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Integrating local wisdom and environmental awareness to promote organic farming intentions in Bali: An extension of the theory of planned behavior

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Abstract

The agricultural sector plays a critical role in achieving the Sustainable Development Goals (SDGs). Bali, as one of Indonesia's provinces, faces the challenge of low farmers intention to adopt organic practices. This study aims to explore the intention to engage in organic farming by extending the Theory of Planned Behavior (TPB) through the inclusion of environmental awareness as an antecedent of behavior. A mixed-method approach was employed, beginning with qualitative research to develop an environmental awareness measurement instrument grounded in the local wisdom of Sad Kṛti. Subsequently, a quantitative method was used to examine the causal relationships among the research variables. Based on data from 340 farmers across Bali, collected through interviews and surveys using structured questionnaires, the results revealed that both attitude and perceived behavioral control significantly influenced the relationship between Sad Kṛti-based environmental awareness and organic farming intention. In contrast, subjective norms showed no significant effect. The findings highlight the importance of environmental awareness campaigns that emphasize local wisdom values to foster positive attitudes and perceived control, ultimately enhancing farmers' intentions toward organic agriculture.

Keywords: Environmental awareness, Intention, Local wisdom, Organic farming.

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1. Introduction

The agricultural sector plays a crucial role in achieving the Sustainable Development Goals (SDGs) by serving as a driving force for sustainable development. The SDGs emphasize the need for sustainable agricultural practices that integrate

economic, social, and environmental dimensions to ensure food security, enhance farmer welfare, and preserve natural resources for future generations. Sustainable agriculture is defined as the management of agricultural resources in a way that fulfills human needs while maintaining or improving environmental quality and conserving natural capital [1]. Through its implementation, several SDG targets can be achieved, including SDG 1 on poverty eradication, SDG 2 on hunger elimination, SDG 12 on responsible consumption and production, SDG 13 on climate action, and SDG 15 on the protection of terrestrial ecosystems.

In recent decades, agricultural development has increasingly relied on synthetic chemical inputs such as inorganic fertilizers and chemical pesticides. Although these inputs can enhance productivity in the short term, they have contributed to long-term environmental problems such as soil degradation, reduced fertility, water pollution, threats to human health, and the loss of biodiversity. These challenges underscore the urgent need to shift agricultural paradigms toward more sustainable approaches that simultaneously support food security, farmer prosperity, and environmental conservation.

Bali presents a unique example of agriculture embedded in local cultural values that emphasize ecological balance. In Bali, farming is not merely a means of production but a vital expression of cultural identity and spiritual practice [2]. Local ecological wisdom is reflected in various rituals and belief systems that promote harmony between humans, nature, and the divine. This is institutionalized through traditional systems such as Subak, which governs the equitable distribution of irrigation water. At the same time, as a globally recognized tourism destination, Bali must ensure the availability of safe and high-quality food not only for local consumption but also to meet the demands of international visitors. Therefore, an integrated agricultural development strategy is needed that spans the entire value chain, supports ecological resilience, strengthens food sovereignty, and preserves the region's agricultural heritage.

Among the various sustainable farming models, organic agriculture is considered highly suitable for Bali. Organic farming is an integrated system that prioritizes both the quality of agricultural products and environmental sustainability [3]. It is based on four core principles articulated by the International Federation of Organic Agriculture Movements (IFOAM): health, ecology, fairness, and care [4]. These principles provide an ethical and ecological foundation for farming practices that avoid environmental degradation, protect the interests of producers and consumers, and ensure the integrity of the entire food system. Moreover, the development of organic agriculture supports the branding and competitive positioning of Bali's local products. Given Bali's status as a tourism hub, the demand for high-quality organic products presents an important market opportunity [5]. Organic products are perceived as safer and healthier, and with proper certification, they gain consumer trust and market recognition [6-8]. Furthermore, consumers are often willing to pay a premium for products that promote health and environmental values, thereby enhancing the competitiveness of organic goods [8]. Organic agriculture also appeals to a growing segment of environmentally conscious consumers who seek products aligned with sustainable lifestyles [9, 10].

The Bali provincial government has supported the development of organic agriculture by issuing regional regulations that provide legal and policy frameworks. These efforts are complemented by incentives such as support for farming infrastructure, subsidies, improved access to technology, information, capital, certification services, and agricultural insurance. However, data from the Bali Provincial Department of Agriculture and Food Security indicate that progress remains limited. As of 2021, there were 12,072 farmer groups and 1,011 farmer group associations (Gapoktan) in Bali. Yet by 2022, only a small portion had obtained organic certification. Specifically, only 29 food crop groups (264.32 hectares), 42 horticulture groups (222.56 hectares), and 11 plantation groups (426.70 hectares) were certified. This suggests that only 8.5 percent of farmer groups had transitioned to certified organic practices, indicating limited adoption despite available resources and support.

To understand the behavioral factors behind this low adoption rate, this study adopts the Theory of Planned Behavior (TPB) as its primary analytical framework. TPB is well-suited for examining behaviors that require deliberate planning and preparation, such as the transition to organic farming. It accounts for both social and technical dimensions of decision-making and considers perceived challenges associated with adopting new practices. According to TPB, behavioral intention is influenced by three key constructs: attitude toward the behavior, subjective norms, and perceived behavioral control [11]. While TPB has been widely applied to study sustainable farming adoption [12-16], it has limitations in capturing the deeper psychological and cultural motivations behind farmer behavior. The decision to adopt organic farming is not only technical or economic but also reflects personal values, ecological beliefs, and perceptions of long-term risks and benefits. Therefore, a more comprehensive theoretical framework is necessary to explain organic farming intentions more effectively.

Prior literature suggests that environmental awareness plays a critical role in shaping pro-environmental intentions and behaviors [6, 17-20]. However, most studies have employed generalized indicators of environmental awareness that do not fully capture local cultural perspectives. In the context of Bali, environmental awareness is deeply rooted in local wisdom, particularly the concept of *Sad Kṛti*. This traditional Balinese philosophy emphasizes harmonious relationships among humans, nature, and the divine, and promotes spiritual reverence for nature as a sacred manifestation of divinity [21]. By incorporating *Sad Kṛti* values into the construct of environmental awareness, researchers can develop measurement tools that reflect not only cognitive and behavioral elements but also spiritual and cultural dimensions. This enhances the relevance, representativeness, and contextual validity of environmental awareness constructs in Balinese society.

In light of these considerations, this study extends the Theory of Planned Behavior (TPB) framework by incorporating environmental awareness based on *Sad Kṛti* as an antecedent to both attitude and perceived behavioral control. The Value-Belief-Norm (VBN) theory is also employed to provide deeper theoretical support, particularly in explaining how cultural values and personal norms influence farmers' intentions to engage in organic agriculture in Bali.

2. Literature Review and Hypothesis

2.1. Theory of Planned Behavior (TPB)

These three constructs provide a solid foundation for understanding behavioral intentions within a wide range of contexts, including sustainable agriculture. However, the Theory of Planned Behavior (TPB) alone may not be sufficient to fully capture the cultural, ecological, and spiritual factors that influence farmers' decisions in specific local contexts such as Bali. This opens space for further model development, such as integrating TPB with culturally grounded constructs like *Sad Kṛti*-based environmental awareness.

Sad Kṛti, rooted in Balinese Hindu cosmology, emphasizes six principles that guide harmonious human-nature relationships. These include principles of truth, purity, and balance that are reflected in daily practices and community rituals [12]. When these values shape environmental perceptions and decision-making processes, they add a spiritual dimension often missing from conventional behavior models. As such, incorporating *Sad Kṛti* into the framework not only aligns the model with local belief systems but also enhances explanatory power by contextualizing pro-environmental behavior within deeply held cultural norms [21].

To complement this extension, the Value-Belief-Norm (VBN) theory offers a useful lens for understanding how personal values, ecological beliefs, and moral obligations interact to shape pro-environmental behavior. VBN theory posits that values activate environmental beliefs, which in turn form personal norms that drive behavioral commitment [21]. In the case of Balinese farmers, values stemming from *Sad Kṛti*, such as reverence for nature and spiritual duty, could serve as triggers for moral norms and perceived obligations to adopt environmentally friendly practices like organic farming. Unlike the Theory of Planned Behavior (TPB), which emphasizes rational evaluations and social influences, VBN theory integrates moral and value-based motivations, thereby offering a more holistic understanding of behavior in spiritually rich settings [21, 22].

Several empirical studies support the integration of TPB and VBN for explaining pro-environmental behavior. For instance, researchers have found that personal norms significantly predict green consumer behavior [23] and that value-driven motivations enhance the explanatory power of TPB in contexts like recycling [24], sustainable food consumption [25] and renewable energy adoption [26]. Furthermore, value-based beliefs are particularly influential in collectivist and high-context societies, where communal and spiritual values are more salient [27, 28].

By combining TPB's behavioral predictors with the culturally infused environmental awareness construct informed by *Sad Kṛti*, and grounding this in the VBN framework, this study proposes a more robust model tailored to the Balinese context. This hybrid model not only improves the understanding of organic farming intentions but also aligns policy and intervention strategies with local values, making them more acceptable and sustainable in the long term. Future research in similar socio-cultural contexts could benefit from this integrative approach to designing behaviorally informed and culturally appropriate agricultural development policies.

2.2. Value-Belief-Norm (VBN) Theory and Hypothesis Development

Environmental awareness has consistently been found to influence behavioral intentions in pro-environmental contexts. Individuals who are more aware of environmental issues are more likely to act in ways that reflect that concern. For example, studies have shown that environmental awareness significantly influences purchase intentions for green and organic products [17, 18, 20]. When this awareness is shaped by cultural and spiritual beliefs, such as those embedded in *Sad Kṛti*, it may further enhance an individual's motivation to engage in sustainable practices.

Sad Kṛti, as an indigenous Balinese ecological philosophy, strengthens the internalization of biospheric and altruistic values that are central to the VBN framework [21]. By instilling a sense of spiritual responsibility and reverence for nature, *Sad Kṛti* enhances the moral salience of environmental behaviors. In this way, *Sad Kṛti* can be understood as a culturally specific value orientation that complements and reinforces the biospheric values emphasized in the VBN theory. Rather than relying solely on cognitive evaluations of environmental outcomes, Balinese farmers may be motivated by a sacred duty to maintain cosmic balance and uphold ancestral teachings, which align with their environmental intentions.

Moreover, integrating *Sad Kṛti* into environmental awareness allows for a richer operationalization of the "awareness of consequences" and "ascription of responsibility" components within the VBN model. For example, when farmers perceive that neglecting sustainable practices could disrupt ecological harmony and spiritual order, they may feel a stronger sense of obligation to act. This perceived responsibility transcends conventional notions of individual agency and is embedded in communal identity and religious doctrine [12]. As a result, personal norms become not just individual moral compasses but reflections of shared cultural and spiritual commitments.

This cultural integration enhances the explanatory power of the VBN theory in the Balinese context. Previous applications of VBN often rely on universal constructs of value and belief, but the inclusion of locally rooted philosophies like *Sad Kṛti* demonstrates how environmental behavior is shaped by place-based worldviews. In collectivist and high-context societies, such as Indonesia, these culturally grounded motivators may exert greater influence on behavior than abstract environmental concern alone [27, 28].

Therefore, this study proposes that environmental awareness, when conceptualized through the lens of *Sad Kṛti*, can serve as a key antecedent not only to behavioral intention but also to the motivational processes articulated in both TPB and VBN theories. This integrative approach offers a novel theoretical contribution by demonstrating how indigenous ecological values can enrich mainstream behavioral models. It also provides practical implications for policymakers and NGOs aiming to promote sustainable agriculture: interventions that resonate with local beliefs and cultural values are more likely to succeed in transforming behavior and fostering long-term environmental stewardship.

H_1: Environmental awareness based on Sad Kṛti has a positive and significant effect on the intention to engage in organic farming.

According to VBN, values shape beliefs, and these beliefs form the basis for attitudes toward environmental behavior. Individuals who internalize environmental values tend to develop positive attitudes toward sustainability-related actions. Studies have shown that environmental awareness contributes significantly to favorable attitudes toward green products and organic consumption [6, 9, 20]. In the farming context, culturally rooted awareness based on *Sad Kṛti* is expected to foster a more positive attitude toward organic farming.

H_2: Environmental awareness based on Sad Kṛti has a positive and significant effect on attitude toward organic farming.

Perceived behavioral control refers to an individual's belief in their ability to perform a behavior. Research suggests that individuals with high environmental awareness are more confident in their ability to adopt pro-environmental behaviors. Studies have found that awareness enhances perceived control over behaviors such as staying at green hotels or purchasing sustainable products [29]. When awareness includes cultural values that emphasize responsibility and empowerment, such as *Sad Kṛti*, it may strengthen farmers' perceived ability to engage in organic farming. In this context, *Sad Kṛti* not only serves as a moral compass but also fosters a sense of spiritual duty and personal agency, reinforcing the belief that individuals have both the right and the responsibility to take care of nature. Consequently, this culturally integrated form of awareness may reduce psychological and practical barriers to organic adoption, promoting stronger behavioral intentions and potentially leading to actual practice change.

H_3: Environmental awareness based on Sad Kṛti has a positive and significant effect on perceived behavioral control.

Within the TPB framework, attitude is one of the most consistent predictors of intention. Individuals with positive evaluations of a behavior are more likely to intend to perform it. Several studies have shown that attitudes strongly predict organic food consumption and sustainable farming intentions [14, 17, 20]. A favorable attitude toward organic farming reflects beliefs in its benefits for health, the environment, and long-term soil fertility, which are particularly valued by farmers who align with ecological traditions. When these beliefs are shaped by culturally grounded awareness, such as the sacred view of nature embedded in *Sad Kṛti*, the attitudinal component of TPB becomes even more influential. In such cases, positive attitudes are not only based on practical or economic outcomes but also rooted in spiritual alignment, ancestral wisdom, and moral obligation. This deepens the motivational force behind intention and may help explain why some farmers maintain sustainable practices even when facing economic uncertainty or institutional barriers.

H_4: Attitude toward organic farming has a positive and significant effect on the intention to engage in organic farming.

TPB also emphasizes the importance of perceived behavioral control in predicting intention. When individuals believe they have the resources, knowledge, and opportunity to act, they are more likely to form strong intentions. Studies have shown that perceived behavioral control significantly predicts intentions related to energy use, pest management, and organic food purchase [8, 14, 30]. In the case of Balinese farmers, those who feel capable of managing the technical and financial challenges of organic farming are more likely to adopt it. When this sense of capability is reinforced by cultural values such as the *Sad Kṛti* emphasis on self-reliance, stewardship, and communal support, it may further strengthen the perception that organic farming is not only feasible but also a shared responsibility. This highlights the importance of integrating both internal (knowledge, confidence) and external (community norms, spiritual beliefs) sources of control to foster sustainable behavioral intentions.

H_5: Perceived behavioral control has a positive and significant effect on the intention to engage in organic farming.

Subjective norms capture perceived social pressures from significant others. In collectivist cultures, social norms can be powerful motivators of behavior. However, studies show mixed results. While some research confirms the influence of subjective norms on sustainable behavior [14, 19], others suggest that social influence may be less effective if external support systems are weak [14, 31]. In Bali, the effectiveness of social norms may depend on the degree of peer support and institutional endorsement for organic farming. When traditional leaders, community groups, or Subak institutions advocate for sustainable practices, farmers may feel a stronger normative obligation to comply. Conversely, in the absence of visible support or incentives, even strong cultural norms may not translate into behavioral intentions. Therefore, reinforcing subjective norms with tangible policy measures and visible community commitment is essential for fostering the collective adoption of organic farming practices.

H_6: Subjective norms have a positive and significant effect on the intention to engage in organic farming.

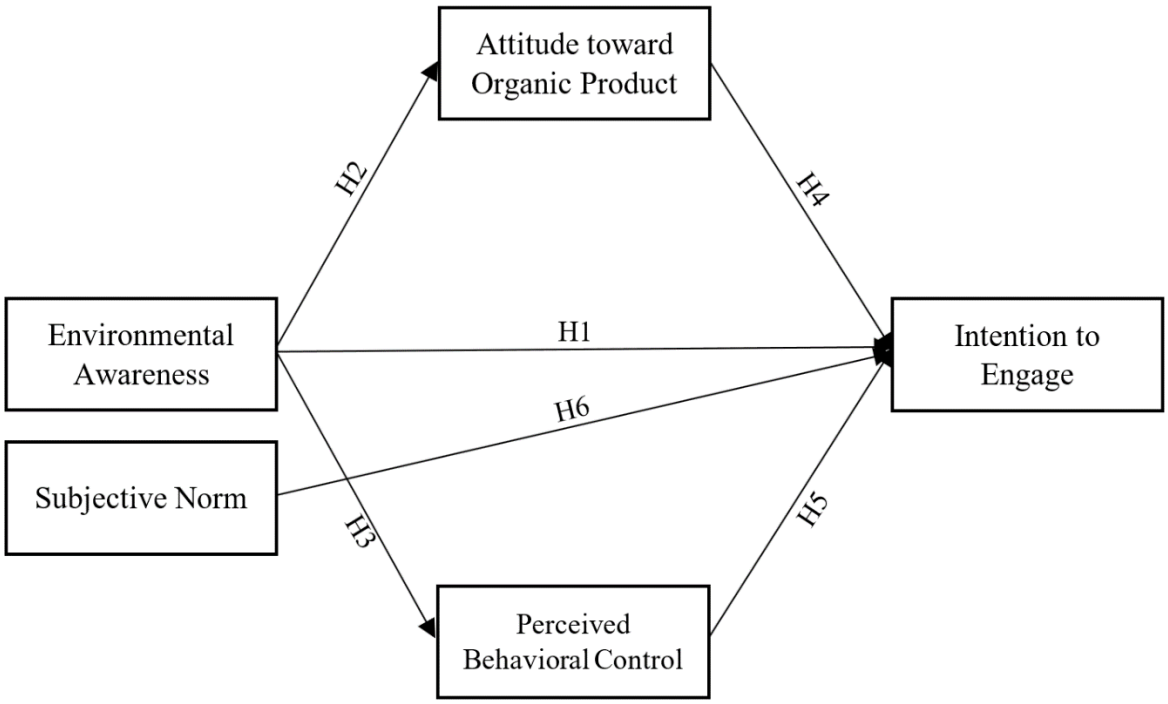

Figure 1.
Research Framework

3. Research Methodology

This study adopted a sequential exploratory mixed-methods approach, beginning with a qualitative phase to develop culturally grounded indicators, followed by a quantitative phase to empirically validate the conceptual framework. The qualitative phase involved in-depth interviews with four key informants, comprising Balinese scholars and cultural experts who possess deep knowledge of *Sad Kṛti*, a traditional value system embedded in the ecological consciousness of Balinese society. These interviews helped identify twelve initial indicators of environmental awareness rooted in *Sad Kṛti*.

The initial indicators were refined through further expert consultations to ensure conceptual clarity and cultural specificity. Two additional informants were involved in reviewing and condensing the items to meet face validity requirements. Following this refinement, the indicators were subjected to a content validity assessment involving a panel of ten experts, including academics, cultural practitioners, organic agriculture actors, and environmental observers. This process aimed to ensure that each item accurately reflected the underlying construct, with no irrelevant or ambiguous indicators.

The validated items were then tested in a pilot study involving 30 farmers to ensure clarity and consistency. The final questionnaire was distributed to 340 farmers in three regencies of Bali: Tabanan, Karangasem, and Buleleng, who were actively engaged in farming, had not yet converted to organic practices, but had received organic farming literacy support. The constructs measured in this study included Environmental Awareness (based on *Sad Kṛti*), Subjective Norms, Attitude toward Organic Farming, Perceived Behavioral Control, and Intention to Practice Organic Farming. Responses were collected using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Data were analyzed using Structural Equation Modeling with the Partial Least Squares approach (PLS-SEM) through SmartPLS 4 software. The analysis began with an evaluation of the measurement model to ensure reliability and validity. Convergent validity was assessed using factor loadings, Average Variance Extracted (AVE), and Composite Reliability (CR), while internal consistency was evaluated through Cronbach's Alpha. Discriminant validity was confirmed using both the Fornell-Larcker criterion and the Heterotrait-Monotrait ratio (HTMT), ensuring that each construct was distinct from the others.

Following this, the structural model was examined to test the hypothesized relationships among variables. Prior to hypothesis testing, multicollinearity was assessed using the Variance Inflation Factor (VIF) values. Predictive power and model fit were evaluated using the coefficient of determination (R^2) and the Stone-Geisser's Q^2 values to ensure the model's relevance and robustness. The significance of the relationships was established through bootstrapping procedures with 5,000 subsamples, which provided stable estimates for hypothesis testing without assuming normal data distribution.

This rigorous approach ensured both the theoretical relevance and empirical reliability of the model, allowing for a comprehensive analysis of how traditional ecological wisdom influences farmers' intentions toward sustainable agricultural transformation.

4. Research Result

4.1. Measurement Model Assessment

The study began with an exploration of the *Sad Kṛti* values through interviews with four key informants. These informants included Balinese academics and cultural experts who possessed deep knowledge of the *Sad Kṛti* local wisdom, enabling them to provide comprehensive explanations regarding the ecological awareness embedded within Balinese cultural

values. Based on the interview results, twelve indicators of environmental awareness grounded in *Sad Kṛti* were identified: (1) nature as a manifestation of God, (2) harmony among humans, nature, and God, (3) devotion to God, (4) ethical and ritual practices, (5) the sanctity of mountains and oceans, (6) spiritual insight, (7) mountains and oceans as sources of life, (8) the spiritual power of nature, (9) concern for the mountains and oceans, (10) harmony between the microcosm and macrocosm, (11) the unity of humans, nature, and God as a single reality, and (12) the natural hydrological cycle.

These indicator items were then refined to meet face validity criteria by involving two additional key informants to ensure the indicators were concise and specific. The refined indicators were subsequently subjected to content validity assessment. This step was critical, as no prior studies had developed or tested an instrument for measuring environmental awareness based on the *Sad Kṛti* values. Therefore, the indicators were expected to genuinely represent the concept of environmental awareness without including irrelevant or ambiguous items. The researchers engaged a panel of experts to evaluate each item and determine whether it effectively reflected environmental awareness based on *Sad Kṛti* local wisdom.

The validation process involved ten expert panelists comprising academics, Balinese cultural practitioners, organic farming entrepreneurs, and environmental observers. The results were interpreted by comparing the Content Validity Ratio (CVR) of each item against a critical value based on the number of panel members (N). An item was considered to have significant content validity if its CVR was greater than or equal to the critical value. For a panel size of N = 10, the critical CVR value is 0.62 [32]. Items with CVR values ≥ 0.62 were considered valid representations of environmental awareness rooted in *Sad Kṛti* values and were therefore eligible for inclusion in the quantitative phase of the study. The CVR results for each indicator are presented in the following section.

Table 1.
Content Validity Ratio (CVR).

No	Indicator Item	Statement	Relevant	Irrelevant	CVR
1	Nature as a manifestation of God	Awareness of preserving nature as a form of devotion to God	10	0	1.00
2	Harmony between humans, nature, and God	Awareness that protecting nature reflects harmony between humans, nature, and God	10	0	1.00
3	Ethical and ritual practices	Awareness of practicing ethics and rituals as a form of honoring nature	10	0	1.00
4	Sacredness of mountains and oceans	Awareness that land and water are sacred and must be preserved	10	0	1.00
5	Spiritual insight	Awareness of spiritual dimensions in environmental protection	7	3	0.40
6	Nature's spirit or power	Awareness that nature possesses a spiritual force or energy	6	4	0.20
7	Unity of humans, nature, and God	Awareness that humans, nature, and God form an inseparable, unified reality	8	2	0.60
8	Harmony between microcosm and macrocosm	Awareness that protecting nature reflects harmony between the microcosm and macrocosm	8	2	0.60
9	Hydrological cycles of nature	Awareness of the natural hydrological cycle's vital role in sustaining life	6	4	0.20

The content validity assessment, as presented in Table 1, was conducted using the Content Validity Ratio (CVR) method based on evaluations from ten expert panelists. These panelists included academics, Balinese cultural experts, organic farming practitioners, and environmental observers. The purpose of this evaluation was to determine which indicators of environmental awareness, rooted in *Sad Kṛti* local wisdom, were sufficiently valid for inclusion in the quantitative phase of the study. According to Lawshe [32] the minimum CVR value required for a panel of ten experts is 0.62. Any item scoring equal to or above this threshold can be considered to have significant content validity.

The results show that four indicators achieved perfect agreement among all experts, each with a CVR of 1.00. These indicators are: nature as a manifestation of God, harmony among humans, nature, and God, ethical and ritual practices, and the sanctity of mountains and oceans. The unanimous relevance attributed to these items indicates a strong consensus that they are central to the conceptualization of environmental awareness in the Balinese context.

In contrast, five indicators received CVR scores below the threshold, suggesting less agreement among the panelists. These include spiritual insight (0.40), spiritual power of nature (0.20), unity of humans, nature, and God (0.60), harmony between microcosm and macrocosm (0.60), and awareness of the natural hydrological cycle (0.20). While these indicators may still hold conceptual value, their statistical scores imply the need for further refinement, clarification, or potential reconsideration before inclusion in a quantitative instrument.

In conclusion, the CVR analysis confirms the content validity of four key indicators, which will serve as the foundation for constructing a culturally grounded measure of environmental awareness based on *Sad Kṛti* values. These validated indicators were used in the next phase of the research involving the development and testing of the environmental awareness construct.

Table 2.
AVE, Composite Reliability, and Cronbach's Alpha.

Variable	AVE	Cronbach's Alpha	CR
Environmental Awareness (EA)	0.544	0.792	0.856
Subjective Norms (SN)	0.706	0.902	0.923
Attitude Toward Organic Farming (ATOF)	0.788	0.910	0.937
Perceived Behavioral Control (PBC)	0.739	0.911	0.934
Intention to Engage (IE)	0.585	0.819	0.875

The validity and reliability of the research constructs were evaluated using three key statistical measures: average variance extracted (AVE), Cronbach's alpha, and composite reliability. The results in Table 2 demonstrate that all constructs meet the required thresholds, indicating good internal consistency and convergent validity.

First, all AVE values exceed the recommended minimum of 0.50, confirming that each construct explains more than half of the variance in its indicators. The construct for Environmental Awareness scored an AVE of 0.544, indicating adequate convergent validity despite being the lowest among the five constructs. Meanwhile, the constructs for Subjective Norms, Attitudes toward Organic Farming, Perceived Behavioral Control, and Intention to Practice Organic Farming demonstrated higher AVE values, ranging from 0.585 to 0.788, reflecting strong construct validity.

Second, Cronbach's Alpha values for all constructs are above the threshold of 0.70, indicating satisfactory internal consistency. The highest reliability is shown by Perceived Behavioral Control (0.911), while Environmental Awareness, at 0.792, still meets the accepted standard.

Third, the composite reliability values also exceed 0.70 for all constructs, with scores ranging from 0.856 to 0.937. These results further support the internal consistency and overall reliability of the constructs.

Table 3.
HTMT

	EA	IE	SN	PBC	ATOF
EA					
IE	0.415				
SN	0.095	0.150			
PBC	0.841	0.686	0.242		
ATOF	0.753	0.800	0.134	0.679	

The results of the Heterotrait-Monotrait Ratio (HTMT) assessment demonstrate that all values between the constructs fall below the recommended threshold of 0.90, indicating strong discriminant validity across the model. This suggests that each construct in the framework, such as Environmental Awareness, Attitude, Subjective Norms, Perceived Behavioral Control, and Intention to Practice Organic Farming, measures conceptually distinct phenomena. The absence of multicollinearity between constructs confirms that respondents were able to clearly differentiate between the latent variables, ensuring the robustness and interpretability of the structural model. Thus, the HTMT findings affirm that the measurement model possesses adequate construct independence and supports the validity of the subsequent structural path analysis.

4.2. Structural Model Assessment

The results of the hypothesis testing using SEM-PLS are presented in Table 4. Each hypothesis was assessed based on the path coefficient, t-statistics, and p-values. The findings indicate that five of the six hypotheses were supported, demonstrating statistically significant relationships between the constructs, while one hypothesis was not supported.

Table 4.
Hypothesis Testing

Relationship	Coef.	T-Stat	P-Value	Conclusion
EA → IE	0.153	3.542	0.000	Significant
EA → ATOF	0.627	15.914	0.000	Significant
EA → PBC	0.289	5.931	0.000	Significant
ATOF → IE	0.117	4.290	0.000	Significant
PBC → IE	0.387	7.757	0.000	Significant
SN→ IE	0.036	1.480	0.140	Insignificant

First, environmental awareness based on *Sad Kṛti* values has a significant positive effect on the intention to practice organic farming ($\beta = 0.153$, $t = 3.542$, $p < 0.001$). This suggests that stronger environmental awareness, shaped by local wisdom, leads to a greater intention among farmers to adopt organic farming. Additionally, environmental awareness significantly influences both attitude toward organic farming ($\beta = 0.627$, $t = 15.914$, $p < 0.001$) and perceived behavioral control ($\beta = 0.289$, $t = 5.931$, $p < 0.001$), indicating its foundational role in shaping key psychological drivers of behavior.

Attitudes toward organic farming are also positively associated with intention ($\beta = 0.117$, $t = 4.290$, $p < 0.001$), suggesting that favorable attitudes contribute to the intention to engage in organic practices. Similarly, perceived behavioral

control has a significant positive effect on intention ($\beta = 0.387$, $t = 7.757$, $p < 0.001$), emphasizing the role of self-efficacy and perceived ease in performing the behavior.

However, the effect of Subjective Norms on the intention to practice organic farming was not statistically significant ($\beta = 0.036$, $t = 1.480$, $p = 0.140$). This indicates that social pressure or perceived expectations from others may not be a strong determinant of farmers' intention to adopt organic farming in the context of this study.

The overall model demonstrated strong predictive relevance and explanatory power. The coefficient of determination (R^2) for the intention to practice organic farming was 0.815, indicating that 81.5% of the variance in intention can be explained by environmental awareness, attitude, perceived behavioral control, and subjective norms. This highlights the model's substantial explanatory capability. Additionally, the Q^2 value was 0.883, which is close to 1 and well above the minimum threshold of 0, signifying that the model possesses high predictive accuracy and relevance. These findings confirm that the extended Theory of Planned Behavior model enriched with culturally rooted environmental awareness based on *Sad Kṛti* values provides a strong and reliable framework for predicting farmers' intentions to adopt organic farming practices.

4.3. Discussion

The findings of this study indicate that environmental awareness based on *Sad Kṛti* values has a positive and significant effect on the intention to practice organic farming. This result aligns with previous research [6, 9, 10, 17-20]. Farmers who possess environmental awareness generally demonstrate a strong understanding of environmental issues such as land degradation, water pollution, climate change, and biodiversity loss. This awareness motivates them to act more responsibly toward the environment. In the Balinese agricultural context, ecological awareness is deeply rooted in cultural philosophy that emphasizes harmony among humans, nature, and the divine. Nature is viewed as sacred and therefore must be protected. This strong spiritual and cultural connection between farmers and nature fosters a deep sense of environmental responsibility that supports sustainable practices such as organic farming.

Environmental awareness based on *Sad Kṛti* values also significantly influences farmers' attitudes toward organic farming. Such awareness activates personal norms that strengthen individual beliefs, ultimately shaping a favorable attitude toward pro-environmental behavior. Farmers with strong environmental awareness believe that nature is a manifestation of the divine, and protecting it is an act of devotion. They also perceive land and water as vital sources of life that must remain sacred and preserved. Moreover, these farmers critically evaluate the environmental impact of their actions. The detrimental effects of chemical fertilizers and pesticides on soil and water quality, as well as the long-term sustainability of agricultural land, reinforce their positive attitude toward organic farming. These results are consistent with findings from previous studies [9, 10, 18, 33, 34] which confirm that environmental awareness shapes consumer attitudes toward environmentally friendly behavior.

Furthermore, *Sad Kṛti*-based environmental awareness has a positive and significant impact on perceived behavioral control. Awareness fosters deeper knowledge and understanding of environmental issues, which in turn boosts farmers' confidence that their actions can make a difference in environmental preservation. Awareness reduces uncertainty about environmentally responsible farming and enhances the perception that such practices are within the farmers' control. This sense of control is reflected in farmers' readiness to apply their knowledge and skills in organic farming, attend training programs, utilize available resources, and collaborate with others in managing organic agricultural land. These findings are consistent with studies that have found individuals with strong environmental responsibility are more motivated to align their behavior with sustainability values [34-37].

The study also confirms that both attitude and perceived behavioral control significantly influence farmers' intentions to adopt organic farming. Farmers with favorable attitudes and a strong sense of behavioral control are more likely to engage in or transition to organic farming practices. Their belief in the benefits of organic farming fosters positive emotions such as pride and a sense of environmental responsibility, which reinforce their intention to switch. When farmers' attitudes align with personal values or long-term goals such as contributing to sustainable practices, their intention to transition becomes even stronger. These findings are in line with prior studies [16, 20, 26, 37, 38]. Additionally, farmers with high perceived behavioral control exhibit confidence and competence in managing the transition to an organic farming system. This aligns with the conclusions of recent research [19, 26, 29, 38, 39].

Among the three core constructs of the Theory of Planned Behavior, only subjective norms were found to have no significant influence on the intention to engage in organic farming. This finding is supported by studies such as [18, 40]. Farmers did not feel strong social pressure or encouragement from family, community, or government to adopt organic farming. Although farmer communities (Subak) have collaborated with the government to provide education, such efforts have not been strong enough to drive widespread adoption. The limited availability of organic farming infrastructure, insufficient organic fertilizer distribution, lack of financial incentives for land conversion, and the complexity and high cost of organic certification contribute to farmers' reluctance to transition. Farmers also expect financial support from the government during the transitional period, as well as improved market access, which remains limited. Without this support, many farmers remain hesitant to embrace organic agriculture.

4.4. Implications

This study provides several important theoretical contributions. First, it enriches the literature on pro-environmental behavior by extending the Theory of Planned Behavior (TPB) through the integration of local wisdom, specifically the *Sad Kṛti* philosophy. While the TPB has been widely applied in environmental studies, this research demonstrates how traditional cultural and spiritual values can serve as a meaningful foundation for strengthening key psychological determinants, such as attitude and perceived behavioral control. Second, the findings offer empirical support for the Value-Belief-Norm (VBN)

theory by confirming the role of environmental awareness rooted in personal values and cultural beliefs in shaping sustainable behavioral intentions. By operationalizing *Sad Kṛti* as an endogenous construct influencing environmental attitudes and behaviors, this study contributes to the contextualization of environmental theories in culturally embedded settings, particularly within the agrarian societies of Southeast Asia.

From a practical perspective, this research has implications for agricultural policy, sustainability programs, and rural development strategies in Bali and other culturally rich regions. First, the positive influence of *Sad Kṛti*-based environmental awareness on farmers' intentions to adopt organic farming suggests that development programs should incorporate cultural and spiritual elements into training and outreach activities. Government agencies and NGOs can design educational interventions that align environmental messages with local religious and philosophical worldviews to increase acceptance and relevance. Second, the findings reveal the need to strengthen farmers' perceived behavioral control by providing adequate technical training, access to resources, and peer learning platforms. Ensuring that farmers feel capable and confident in their ability to transition to organic practices is essential for achieving behavioral change. Third, the insignificant role of subjective norms indicates that social influence mechanisms such as peer endorsement, community champions, and institutional support must be enhanced. This includes formal recognition of organic farmers, local incentive schemes, and stronger farmer-government collaboration to reduce uncertainties and reinforce social encouragement for sustainable practices.

Together, these implications underscore the importance of integrating psychological models with culturally grounded frameworks to promote sustainable agriculture, particularly in contexts where tradition and identity are closely tied to environmental stewardship.

4.5. Limitation and Future Direction

Despite offering valuable insights, this study is not without limitations. First, the research was conducted within a specific cultural and geographical context, namely among farmers in Bali who are embedded in the *Sad Kṛti* value system. While this provides a rich understanding of local wisdom and environmental behavior, it limits the generalizability of the findings to other regions or cultures where different value systems may influence environmental awareness and farming intentions. Future studies should consider comparative analyses involving farmers from other provinces or countries to examine whether similar cultural constructs play equivalent roles in influencing sustainable agricultural behavior.

Second, the measurement of environmental awareness based on *Sad Kṛti* was developed and validated within this study for the first time. Although rigorous content validation and reliability testing were conducted, further refinement and confirmatory validation using larger and more diverse samples are needed to ensure the robustness of the instrument. Future research could also explore other dimensions of local wisdom or spiritual beliefs that may enrich the construct of environmental awareness in different cultural settings.

Third, the study primarily employed a cross-sectional design, which limits the ability to infer causality over time. Longitudinal studies are recommended to observe how farmers' environmental attitudes and intentions evolve, especially during and after the transition to organic farming. Additionally, qualitative approaches could be used to explore the nuanced ways in which farmers interpret and enact local wisdom in their daily agricultural practices.

Lastly, the current model focused on individual-level psychological and cultural factors. Future research should integrate broader structural variables such as policy support, economic incentives, market access, and institutional trust to develop a more comprehensive understanding of the enablers and barriers to organic farming adoption. A multi-level or mixed-method approach may help bridge micro-level intentions with macro-level policy implications.

5. Conclusion

This study explored the role of *Sad Kṛti*-based environmental awareness in shaping Balinese farmers' intentions to adopt organic farming. By integrating local wisdom into the Theory of Planned Behavior (TPB), the research provides a culturally grounded understanding of how spiritual and ecological values influence pro-environmental behavior. The findings demonstrate that *Sad Kṛti*-inspired environmental awareness significantly impacts farmers' attitudes, perceived behavioral control, and ultimately their intention to transition to organic agriculture. This underscores the importance of culturally embedded constructs in shaping sustainability-oriented decisions.

The study also found that while environmental awareness, attitude, and perceived control significantly predict behavioral intention, subjective norms do not exhibit a notable effect. This suggests that farmers are more influenced by internalized values and perceived self-efficacy than by external social pressures. These findings have important implications for designing behavior change interventions and agricultural policies that are context-sensitive and culturally relevant.

Overall, this research contributes to the literature by extending the Theory of Planned Behavior (TPB) through the incorporation of indigenous ecological ethics. It also offers practical insights for policymakers and practitioners aiming to promote sustainable farming in culturally diverse settings. Future research should expand on this work by incorporating longitudinal designs and exploring the influence of structural and institutional factors in supporting organic farming transitions.

References

[1] S. Arwati, *Introduction to sustainable agriculture science*. Yogyakarta: Inti Mediatama, 2018.

[2] N. Purnawan and I. Sardiana, "Subak educational tour packages are an effort to maintain the sustainability of agricultural and cultural-based tourism potential in Bali," *J Kawistara*, vol. 7, no. 3, pp. 275–86, 2018.

[3] A. Kardinan, *Organic farming systems: Philosophy of inspection principles*. Yogyakarta: Intimedia, 2016.

[4] IFOAM - Organics International, "Principles of organic agriculture [Internet]," 2005. Retrieved: https://www.ifoam.bio/. 2005.

[5] W. Koster and I. W. Ramantha, "Economic transformation based on Bali nature, human and culture," *Journal of Positive School Psychology,* vol. 6, no. 5, pp. 7382–7392, 2022.
[6] B. Chekima, A. Igau, S. A. W. S. K. Wafa, and K. Chekima, "Narrowing the gap: Factors driving organic food consumption," *Journal of Cleaner Production,* vol. 166, pp. 1438-1447, 2017. https://doi.org/10.1016/j.jclepro.2017.08.086
[7] T. H. Pham, T. N. Nguyen, T. T. H. Phan, and N. T. Nguyen, "Evaluating the purchase behaviour of organic food by young consumers in an emerging market economy," *Journal of Strategic Marketing,* vol. 27, no. 6, pp. 540-556, 2019.
[8] N. Ahmed, C. Li, A. Khan, S. A. Qalati, S. Naz, and F. Rana, "Purchase intention toward organic food among young consumers using theory of planned behavior: Role of environmental concerns and environmental awareness," *Journal of Environmental Planning and Management,* vol. 64, no. 5, pp. 796-822, 2021.
[9] M. K. Koklic, U. Golob, K. Podnar, and V. Zabkar, "The interplay of past consumption, attitudes and personal norms in organic food buying," *Appetite,* vol. 137, pp. 27-34, 2019. https://doi.org/10.1016/j.appet.2019.02.010
[10] M. H. Le and P. M. Nguyen, "Integrating the theory of planned behavior and the norm activation model to investigate organic food purchase intention: evidence from Vietnam," *Sustainability,* vol. 14, no. 2, p. 816, 2022. https://doi.org/10.3390/su14020816
[11] I. Ajzen and A. W. Kruglanski, "Reasoned action in the service of goal pursuit," *Psychological Review,* vol. 126, no. 5, p. 774, 2019.
[12] I. Issa and U. Hamm, "Adoption of organic farming as an opportunity for Syrian farmers of fresh fruit and vegetables: An application of the theory of planned behaviour and structural equation modelling," *Sustainability,* vol. 9, no. 11, p. 2024, 2017.
[13] A. Bagheri, A. Bondori, M. S. Allahyari, and C. A. Damalas, "Modeling farmers' intention to use pesticides: An expanded version of the theory of planned behavior," *Journal of Environmental Management,* Vol. 248, p. 109291, 2019.
[14] J. Li, S. Feng, T. Luo, and Z. Guan, "Adoption of sustainable production technology," *Journal of Cleaner Production,* vol. 257, p. 120611, 2020.
[15] R. Rezaei, L. Safa, C. A. Damalas, and M. M. Ganjkhanloo, "Drivers of farmers' intention to use integrated pest management: integrating theory of planned behavior and norm activation model," *Journal of Environmental Management,* vol. 236, pp. 328-339, 2019.
[16] T. N. Nguyen, A. Lobo, and B. K. Nguyen, "Young consumers' green purchase behaviour in an emerging market," *Journal of Strategic Marketing,* vol. 26, no. 7, pp. 583-600, 2018.
[17] P. Kautish and R. Sharma, "Values, environmental consciousness and behavioral intentions," *Journal of Indian Business Research,* vol. 13, no. 1, pp. 1–29, 2018.
[18] J. Shin and A. S. Mattila, "When organic food choices shape subsequent food choices: The interplay of gender and health consciousness," *International Journal of Hospitality Management,* vol. 76, pp. 94-101, 2019.
[19] H. Wang, H. Gui, C. Ren, and G. Liu, "Factors influencing urban residents' intention of garbage sorting in china: An extended tpb by integrating expectancy theory and norm activation model," *Sustainability,* vol. 13, no. 23, p. 12985, 2021. https://doi.org/10.3390/su132312985
[20] S.-W. Wu and P.-Y. Chiang, "Exploring the mediating effects of the theory of planned behavior on the relationships between environmental awareness, green advocacy, and green self-efficacy on the green word-of-mouth intention," *Sustainability,* vol. 15, no. 16, p. 12127, 2023.
[21] P. C. Stern, "New environmental theories: toward a coherent theory of environmentally significant behavior," *Journal of Social Issues,* vol. 56, no. 3, pp. 407-424, 2000.
[22] L. Steg and J. I. De Groot, "Environmental values," in *The Oxford handbook of environmental and conservation psychology*. Oxford: Oxford University Press, 2012, pp. 81-92.
[23] S. Schwartz, "Normative influences on altruism," *Advances in Experimental Social Psychology,* vol. 10, pp. 221-279, 1977. https://doi.org/10.1016/S0065-2601(08)60358-5
[24] A. Singh and P. Verma, "Factors influencing Indian consumers' actual buying behaviour towards organic food products," *Journal of Cleaner Production,* vol. 167, pp. 473-483, 2017. https://doi.org/10.1016/j.jclepro.2017.08.106
[25] M. X. Yang, X. Tang, M. L. Cheung, and Y. Zhang, "An institutional perspective on consumers' environmental awareness and pro-environmental behavioral intention: Evidence from 39 countries," *Business Strategy and the Environment,* vol. 30, no. 1, pp. 566-575, 2021. https://doi.org/10.1002/bse.2638
[26] C.-C. Lin and C.-M. Dong, "Exploring consumers' purchase intention on energy-efficient home appliances: Integrating the theory of planned behavior, perceived value theory, and environmental awareness," *Energies,* vol. 16, no. 6, p. 2669, 2023.
[27] H. Du, D. Liu, B. K. Sovacool, Y. Wang, S. Ma, and R. Y. M. Li, "Who buys New Energy Vehicles in China? Assessing social-psychological predictors of purchasing awareness, intention, and policy," *Transportation Research Part F: Traffic Psychology and Behaviour,* vol. 58, pp. 56-69, 2018.
[28] M. T. Liu, Y. Liu, and Z. Mo, "Moral norm is the key: An extension of the theory of planned behaviour (TPB) on Chinese consumers' green purchase intention," *Asia Pacific Journal of Marketing and Logistics,* vol. 32, no. 8, pp. 1823-1841, 2020.
[29] C.-S. Tan, H.-Y. Ooi, and Y.-N. Goh, "A moral extension of the theory of planned behavior to predict consumers' purchase intention for energy-efficient household appliances in Malaysia," *Energy Policy,* vol. 107, pp. 459-471, 2017. https://doi.org/10.1016/j.enpol.2017.05.027
[30] L. Gao, S. Wang, J. Li, and H. Li, "Application of the extended theory of planned behavior to understand individual's energy saving behavior in workplaces," *Resources, Conservation and Recycling,* vol. 127, pp. 107-113, 2017.
[31] T. S. Ruslim, Y. Kartika, and C. G. Hapsari, "Effect of environmental concern, attitude, subjective norms, perceived behavioral control and availability on purchase of green skincare products with intention to purchase as a mediation variable," *Jurnal Ilmiah Manajemen Dan Bisnis,* vol. 8, no. 1, p. 120, 2022.
[32] C. H. Lawshe, "A quantitative approach to content validity," *Personnel Psychology,* vol. 28, no. 4, pp. 563–75, 1975. https://doi.org/10.1111/j.1744-6570.1975.tb01393.x
[33] B. El Badriati, M. Saleh, F. H. Nahar, T. L. Aprilia, and M. Azizurrohman, "The work ethics of muslim woman Songket weavers in increasing family income: Sukarare tourism village, Indonesia," *Heliyon,* vol. 8, no. 11, p. e11604, 2022. https://doi.org/10.1016/j.heliyon.2022.e11604
[34] X. Xu, S. Wang, and Y. Yu, "Consumer's intention to purchase green furniture: Do health consciousness and environmental awareness matter?," *Science of the Total Environment,* vol. 704, p. 135275, 2020.

[35] S. Bamberg, "How does environmental concern influence specific environmentally related behaviors? A new answer to an old question," *Journal of Environmental Psychology,* vol. 23, no. 1, pp. 21-32, 2003.

[36] S. Wang, J. Fan, D. Zhao, S. Yang, and Y. Fu, "Predicting consumers' intention to adopt hybrid electric vehicles: using an extended version of the theory of planned behavior model," *Transportation,* vol. 43, pp. 123-143, 2016.

[37] M.-F. Chen and P.-J. Tung, "Developing an extended theory of planned behavior model to predict consumers' intention to visit green hotels," *International Journal of Hospitality Management,* vol. 36, pp. 221-230, 2014. https://doi.org/10.1016/j.ijhm.2013.09.006

[38] J. Li, S. Feng, T. Luo, and Z. Guan, "What drives the adoption of sustainable production technology? Evidence from the large scale farming sector in East China," *Journal of Cleaner Production,* vol. 257, p. 120611, 2020.

[39] P. Yanakittkul and C. Aungvaravong, "A model of farmers intentions towards organic farming: A case study on rice farming in Thailand," *Heliyon,* vol. 6, no. 1, p. e03039, 2020. https://doi.org/10.1016/j.heliyon.2019.e03039

[40] P. Ataei, S. Gholamrezai, R. Movahedi, and V. Aliabadi, "An analysis of farmers' intention to use green pesticides: The application of the extended theory of planned behavior and health belief model," *Journal of Rural Studies,* vol. 81, pp. 374-384, 2021. https://doi.org/10.1016/j.jrurstud.2020.11.003