant validity. To pass the test, the value generated on each variable must be greater than the value of the other variable (numbers with column and row positions aligned with the corresponding variables. Discriminant validity is also carried out based on the measurement of the Fornell Larcker criteration with constructs. If the correlation of the constructs in each indicator is greater than the other constructs, it means that the latent construct can predict the indicator better than the other constructs. The fornel-Larcker criterion calculation process is carried out by comparing the AVE root of each construct to the correlation between one another construct in the research hypothesis model.

Tabel 4.
Fornell Larcker Criteration

	Conservat6 gion	Deforestation Behaviour	Self Transcendence
Conservation	0.740		
Deforestation Behaviour	0.315	0.906	
Self Transcendence	0.508	0.546	0.752

Based on the results of the analysis, it was shown that each indicator had the largest FLC value in its own latent construct compared to the FLC value in other constructs. This explains that the indicators used in this study have good discriminant validity in forming their respective variables. When viewed from the root value, AVE (bold) also has a greater value in the construct compared to the value in other variables. This value shows that the variable is valid and no indication of collinearity is found in the variable.

Table 5.
Discriminant Validity Test With HTMT.

	Heterotrait-monotrait ratio (HTMT)
Deforestation Behaviour <-> Conservation	0.350
Self Transcendence <-> Conservation	0.624
Self Transcendence <-> Deforestation Behaviour	0.622

Based on the results of the heterotrait-monotrait ratio (HTMT) analysis, it is shown that the relationship between variables has a value of < 0.90 so that it is classified as valid discriminant. If the HTMT value between constructs is greater than the cut-off, then the validity of the discriminator can be questioned because the constructs are considered not to be sufficiently empirically different.

3.9.3. Cross Loading

Discriminant Validity is carried out by looking at the cross loading value of the construction measurement. The cross loading value indicates the magnitude of the correlation between each constructor and its indicator and the indicators of the other block constructs. A measurement model has good discriminant validity if the correlation between the constructor and its indicator is higher than the correlation with the indicator of the other block constructor.

Table 6.
Cross Loading.

	Conservation	Deforestation Behaviour	Self Transcendence
ATB	0.271	0.891	0.474
BEC	0.408	0.440	0.766
BED	0.370	0.271	0.536
BI	0.237	0.898	0.422
COI	0.616	0.286	0.449
COR	0.811	0.235	0.408
FAC	0.784	0.215	0.411
PBC	0.259	0.906	0.544
SEP	0.772	0.193	0.251
SES	0.703	0.196	0.287
SN	0.365	0.930	0.524
UNC	0.379	0.476	0.858
UNN	0.529	0.418	0.776
UNT	0.245	0.417	0.786

Based on the data presented in the table above, it can be seen that each indicator in the research variable has the largest cross loading value in the variable it formed compared to the cross loading value in the other variables. Based on the results obtained, it can be stated that the indicators used in this study have good discriminant validity in compiling their respective variables. From the results of cross loadings, all indicators are highly correlated with each of its contracts. Cross loading explains how strongly the indicators have an effect on each latent variable (construct).

3.9.4. Reliability Estimate

Reliability estimate is used to evaluate how consistent and reliable a measurement instrument is. In this analysis, by looking at the value of composite reliability. The criterion used is that the composite reliability value must be greater than 0.70 to indicate an adequate level of reliability. With this framework, it can be seen from the results of the following analysis.

Table 7.
Reliability Estimate.

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)
Conservation	0.794	0.791	0.857
Deforestation Behaviour	0.928	0.935	0.948
Self-Transcendence	0.802	0.827	0.865

From the results of the analysis above, it shows that the composite reliability value has met the criteria set, which is above 0.70.

3.10. Inner Model

3.10.1. Multicollinearity Test

The multicollinearity test was used to evaluate how strong the relationships between independent variables in the regression model were. The table presents the collinearity statistics (VIF) for each item on the variable, which measures how much variance of that independent variable can be explained by other independent variables in the model. In this

analysis, the criteria used is that the VIF value must be less than 10 to determine that there are no significant multicollinearity issues in the model.

Table 8.
Multicollinearity Test.

	VIF
ATB	3.439
BEC	1.872
BED	1.319
BI	3.543
COI	1.600
COR	2.030
FAC	2.793
PBC	3.475
SEP	3.673
SES	1.813
SN	4.403
UNC	2.196
UNN	1.810
UNT	1.882

From the results of the analysis above, it can be seen that overall the indicator does not occur multicollinearity due to the VIF<10 value. So it can be concluded that the results of this multicollinearity test that the regression model can be relied on in analyzing the relationship between the variables in the study.

3.11. Coefficient of Determination

The determination coefficient is an important metric in evaluating how well the regression model fits the observed data. The criteria used to assess the strength of the model are that the R Square value should be between 0.25 to 0.50 to indicate a moderate model, and a value above 0.50 indicates a strong model. It can be seen from the results of the following analysis.

Table 9.
Coefficient of Determination.

	R-square	R-square adjusted
Deforestation Behaviour	0.300	0.280

From the results of the analysis above, it shows that the determination coefficient (R Square) for the Deforestation Behavior variable is 0.300.

3.12. F Square

Before we discuss the results of the analysis further, it is important to understand the concept of effect size used to evaluate how much impact or influence independent variables have on dependent variables in regression models. The table presents the value of F Square for the variables generated from the analysis. The criteria used to assess effect size are that the F-Square value of 0.02 indicates a small or low impact, a value of 0.15 indicates a medium or medium impact, and a value of 0.35 indicates a large or strong impact. With this framework, it can be explained in the following analysis results.

Table 10.
Coefficient of Determination.

	f-square
Conservation -> Deforestation Behaviour	0.003
Self Transcendence -> Deforestation Behaviour	0.287

3.13. Q Square

The next stage is to conduct Q^2 (predictive relevance) testing using the blindfolding method to be able to provide evidence that certain variables used in a model are made to have predictive relevance with other variables in the model with a measurement threshold value above zero. The threshold values in the Q^2 (predictive relevance) test were 0.02 for small influence, 0.15 for medium influence, and 0.35 for large influence.

Table 11.
Q Square Test Results.

	SSO	SSE	Q^2 (=1-SSE/SSO)
Conservation	370.000	370.000	0.000
Deforestation Behaviour	296.000	228.959	0.226
Self Transcendence	370.000	370.000	0.000

Based on the table above, it is known that the Q Square value in the endogenous variable Deforestation Behavior is 0.226.

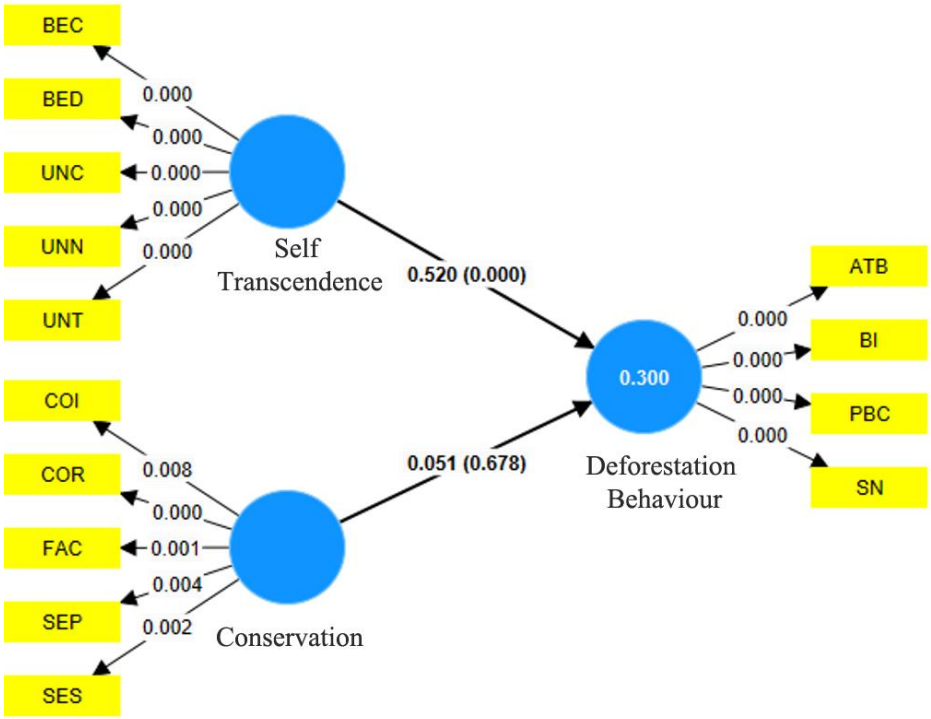

Figure 2.
Inner Weight.

3.14. Hypothesis Proof

3.14.1. Direct Effect (Path Coefficient)

Direct effect analysis describes the relationship in which an exogenous variable directly influences an endogenous variable, without the involvement of mediating variables.

Criteria:

- Koeifisiein jaluir (Path Coefficient)
- If the path coefficient value is positive, then the value of the eidogein variable is the same, if the value of the eiksogein variable increases, then the value of the eindogein variable increases/increases.
- If the path coefficient value is negative, then the value of the eindogein variable is the opposite direction, if the value of the eiksogein variable increases/increases, then the value of the eindogein variable is increased.
- Probability/significant value (P-Value)
- If the value of P-Value<0.05, then significant
- If the value of P-Value>0.05, then it is not significant.

Table 12.
Direct Effect (Path Coefficient).

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
Conservation -> Deforestation Behaviour	0.051	0.087	0.123	0.415	0.678
Self Transcendence -> Deforestation Behaviour	0.520	0.505	0.095	5.499	0.000

1. The results of the analysis showed that Conservation had no significant effect on Deforestation Behavior with a t-statistical value of 0.415 or < 1.96 and a P value of 0.678 or > 0.05. Thus the change in Conservation will not affect the resulting change in Deforestation Behavior.

2. The results of the analysis showed that Self Transcendence had a significant effect on Deforestation Behavior of 0.520 with a t-statistical value of 5.499 or > 1.96 and a P value of 0.000 or < 0.05. thus an increase in Self Transcendence will increase Deforestation Behavior by 52.0%.

3.15. Self-Transcendence Has a Positive and Significant Effect on the Deforestation Behavior of the Kanayant Dayak Indigenous People

The results of this study show that Self-Transcendence has a positive and significant effect on the Deforestation Behavior of the Dayak Kanayant indigenous people. This means that the higher the value of Self-Transcendence that individuals have, which includes concern for the interests of others, concern for nature, and the dimension of spirituality, the greater their tendency to avoid behaviors that destroy the forest. In the context of the Dayak Kanayant people, these values are strongly reflected in their culture and belief systems that consider nature to be an integral part of the lives and heritage of their ancestors. Therefore, the value of Self-Transcendence plays an important role in shaping collective behavior oriented towards environmental conservation.

These findings are reinforced by a number of previous studies conducted by Topper, et al. [23] and Fatmawati and Dewantara [24] suggesting that altruistic and biospheric values, which are part of Self-Transcendence, are positively correlated with pro-environmental behavior. Wang, et al. [25] also found that individuals with a universal value orientation and empathy towards nature tend to be more active in protecting the environment. In addition, Zhao and Huang [26] state that Self-Transcendence is a major predictor in decision-making that considers environmental sustainability. These results are in line with the condition of indigenous peoples who still uphold spiritual and social values in their relationship with nature.

In the Dayak Kanayant people, forests are not only considered as a natural resource, but also as part of the sacred cosmological order. The belief that nature is inhabited by ancestral spirits and supernatural beings creates a value system that reinforces conservative behavior toward the environment. Self-Transcendence in this society is not just a psychological concept, but part of a cultural identity that lives and is inherited between generations. Thus, the behavior of rejecting deforestation is a reflection of spiritual, social, and ecological values that are integrated into daily life.

In conclusion, this study confirms that Self-Transcendence has a positive and significant influence on the Deforestation Behavior of the Dayak Kanayant indigenous people. The noble values contained in Self-Transcendence are proven to encourage individuals to act ethically towards nature, strengthen local wisdom, and reject practices that damage the environment. Therefore, forest conservation in the context of indigenous communities needs to be supported through the strengthening of cultural and spiritual values that have been proven to be effective in shaping environmentally friendly behaviors.

Self-Transcendence is one of the key dimensions in Schwartz's theory of Basic Human Values, which includes values such as universalism and benevolence. Individuals with this value orientation tend to:

a. Showing empathy and concern for the well-being of other creatures
b. Upholding harmony with nature and
c. Avoid actions that damage the environment.

In the context of indigenous peoples, these values are embodied in:

a. Customary taboos against forest destruction,
b. Conservation of sacred forests, and
c. An ecological ritual that marks the limits of behavior towards nature.

According to the prosocial and pro-environmental approach of Schwartz's theory, the value of Self-Transcendence will suppress the tendency of deforestation behavior, as the perpetrator will think about its impact on the community and the environment in the long term. The results show that Self-Transcendence has a positive and significant effect on Deforestation Behavior , namely the higher the Self-Transcendence, the lower the deforestation behavior.

Self-Transcendence is one of the main dimensions in the theory of Basic Human Values developed by Shalom H. Schwartz. This dimension reflects values that encourage individuals to transcend personal interests for the well-being of others and nature. The two core values that represent Self-Transcendence are universalism (concern for nature and the well-being of humanity) and benevolence (the desire to help and protect the well-being of those closest to them).

In the context of indigenous peoples, the values of Self-Transcendence manifest themselves in various forms, such as:

a. customary taboos against forest destruction, which are believed to bring curses or spiritual disturbances if violated;
b. Preservation of sacred forests that are considered sacred and cannot be exploited;
c. Ecological rituals, which symbolically show respect for nature and reinforce behavioral limits towards the environment.

In the framework of prosocial and environmental behavior described by Schwartz, the value of Self-Transcendence plays a role as the main motivator in shaping pro-environmental behavior. Individuals who uphold these values tend to:

a. Consider the long-term impact on communities and ecosystems
b. Avoid practices that risk damaging the environment, including deforestation

3.16. Conservation has a positive and no significant effect on the Deforestation Behavior of the Kanayant Dayak indigenous people

The results of the study show that the value of Conservation has a positive and no significant effect on the Deforestation Behavior of the Dayak Kanayant indigenous people. The value of Conservation includes dimensions such as

tradition, conformity, and security, which in the Kanayant Dayak indigenous people are reflected in compliance with customary rules, respect for ancestors, and the desire to maintain social and ecological harmony. Thus, the stronger the value of conservation held by the community, the greater their drive to preserve forests and reject deforestation practices that are contrary to customary values and norms.

These findings are in line with previous research that showed that Conservation values are closely related to pro-environmental behavior. Schwartz [27] in his theory states that individuals who have a Conservation value orientation tend to maintain social order and value stability, including in terms of maintaining environmental sustainability. Research by Ives, et al. [28] also reveals that conservative values can be an important basis in shaping nature conservation attitudes and behaviors, especially in communities that integrate social norms and spiritual beliefs into everyday life.

In the Dayak Kanayant indigenous people, values such as respecting the forest, obeying customary rules (taboo), and maintaining harmony between humans and nature are tangible forms of Conservation orientation. Forests for them are not only an economic source, but also a spiritual and social space that is collectively maintained. Traditional practices such as the prohibition of cutting down trees in certain areas or the obligation to perform rituals before clearing land reflect the strong role of conservation values in directing people's behavior towards the environment in a sustainable manner.

In conclusion, the value of Conservation has been proven to have a positive and significant influence on the Deforestation Behavior of the Dayak Kanayant indigenous people. Orientation towards stability, respect for traditions, and adherence to customary norms are the main forces in preventing deforestation behavior. Therefore, efforts to preserve the environment in customary territories should involve and strengthen conservative values that live in the culture of the community as an effective and sustainable strategy.

Conservation is a dimension of value in Schwartz's theory that includes security, conformity and tradition. In indigenous peoples:

a. This value is seen in compliance with customary norms,
b. Preservation of ecological rites, and
c. Submission to the social structures that maintain human-nature relations.

According to the Theory of Planned Behavior (TPB), this value is closely related to subjective norms, namely the perception of what is expected by the social environment. In indigenous communities, individuals with high conservation values will avoid deviating from collective norms, such as illegal logging or indiscriminate forest clearing. The value of conservation will encourage: 1) Compliance with customary prohibitions on deforestation and 2) Respect for ecological structures in communal life. So the higher the conservation value, the lower the deforestation tendency.

The results showed that there was a positive but not significant influence. The Conservation dimension in Schwartz's theory includes three main values: tradition, conformity, and security. All three emphasized the importance of social stability, order, and the preservation of practices that have long been upheld by the community. Individuals with high Conservation values tend to maintain the status quo, respect social rules and avoid deviations from norms. In the context of indigenous peoples, the value of Conservation is particularly relevant because:

a. Indigenous peoples uphold customary norms and ecological traditions as part of their collective identity.
b. There are social structures that regulate human interaction with nature, such as the division of customary territories and prohibited forests.
c. The application of social sanctions to violations of customary rules, including illegal deforestation activities.

Based on the Theory of Planned Behavior (TPB) developed by Ajzen, Conservation is closely related to subjective norms, namely individual beliefs about the expectations and views of others around them. In indigenous communities, social pressures and community surveillance have a powerful influence in shaping individual environmental behaviors. Conservation values have a positive influence on inhibiting deforestation behavior, because:

a. Compliance with customary prohibitions is an effective social mechanism in preventing illegal forest clearing
b. Respect for ecological rites encourages people to maintain the balance of nature as part of social-spiritual harmony.

Thus, the higher the orientation of the Conservation value, the lower the likelihood of deforestation. Forest conservation in indigenous peoples is not only driven by ecological awareness, but also by strong cultural and social value structures.

4. Conclusion

The conclusions in this research study are:

1) The results of the analysis showed that *Self Transcendence* had a significant effect on *Deforestation Behavior* of 0.520 with a t-statistical value of 5.499 or > 1.96 and a P value of 0.000 or < 0.05. Thus, an increase in *Self Transcendence* will increase *Deforestation Behavior* by 52.0%. Changes *in Self Transcendence* will affect the resulting *changes in Deforestation Behavior*.
2) The results of the analysis showed that *Conservation* had no significant effect on *Deforestation Behavior* with a t-statistical value of 0.415 or < 1.96 and a *P value* of 0.678 or > 0.05. Thus the change *in Conservation* will not affect the resulting *change in Deforestation Behavior*.

5. Implications

Based on the results of the analysis and conclusions in this study, there are a number of theoretical and practical implications that can be drawn, both for the development of science and for the formulation of policies and social interventions at the local level:

5.1. Implied Theorem

5.1.1. Confirmation of Schwartz's Theory

The result that *Self-Transcendence* has a significant effect on *Deforestation Behavior* provides empirical support for Schwartz's *theory of Basic Human Values*. This suggests that values such as *universalism* and *benevolence*, which emphasize concern for the environment and others, can be important predictors in shaping ecological behaviors, including the tendency of individuals or communities to reject deforestation practices.

5.1.2. Contribution to Pro-Environmental Studies in the Indigenous Context

These findings enrich the literature on pro-environmental behaviour in the context of local cultures, particularly indigenous peoples. The values *of Self-Transcendence* inherent in customary norms can be used as a strong theoretical framework to understand how indigenous peoples maintain environmental sustainability.

5.1.3. The Relevance of the SDGs Needs to Be Reviewed for the Conservation Dimension

The insignificance of the relationship between *conservation* and *deforestation behaviour* indicates that in certain contexts, values such as *tradition*, *conformity*, and *security* do not directly influence deforestation behaviour. This may be due to the reinterpretation of traditional values that are not always in sync with the reality of economic or social pressures. Therefore, the integration between Schwartz's theory and the SDGs in the customary context requires further study, especially on the aspect *of subjective norms*.

5.2. Practical Implications

5.2.1. Strengthening the Value of Self-Transcendence in Education and Socialization

Because *Self-Transcendence* has a significant effect on suppressing deforestation behavior, environmental conservation efforts, especially in indigenous peoples' areas, should be focused on strengthening values such as concern for nature, harmony with the environment and social empathy. This can be done through culture-based education, the involvement of indigenous leaders in environmental campaigns and the integration of ecological values in local curricula.

5.2.2. Critical of Traditional Assumptions as Protective Factors

The results of this study challenge the common assumption that traditional values (*Conservation*) always function as a protector against environmental degradation. Therefore, policy interventions and community-based programs need to pay attention to the fact that not all forms of cultural conservatism automatically support forest conservation efforts.

5.2.3. Planning of Social and Cultural Intervention Programs

Government agencies, NGOs and local communities need to develop intervention strategies that focus more on strengthening altruistic and collective values that come from *Self-Transcendence*. Programs such as customary forest recognition, community-based conservation incentives, and revitalization of ecological rituals will be more effective if they are directed at strengthening these values.

6. Recommendations

Based on the findings that *Self-Transcendence* has a significant effect on *Deforestation Behavior*, while *Conservation* does not have a significant effect, some recommendations can be made as follows:

6.1. Strengthening the Values of Self-Transcendence in Society

Local governments, NGOs, and other stakeholders need to design educational and cultural programs that encourage the internalization of *Self-Transcendence* values, especially in communities living around forest areas. This can be done through:

a. Integration of the values of universalism and benevolence in formal and informal education, including through local content curricula;
b. The involvement of traditional and religious leaders in conveying the narrative of environmental conservation that is in harmony with the moral and spiritual values of the community;
c. Development of a public campaign based on local culture that emphasizes the importance of empathy for living beings and ecosystem sustainability.

6.2. Revitalization of Local Wisdom as Pro-Environmental Social Capital

Although the value *of conservation* has not been proven to be statistically significant, the potential of traditional values and customary norms can still be used as a cultural approach. Therefore:

a. There is a need to remap cultural values that are still alive and relevant, as well as the extent to which these values support or contradict forest conservation efforts;

b. Ecological rituals and customary sacred zones need to be strengthened as instruments of ecological protection, with legal support through the recognition of customary forests or community conservation areas.

6.3. Focus Interventions on Proven Effective Values

In formulating policies or intervention programs, it is important to:

a. Prioritize value-based approaches that have been proven to be influential, such as *Self-Transcendence*, over traditional assumptions that are not necessarily actually relevant.
b. Develop environmental training and counseling modules rooted in the values of care, empathy and collective responsibility towards nature.
c. Involving the younger generation in socio-environmental activities that build concern and solidarity for the environment.

6.4. Strengthening Values Based on Social Data

Local Governments are advised to:

a. Conducting periodic surveys of social values to determine changes in the orientation of community values towards the environment;
b. Integrate value approaches in the formulation of forestry, agrarian and village development policies, so that the policies made are truly responsive to the socio-cultural conditions of the local community.

6.5. Research Limitations and Advanced Research Suggestions

Although this study makes an important contribution to understanding the relationship between personal values and deforestation behavior, there are some limitations that need to be recognized as considerations in interpreting the results and in the development of further research:

6.5.1. Limitations of Social and Cultural Context

This research focuses on indigenous peoples or local communities in specific geographical and cultural contexts. Values such as *Self-Transcendence* and *Conservation* can have different meanings and manifestations depending on local traditions, social norms, and economic-political pressures. Therefore, these findings cannot necessarily be generalized to all communities or other regions, especially urban or non-indigenous communities.

6.5.2. Use of Quantitative Design Only

This study uses a quantitative approach (SEM-PLS) that relies on questionnaires as a measuring tool. While this approach can statistically measure the relationships between variables, it is unable to capture the depth of cultural or spiritual meaning behind values such as *Self-Transcendence* and *Conservation*. A deeper contextual understanding requires a qualitative approach such as interviews or ethnographic studies.

6.5.3. Limited to Two Dimensions of Value

This research only tests two dimensions of the *theory of Basic Human Values* (Schwartz), namely *Self-Transcendence* and *Conservation*. The study has not considered mediating or moderation factors that might influence the relationship between personal values and deforestation behavior, such as:

a. Economic pressures (poverty, land needs)
b. *Subjective norms* of community leaders
c. Level of education or environmental knowledge

Based on the findings and limitations that have been identified, here are some suggestions for further research to broaden and deepen our understanding of the relationship between personal value and deforestation behavior:

6.5.4. Expanding the Value Variables Studied

Follow-up research is recommended for:

a. Include other value dimensions in Schwartz's theory, such as *Self-Enhancement* (ambition, power, achievement) and *Openness to Change* (freedom, stimulation) which may be more relevant in the context of the conflict between economic needs and environmental conservation.
b. Examine the interactions between value dimensions to understand how certain value combinations affect the tendency towards deforestation behavior.

6.5.4. Using a Mixed Methodological Approach

To capture the cultural, spiritual and contextual nuances of values such as *Self-Transcendence* and *Conservation*, further research should incorporate:

a. Qualitative approaches, such as in-depth interviews or ethnographic studies, to explore the meaning of values in the daily life of the Community.
b. Quantitative approach, to test the validity of relationships between variables statistically. This approach will provide a more complete and contextual understanding.

6.5.5. Integrating Mediation or Moderation Variables

Advanced research is recommended to test:

a. The role of mediating variables, such as *attitude toward behavior*, *subjective norms*, or *perceived behavioral control* (from *the Theory of Planned Behavior*), to explain the mechanism of the relationship between values and behavior;
b. The role of moderation variables, such as education level, income, economic pressure, or the existence of customary regulations, to determine the conditions that strengthen or weaken the influence of values on deforestation behavior.

6.5.6. Adapting to Social and Geographic Contexts

To make the findings more general, follow-up research could:

a. Applied to non-indigenous communities or areas with higher economic pressure, for example transmigrant village communities or plantations;
b. Compare between community groups, such as between indigenous and non-indigenous peoples, or between upstream and downstream communities within a single watershed (watershed) area.

6.5.7. Strengthening the Validity of Instruments

The development of instruments for measuring deforestation values and behaviors can be better adapted to the local context:

a. Through cultural and linguistic validation, so that the terms in the questionnaire truly reflect the meaning of the values that live in society;
b. Develop more contextual indicators of deforestation behaviour, such as land use, farming practices, forest clearing, or participation in conservation.

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