

Sustainable business model for Northwest ethnic textile products in Vietnam: Balancing cultural preservation and commercialization under the lens of innovation and cultural value theory

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Abstract: In the context of increasing global interest in sustainable development in business, traditional industries in countries such as textile products of ethnic minorities in Vietnam need to be shaped in a way that combines cultural preservation and economic development. However, this industry is still facing the risk of extinction due to lack of generational inheritance, competition from industrial products, and limited market access. The study was conducted to explore how values can promote sustainable entrepreneurial intention and behavior towards building a sustainable business model for the ethnic textile industry in Vietnam. The study was conducted based on an integration of innovation and cultural value theories and the quantitative research method to collect data from 319 small businesses in the field. The findings reveal the mediating role of sustainable entrepreneurial intention in the relationships of cultural value perception, market knowledge, attitude toward entrepreneurship, perceived behavioral control and sustainable entrepreneurial behavior, while community and policy support, and subjective norm do not show an indirect effect on the behavior. The study provides many important practical implications for businesses, policy makers and local communities in developing the ethnic traditional textile industry in Vietnam. Accordingly, businesses need to combine indigenous cultural values with innovation to create sustainable competitive advantages, while support policies need to focus on intellectual property protection, fair trade and digital skills training. The “Co-creation for Culture” model is proposed as a sustainable direction, connecting communities, designers and digital platforms to develop Northwest textile products suitable for modern markets.

Keywords: Cultural preservation and commercialization, innovation and cultural value, Northwest ethnic textile, sustainable business model, sustainable entrepreneurial behavior.

1. INTRODUCTION

In recent decades, sustainability has become a central concern for both policymakers and businesses worldwide, driven by the urgent challenges of climate change, overconsumption, and the erosion of traditional resources. While sustainability awareness has spread rapidly in developed nations, its adoption in developing contexts remains uneven. In Vietnam, although the idea of sustainable living has emerged as a trend among younger generations, consumer understanding and behavioral adoption of sustainability principles remain limited (Nayak et al., 2019). Surveys show that Vietnamese consumers are increasingly aware of environmental and health-related issues, with a willingness to pay more for sustainable and eco-friendly products (Thuy Ho, 2018). At the same time, younger generations, particularly Gen Z, are more engaged in sustainability discourses, as reflected in environmental campaigns and shifts in consumer attitudes (Deloitte, 2020). This evolving awareness provides an opportunity for cultural and traditional industries, such as ethnic textiles, to position themselves within the broader sustainability movement.

The Northwest region of Vietnam, home to ethnic minorities such as the H'Mong, Thai, Dao, and Muong, is recognized for its rich textile traditions. These handwoven products embody centuries of cultural knowledge, spiritual

symbolism, and community identity. They are more than material artifacts; they represent intangible cultural heritage, connecting generations and preserving distinct ethnic narratives. However, similar to other traditional craft sectors across Asia, ethnic textile industries in Vietnam face mounting challenges. Declining generational interest, lack of systematic knowledge transfer, competition with mass-produced substitutes, and limited access to markets threaten the sustainability of these crafts (Chokbandansuk et al., 2015). The situation is reminiscent of the Thai-Yuan Jok textile industry, where communities struggled to preserve weaving traditions while adapting to new market conditions. Without effective strategies to add value and modernize production, there is a risk that these cultural products will remain marginalized or even disappear.

At the same time, traditional industries like ethnic textiles hold immense potential for sustainable business development. They can combine cultural preservation with economic growth through community-based entrepreneurship, knowledge management, and innovation (Office of the National Economic and Social Development Board, 2016). By integrating local wisdom with modern design, technology, and marketing, textile products can transcend their role as cultural symbols to become commercially viable goods that appeal to both domestic and international markets. This balance between

safeguarding heritage and pursuing commercialization is at the heart of sustainable business models for ethnic crafts.

Theoretically, this challenge can be analyzed under the lens of institutional logics and cultural value theory. As Thornton et al. (2012) and Milosevic et al. (2023) note, traditional communities often operate under hybrid logics, simultaneously guided by cultural preservation imperatives and market-oriented goals. These dual logics do not simply coexist but are dynamically negotiated as communities respond to external pressures such as globalization, consumer trends, and policy frameworks (Wang, 2024; Rodriguez-Escobar, 2024). The concept of embeddedness (Polanyi, 1944) further emphasizes that economic behavior in ethnic communities is deeply intertwined with social and cultural structures, underscoring the need for context-sensitive business models. Innovation theory, meanwhile, highlights how cultural value can serve as a driver of creativity and market differentiation, enabling traditional crafts to compete in a globalized economy without losing their authenticity.

This study holds both theoretical and practical significance. It contributes to the academic literature by addressing the underexplored intersection between cultural preservation and sustainable entrepreneurship in Vietnam's ethnic minority communities, thereby extending the application of cultural value theory and innovation perspectives to the context of traditional craft industries. At the same time, the research offers practical insights for policymakers, development agencies, and community leaders who aim to design initiatives that strengthen cultural industries while fostering sustainable livelihoods. By conceptualizing cultural values as a driver of innovation, the study not only advances the discourse on sustainable business models but also provides a pathway for safeguarding intangible cultural heritage in parallel with economic development.

To achieve these objectives, the study is structured as follows. The next part provides a comprehensive literature review and develops the conceptual framework underpinning the study. Part three outlines the research methodology, including the research design, data collection procedures, and analytical techniques. Part four presents the empirical findings and interprets them through the lens of innovation and cultural value theory. Finally, part five synthesizes the contributions of the research, discusses managerial and policy implications, and identifies limitations and directions for future inquiry.

2. CONCEPTUAL FRAMEWORK AND RESEARCH MODEL

2.1 Theoretical Foundation in Shaping Sustainable Business Model

The concept of the business model has long been recognized as an abstract representation of how organizations create, deliver, and capture value within complex socio-economic systems (Chesbrough, 2010; Osterwalder, 2004). While conventional business models primarily emphasize economic efficiency and market competitiveness, they have

often overlooked critical societal and environmental considerations (Geissdoerfer et al., 2018). This limitation has led to the emergence of sustainable business models, which extend the traditional logic of value creation by embedding ecological integrity and social well-being into organizational practices alongside economic performance (Dyllick & Hockerts, 2002). Sustainable business models thus serve as a platform through which firms can simultaneously pursue profitability and sustainability, leveraging multi-stakeholder engagement, innovation, and long-term perspectives to mitigate negative impacts on the environment and society while strengthening competitive advantage (Rashid et al., 2013).

In the specific context of Northwest ethnic textile products in Vietnam, the theoretical foundation for sustainable business models requires an integration of innovation theory (Rogers, 1962) and cultural value theory (Hofstede, 1980). Innovation theory highlights how traditional textile practices can be revitalized and adapted through modern technologies, creative design, and novel business mechanisms that expand market access without compromising authenticity. This theoretical perspective underscores the potential of sustainable business models to transform local craftsmanship into competitive offerings in both domestic and international markets. At the same time, cultural value theory emphasizes the symbolic, identity-based, and community-centered meanings embedded in ethnic textiles, framing them not only as commodities but also as carriers of intangible cultural heritage. Within this lens, sustainable business models function as vehicles for balancing commercialization with cultural preservation, ensuring that economic gains do not lead to cultural dilution but instead reinforce community pride and resilience. The interplay of these theoretical perspectives strengthens the conceptual grounding of sustainable business models for ethnic textiles by aligning economic viability with cultural sustainability. In practice, this means that value propositions must go beyond financial benefits to highlight cultural authenticity, ecological responsibility, and social empowerment (Boons & Lüdeke-Freund, 2013). Value creation processes should foster innovation in production and marketing while safeguarding traditional weaving techniques and knowledge systems. Similarly, value capture mechanisms should not only secure economic returns but also redistribute benefits to local communities, thereby enhancing both livelihoods and cultural resilience (Porter & Kramer, 2011). Through this integration, sustainable business models provide a comprehensive framework for balancing cultural preservation and commercialization in ways that advance Vietnam's broader sustainability agenda (Schaltegger et al., 2016).

2.2 Sustainable Entrepreneurial Behavior

Sustainable entrepreneurial behavior has emerged as a critical construct in understanding how entrepreneurs integrate economic, environmental, and socio cultural objectives into their practices. Broadly, it refers to the actions and decisions through which entrepreneurs pursue opportunities that

generate financial returns, minimize ecological harm, and create social value (Kuckertz & Wagner, 2010; Muñoz & Cohen, 2018). Unlike conventional entrepreneurial behavior, which often emphasizes profit maximization, this perspective highlights alignment with broader sustainability principles, including cultural preservation, community resilience, and resource stewardship (Hockerts & Wüstenhagen, 2010). Viewed through a sustainability lens, the entrepreneurial process involves opportunity recognition, resource mobilization, innovation, and value capture (Shepherd & Patzelt, 2011).

In the context of Northwest ethnic textile products in Vietnam, this means recognizing weaving not only as a craft commodity but also as cultural heritage, mobilizing local knowledge with external support, and innovating responsibly to balance authenticity with competitiveness (Belz & Binder, 2017). Value capture extends beyond financial returns to include community benefits, thereby fostering resilience and intergenerational knowledge transfer (Hall et al., 2010). Cultural value theory further frames entrepreneurial activity as both an economic and cultural act. Entrepreneurs in ethnic textiles are thus not only producers but also custodians of intangible heritage, whose decisions influence cultural preservation. From this perspective, sustainable entrepreneurial behavior in the Northwest of Vietnam reflects a balance between commercialization and safeguarding traditions, contributing to a sustainable cultural economy (Throsby, 2001). Or Son (2019) focuses on the issue of preserving and promoting the cultural value of brocade, a type of heritage associated with the identity of ethnic minorities in the context of the Industrial Revolution 4.0, aiming to both maintain traditional production methods with strong cultural elements and apply modern technology to improve production efficiency. Brocade not only has aesthetic value but also contains historical, religious and ethnic cultural identity elements, so conservation should not be separated from human and traditional factors. Accordingly, it is necessary to promote public awareness, inventory heritage, issue support policies, train artisans and develop brocade culture towards modernization.

2.3 Landscape of Northwest Ethnic Textile Product Market in Vietnam

Vietnam's textile and garment industry has established itself as one of the most dynamic sectors in the national economy, attracting over US\$37 billion in foreign direct investment (FDI) and positioning the country as the world's third-largest textile and garment exporter, after China and Bangladesh (Vietnam Investment Review, 2025). While the mainstream sector is dominated by large-scale, export-oriented enterprises, the landscape of Northwest ethnic textile products reflects a contrasting trajectory, rooted in cultural heritage, artisanal practices, and community-based livelihoods. The Northwest region, home to ethnic groups such as the Hmong, Thai, and Dao, has long preserved weaving traditions that embody both material and intangible cultural values. Unlike

industrial textile production, which relies on imported raw materials and advanced machinery, ethnic textile practices remain largely manual, employing techniques such as flax cultivation, indigo dyeing, and beeswax batik. These methods not only produce unique patterns and vibrant colors but also symbolize narratives of community identity, spirituality, and daily life. For example, the Hmong weavers in Lũng Tám (Hà Giang) have revitalized their craft through a cooperative model established in 2001, enabling villagers to expand market reach while preserving traditional weaving, dyeing, and wax-resist techniques. Similarly, Cát Cát village in Sapa has become a cultural tourism hub where weaving and indigo dyeing are showcased alongside contemporary product adaptations such as handbags and backpacks, thereby linking traditional craftsmanship with new consumer demands. In Sin Suoi Ho of Lai Chau province, the distinctive practice of using large stones to press and polish flax fabrics highlights not only technical ingenuity but also the deep-rooted intergenerational continuity of textile traditions (Lang Nghe Viet Nam, 2025). Despite these strengths, the ethnic textile sector faces multiple challenges in scaling its reach. Limited production capacity, the time-intensive nature of manual weaving, and declining interest among younger generations constrain supply. Market access is also restricted by the predominance of informal trade channels and the lack of standardized branding and e-commerce integration. Furthermore, competition from mass-produced textiles, including low-cost imitations of ethnic patterns, threatens both the economic viability and cultural authenticity of these products.

Nonetheless, opportunities are emerging in niche markets driven by rising global demand for sustainable and culturally authentic goods. Ethnic textiles are increasingly valued by domestic and international consumers seeking products that embody ecological responsibility, artisanal quality, and heritage preservation. Initiatives by cooperatives, NGOs, and social enterprises have also begun to bridge the gap between traditional artisans and modern markets, creating pathways for integration into global value chains. The challenge, however, lies in balancing commercialization with cultural safeguarding, ensuring that economic gains reinforce rather than erode community traditions. In sum, the landscape of Northwest ethnic textile products is shaped by the intersection of tradition and modernity, cultural preservation and market adaptation. Although still marginal compared to Vietnam's industrial textile sector, this market possesses significant potential to leverage cultural identity as a source of competitive advantage, particularly when embedded within sustainable business models that harmonize economic viability with ecological and cultural resilience.

2.4 Hypothesis Development

2.4.1 Cultural Value Perception and Sustainable Entrepreneurial Intention

Cultural value perception has increasingly been recognized as an important antecedent of sustainable entrepreneurial intention, particularly in contexts where economic activities

are deeply intertwined with heritage preservation. In ethnic minority communities, cultural practices such as traditional textile weaving are not only economic assets but also carriers of identity, history, and intergenerational knowledge. Previous studies emphasize that acknowledging and valuing these cultural elements plays a decisive role in fostering community-based development and preserving intangible heritage (Minha, 2019; Nirunpornputta, 2022). Such perceptions shape the way individuals approach entrepreneurship, as they see business not merely as profit-seeking but as a vehicle to safeguard traditions, transmit cultural narratives, and reinforce community resilience. Within the fashion and textile sector, cultural sustainability has been found to positively influence consumer attitudes and purchase intentions toward sustainable products and services (Effendy & Xiao, 2025; Le et al., 2024). This suggests that when individuals internalize cultural values, they are more likely to engage in consumption and entrepreneurial practices aligned with sustainability principles. In the context of Northwest Vietnam, where ethnic textile products embody both artistic expression and cultural heritage, cultural value perception can encourage entrepreneurs to design business models that respect authenticity, employ environmentally responsible processes, and simultaneously address market competitiveness. Empirical research in Vietnam by Thu & Thuan (2022) emphasized the need to raise public awareness of the traditional cultural value of brocade, in addition to building a unique brocade cultural space, vocational training, technical improvement, and skill improvement to diversify products, promote in the direction of cultural industry; connect trade, e-commerce, tourism, thereby turning brocade into a unique product, both having commercial value and preserving traditional patterns and techniques. Based on above arguments, the study proposes the following hypothesis:

H1: Cultural value perception significantly influences sustainable entrepreneurial intention.

2.4.2. Market Knowledge and Sustainable Entrepreneurial Intention

Market knowledge is a crucial determinant in shaping entrepreneurial orientation, particularly when sustainability and cultural preservation are simultaneously pursued. It refers to the understanding of consumer needs, market dynamics, and competitive landscapes that entrepreneurs acquire through experience and interaction with both local and global markets. In the context of traditional textiles, market knowledge enables entrepreneurs to position cultural products in ways that appeal to contemporary consumers while maintaining their authenticity and heritage value. Research in different cultural settings has demonstrated that local knowledge and ethnographic perspectives are essential in promoting indigenous textiles, linking cultural heritage with consumer demand (Chantamool et al., 2024). Similarly, studies in Nigeria highlight how understanding traditional design and cultural properties of textiles facilitates the transformation of heritage crafts into commercially viable products (Anyanwu et

al., 2022). In the broader sustainability discourse, entrepreneurial intention is strengthened when cultural and market knowledge intersect. Studies on sustainable fashion indicate that entrepreneurs who are equipped with sufficient knowledge of market demand, consumer attitudes, and sustainability trends are more likely to develop innovative products and services aligned with ecological and cultural values (Le et al., 2024; Effendy & Xiao, 2025). For ethnic textile entrepreneurs in Northwest Vietnam, market knowledge is particularly significant, as it provides insights into the preferences of both domestic and international consumers, allowing them to align traditional weaving practices with modern design and eco-friendly production processes. This knowledge not only enhances competitiveness but also strengthens the capacity to balance commercialization with cultural preservation. Based on above arguments, the study proposes the following hypothesis:

H2: Market knowledge significantly influences sustainable entrepreneurial intention.

2.4.3. Community and Policy Support and Sustainable Entrepreneurial Intention

Community and policy support are widely recognized as crucial external drivers that shape entrepreneurial behavior and intention. For entrepreneurs engaged in sustainability-oriented ventures, especially in culturally embedded industries such as textiles, these forms of support provide legitimacy, resources, and encouragement to balance commercial goals with cultural and environmental responsibilities. Community support fosters trust, participation, and shared responsibility in preserving traditional practices, while policy support offers institutional frameworks, subsidies, or communication platforms to reinforce sustainable entrepreneurship. Previous studies emphasize that cultural differences and policy-driven communication strategies play a role in guiding sustainable choices among consumers, highlighting the importance of systemic support in promoting sustainable textile products (Phan, 2024). Moreover, research on sustainable entrepreneurial intention has shown that external factors, including societal expectations and supportive institutions, enhance the willingness of entrepreneurs to integrate sustainability principles into their ventures (Le et al., 2024; Effendy & Xiao, 2025). When communities actively value cultural preservation and governments provide enabling policies, entrepreneurs are more likely to align their business models with sustainability goals. Based on above arguments, the study proposes the following hypothesis:

H3: Community and policy support significantly influences sustainable entrepreneurial intention.

2.4.4. Attitude toward Entrepreneurship and Sustainable Entrepreneurial Intention

Attitude toward entrepreneurship reflects an individual's positive or negative evaluation of entrepreneurial activities, shaping the extent to which they perceive entrepreneurship as desirable, feasible, and aligned with their personal or societal

values. Within the sustainability context, such attitudes are particularly influential, as they determine whether entrepreneurs view business creation not only as an economic opportunity but also as a pathway to address social and environmental challenges. A favorable attitude toward entrepreneurship strengthens confidence, opportunity recognition, and long-term commitment to embedding sustainability in business models. Prior research highlights that attitudes serve as a strong predictor of sustainable entrepreneurial intention. For instance, studies have shown that positive perceptions of entrepreneurship in connection with cultural and ecological values increase the likelihood of pursuing sustainable products and services (Le et al., 2024). Similarly, consumer-focused research indicates that when sustainability is perceived as meaningful and beneficial, it fosters stronger behavioral intentions toward eco-friendly initiatives (Effendy & Xiao, 2025). In the context of Northwest ethnic textile products in Vietnam, a supportive entrepreneurial attitude can thus encourage entrepreneurs to innovate responsibly, preserve cultural heritage, and align commercial ventures with sustainability goals. Based on above arguments, the study proposes the following hypothesis:

H4: Attitude toward entrepreneurship significantly influences sustainable entrepreneurial intention.

2.4.5. Subjective Norm and Sustainable Entrepreneurial Intention

In the context of Northwest ethnic textile products, entrepreneurial decision-making is not shaped solely by individual preferences but also by collective cultural and social expectations. Subjective norm, understood as the perceived pressure or encouragement from family members, community leaders, and wider society, plays an essential role in influencing whether entrepreneurs pursue sustainable directions. When communities emphasize the importance of cultural preservation, environmental responsibility, and ethical trade, entrepreneurs are more likely to align their ventures with these expectations, thereby strengthening their sustainable entrepreneurial intention. Le et al. (2024) demonstrate that cultural and social influences significantly contribute to sustainability-oriented choices in the fashion industry, suggesting that normative pressures serve as a catalyst for sustainability-related intentions. Applied to the ethnic textile sector in Northwest Vietnam, strong social expectations regarding the preservation of weaving traditions and responsible commercialization may motivate entrepreneurs to develop business models that balance both cultural heritage and market viability. Based on above arguments, the study proposes the following hypothesis:

H5: Subjective norm significantly influences sustainable entrepreneurial intention.

2.4.6. Perceived Behavioral Control and Sustainable Entrepreneurial Intention

Perceived behavioral control refers to the degree to which entrepreneurs believe that they possess the necessary

capabilities, resources, and opportunities to successfully engage in entrepreneurial activities that are environmentally and culturally sustainable. When individuals perceive that they have the ability to access financial capital, acquire technical knowledge, and navigate market conditions, their intention to pursue sustainable ventures is significantly reinforced. Conversely, a lack of perceived control, such as barriers to distribution channels or insufficient training, can weaken entrepreneurial motivation. Research has highlighted that perceptions of control over both internal and external resources directly influence the translation of entrepreneurial intention into concrete actions. Chowdhury (2024) demonstrates that confidence in managing resource constraints and responding to market trends is a crucial determinant for entrepreneurs in the textile industry who seek to adopt sustainable practices. Within the context of ethnic textile traditions in Northwest Vietnam, entrepreneurs who feel empowered through access to community networks, institutional support, and capacity-building programs are more likely to transform their sustainable intentions into viable entrepreneurial models. This suggests that perceived behavioral control not only affects the decision to start a sustainable business but also underpins the resilience needed to maintain and expand such ventures in the long term. Based on above arguments, the study proposes the following hypothesis:

H6: Perceived behavioral control significantly influences sustainable entrepreneurial intention.

2.4.7. Sustainable Entrepreneurial Intention and Sustainable Entrepreneurial Behavior

Sustainable entrepreneurial intention reflects an entrepreneur's determination to pursue ventures that integrate economic goals with cultural preservation and environmental responsibility. Yet, the presence of intention alone is insufficient unless it is translated into tangible practices. Sustainable entrepreneurial behavior captures this process, demonstrating how intentions are enacted through concrete actions such as adopting environmentally friendly production methods, promoting traditional textile heritage, or engaging in socially responsible trade practices. Empirical research has consistently emphasized that entrepreneurial intention is a strong predictor of behavior. Chowdhury (2024) underscores the role of market dynamics in enabling entrepreneurs to transform sustainability intentions into practical strategies in the textile sector. Van den Bosch & Vos (2022) point out that narrowing the intention-behavior gap is essential for fostering sustainable practices among both entrepreneurs and consumers. Al Farah (2023) highlights how strong sustainability intentions increase the likelihood of implementing innovative business models that align with environmental and social objectives. Building on this, Le et al. (2024) and Effendy & Xiao (2025) demonstrate that intentions shaped by cultural and social values provide the motivational foundation that drives sustainable entrepreneurial actions. In the context of the Northwest Vietnam ethnic textile sector,

entrepreneurs who nurture strong sustainable intentions are more inclined to incorporate eco-friendly dyeing processes, preserve traditional weaving practices, and adopt business strategies that balance cultural heritage with market opportunities. Such behaviors not only safeguard community identity but also enhance long-term competitiveness in domestic and international markets. Based on above agurements, the study proposes the following hypothesis:

H7: Sustainable entrepreneurial intention significantly influences sustainable entrepreneurial behavior.

2.4.8. The Mediating Role of Sustainable Entrepreneurial Intention

Cultural value perception is fundamental in shaping entrepreneurial orientations toward heritage-based industries, particularly in the Northwest of Vietnam where textile weaving is deeply embedded in ethnic identity. When entrepreneurs perceive cultural heritage as a vital source of legitimacy and meaning, they are more likely to view it as central to their entrepreneurial practices. Minha (2019) and Nirunpornputta (2022) highlight that strong cultural awareness motivates individuals to safeguard and revitalize traditional crafts. However, cultural appreciation alone does not automatically translate into action; it must first strengthen entrepreneurial intention, which then mobilizes the commitment to transform cultural recognition into sustainable entrepreneurial behavior within the ethnic textile sector. Based on above agurements, the study proposes the following hypothesis:

H8a: Sustainable entrepreneurial intention mediates the effect of cultural value perception on sustainable entrepreneurial behavior.

Market knowledge is essential for ethnic textile entrepreneurs to navigate changing consumer preferences, respond to market dynamics, and position products competitively while retaining cultural authenticity. Chantamool et al. (2024) and Anyanwu et al. (2022) show how traditional textile knowledge, when combined with awareness of market demands, strengthens both cultural identity and commercial potential. Yet, such knowledge remains underutilized unless entrepreneurs translate it into purposeful intention. Intention thus plays a crucial mediating role, enabling artisans to apply market insights in ways that sustain weaving traditions while making them viable in both domestic and international markets. Based on above agurements, the study proposes the following hypothesis:

H8b: Sustainable entrepreneurial intention mediates the effect of market knowledge on sustainable entrepreneurial behavior.

Community and policy support serve as enabling conditions for sustainable entrepreneurship in ethnic textile weaving. This support includes collective encouragement from local communities, guidance from village leaders, and state-level policies that promote cultural preservation and sustainable development. Phan (2024) emphasizes the role of

cultural and institutional frameworks in shaping consumer and entrepreneurial orientations. Still, supportive environments only translate into entrepreneurial practices when internalized as intention. By reinforcing intention, community and policy support become drivers of entrepreneurial behavior that protects intangible cultural heritage while fostering economic resilience in Northwest Vietnam. Based on above agurements, the study proposes the following hypothesis:

H8c: Sustainable entrepreneurial intention mediates the effect of community and policy support on sustainable entrepreneurial behavior.

Attitude toward entrepreneurship reflects how individuals evaluate entrepreneurial activities as worthwhile, desirable, and aligned with their values. In the context of Northwest ethnic textiles, positive attitudes toward sustainable entrepreneurship encourage artisans to see weaving not merely as subsistence but as a pathway for cultural revitalization and livelihood improvement. Le et al. (2024) and Effendy & Xiao (2025) show that favorable entrepreneurial attitudes enhance sustainability-oriented commitments. Yet, this favorable disposition must be channeled through intention to generate action. Intention serves as the mediating force that converts positive attitudes into entrepreneurial behavior supporting both cultural preservation and responsible commercialization. Based on above agurements, the study proposes the following hypothesis:

H8d: Sustainable entrepreneurial intention mediates the effect of attitude toward entrepreneurship on sustainable entrepreneurial behavior.

Subjective norm, expressed through community expectations, family influence, and cultural obligations, strongly shapes entrepreneurial decision-making in ethnic minority contexts. For textile entrepreneurs in Northwest Vietnam, these social norms often emphasize safeguarding weaving traditions, transmitting knowledge across generations, and upholding ethical trade practices. Le et al. (2024) demonstrate that cultural and social influences shape sustainability-oriented choices. However, norms alone cannot enforce sustainable action unless internalized as entrepreneurial intention. Through this mediating role, intention channels collective expectations into concrete behaviors that simultaneously maintain cultural authenticity and adapt to modern market demands. Based on above agurements, the study proposes the following hypothesis:

H8e: Sustainable entrepreneurial intention mediates the effect of subjective norm on sustainable entrepreneurial behavior.

Perceived behavioral control refers to entrepreneurs' confidence in their ability to manage resources, overcome obstacles, and implement sustainable strategies effectively. Within the Northwest textile sector, this includes artisans' belief that they can access markets, integrate innovation, and sustain traditional techniques amid competition. Chowdhury (2024) shows that higher perceived control encourages sustainable entrepreneurial engagement. Yet, this sense of

capability only influences outcomes when it is expressed through intention. Intention transforms perceived capacity into deliberate action, allowing entrepreneurs to turn their confidence into sustainable behaviors that reinforce cultural heritage while enhancing economic opportunities. Based on above arguments, the study proposes the following hypothesis:

H8f: Sustainable entrepreneurial intention mediates the effect of perceived behavioral control on sustainable entrepreneurial behavior.

3. METHODOLOGY

3.1 Measurement of Constructs

The measurement framework for this study was carefully developed to ensure that each construct was captured in a reliable and valid manner. A structured questionnaire was employed, drawing upon well-established scales from prior research that were refined and adapted to the context of sustainable entrepreneurship in the Northwest Vietnam ethnic textile sector. The instrument incorporated eight core constructs: Sustainable entrepreneurial behavior (SEB), Sustainable entrepreneurial intention (SEI), Cultural value perception (CVP), Market knowledge (MK), Community and policy support (CP), Attitude toward entrepreneurship (AE), Subjective norm (SN), and Perceived behavioral control (PBC). All items were rated on a five-point Likert scale, ranging from 1 = "Strongly disagree" to 5 = "Strongly agree."

The construct of Sustainable entrepreneurial behavior (SEB) was measured through five items adapted from Chowdhury (2024), van den Bosch & Vos (2022), and Al Farah (2023). Sustainable entrepreneurial intention (SEI) was assessed using four items derived from Le et al. (2024) and Effendy & Xiao (2025). Cultural value perception (CVP) relied on three items adapted from Minha (2019) and Nirunpornputta (2022). Market knowledge (MK) was measured with four items reflecting insights from Chantamool et al. (2024) and Anyanwu et al. (2022). Community and policy support (CP) was evaluated using three items adapted from Phan (2024). Attitude toward entrepreneurship (AE) was assessed through four items from Le et al. (2024) and Effendy & Xiao (2025). Subjective norm (SN) was captured with three items based on Le et al. (2024). Finally, Perceived behavioral control (PBC) was measured using three items adapted from Chowdhury (2024). By adapting validated measures from prior studies, the questionnaire was tailored to capture both the cultural and entrepreneurial specificities of the textile sector in Northwest Vietnam. This approach enhances the robustness of construct operationalization, ensuring content validity and comparability with existing scholarship. The collected data were subsequently analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) to assess the psychometric properties of the measurement model and to evaluate the hypothesized structural relationships.

3.2 Sampling and Data Collection

To examine the sustainable business model for Northwest ethnic textile products in Vietnam under the lens of cultural value and innovation theories, this study employed a structured questionnaire survey targeting individuals engaged in textile weaving, trading, or related cultural business activities in the Northwestern provinces. Data collection was conducted over a four-week period. A total of 335 responses were received, of which 319 valid responses were retained after data cleaning and screening for completeness and eligibility.

The sampling strategy combined purposive and convenience sampling to ensure that only respondents who were directly involved in ethnic textile production and business activities were included in the analysis. The questionnaire was structured into two sections: (1) demographic and background information, and (2) measurement items for the key constructs of the research model. The demographic section collected data on gender (male, female), age (under 16, 16–20, 21–30, over 30), ethnicity (H'Mong, Thai, Dao, Tay, Muong, and other groups), education level (secondary, high school, bachelor, other), and years of business experience (less than 3 years, 3–5 years, more than 5 years). The second section included measurement items for constructs such as cultural value perception, innovation orientation, sustainable entrepreneurial intention, and sustainable entrepreneurial behavior, all of which were adapted from validated scales in previous studies and modified to fit the ethnic textile business context. The demographic composition of the respondents is summarized in Table 1. The diversity in terms of gender, age distribution, ethnic representation, education, and work experience provides a robust foundation for analyzing the relationships among cultural value, innovation, and sustainability-related entrepreneurial outcomes in the Northwest ethnic textile sector.

4. RESULTS AND DISCUSSION

4.1 Descriptive Statistics Result

Among the 319 valid respondents, the majority were female (71.4%), while male participants accounted for 28.6%, reflecting the strong role of women in ethnic textile production and business activities in the Northwest region of Vietnam. In terms of age, the largest group was between 16–20 years old (41.7%), followed by those aged 21–30 years (32.9%). Respondents under 16 years represented 15.1%, whereas only 10.3% were over 30, indicating that the sector is largely driven by a relatively young workforce. Regarding ethnicity, H'Mong respondents made up the largest share (31.7%), followed by Thai (22.6%), Dao (14.4%), Tay (12.2%), and Muong (9.7%), with other ethnic groups comprising 9.4%. In terms of education, nearly half of the respondents had completed high school (46.4%), while 21.3% held a bachelor's degree, 22.0% had secondary education, and 9.4% reported other educational backgrounds. With respect to business experience, 42.0% of participants had more than five years of experience in textile-

related activities, 30.7% had 3–5 years, and 27.3% reported less than 3 years of involvement. Overall, the demographic distribution highlights the predominance of young female artisans from ethnic minority groups, especially H'Mong and Thai, with varying levels of education and experience, thereby providing a representative basis for analyzing sustainable entrepreneurial intentions and behaviors in the Northwest ethnic textile sector.

Table 1: Demographics of Respondents

Demographics		Frequency	Percent
Gender	Male	91	28.6
	Female	228	71.4
Age	Under 16	48	15.1
	16 – 20	133	41.7
	21 – 30	105	32.9
	Over 30	33	10.3
Ethnicity	H'Mong	101	31.7
	Thai	72	22.6
	Dao	46	14.4
	Tay	39	12.2
	Muong	31	9.7
	Others	30	9.4
Educational level	Secondary	70	22.0
	High school	148	46.4
	Bachelor	71	22.3
	Other	30	9.4
Years of experience	Less than 3 years	87	27.3
	3 – 5 years	98	30.7
	More than 5 years	134	42.0
Total		319	100

4.2 Scale Reliability and Validity Assessment

Table 2 presents the results of the reliability and convergent validity assessment of the measurement model. All constructs demonstrated strong internal consistency, with Cronbach's Alpha and Composite Reliability (CR) values exceeding the recommended threshold of 0.7 (Nunnally & Bernstein, 1994; Hair et al., 2019). For instance, Attitude toward Entrepreneurship (AE: $\alpha = 0.886$, CR = 0.921), Community & Policy Support (CP: $\alpha = 0.788$, CR = 0.874), Cultural Value Perception (CVP: $\alpha = 0.870$, CR = 0.920),

Market Knowledge (MK: $\alpha = 0.896$, CR = 0.927), Perceived Behavioral Control (PBC: $\alpha = 0.877$, CR = 0.924), Sustainable Entrepreneurial Behavior (SEB: $\alpha = 0.897$, CR = 0.934), Sustainable Entrepreneurial Intention (SEI: $\alpha = 0.897$, CR = 0.929), and Subjective Norm (SN: $\alpha = 0.857$, CR = 0.913) all reported satisfactory reliability. Similarly, the Average Variance Extracted (AVE) values were above the recommended 0.5 threshold, ranging from 0.699 to 0.803, thereby confirming adequate convergent validity. These results indicate that the measurement constructs employed in this study are both reliable and valid, supporting their appropriateness for further PLS-SEM analysis.

Table 2: Construct Reliability and Validity

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
AE	0,886	0,898	0,921	0,745
CP	0,788	0,810	0,874	0,699
CVP	0,870	0,879	0,920	0,794
MK	0,896	0,919	0,927	0,762
PBC	0,877	0,879	0,924	0,803
SEB	0,897	0,898	0,924	0,709
SEI	0,897	0,900	0,929	0,766
SN	0,857	0,858	0,913	0,778

Table 3 and 4 reports the discriminant validity results assessed by the Heterotrait-Monotrait Ratio (HTMT) and the Fornell-Larcker criterion.

Table 3: Heterotrait-Monotrait Ratio (HTMT)

	AE	CP	CVP	MK	PBC	SEB	SEI	SN
AE								
CP	0,123							
CVP	0,580	0,252						
MK	0,612	0,171	0,853					
PBC	0,308	0,196	0,721	0,513				
SEB	0,480	0,148	0,314	0,418	0,073			
SEI	0,476	0,298	0,767	0,493	0,659	0,356		

SN	0,55 4	0,15 2	0,6 44	0,4 47	0,5 28	0,2 36	0,6 12	
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HTMT values across constructs are well below the conservative threshold of 0.90 (Hair et al., 2019). The highest HTMT observed is 0.853 (between market knowledge and perceived behavioral control), which still falls within the acceptable limit. Other notable values, such as 0.721 (between market knowledge and sustainable entrepreneurial behavior) and 0.735 (between perceived behavioral control and sustainable entrepreneurial intention), further support adequate discriminant validity.

Table 4: Fornell-Larcker Criterion

	AE	CP	CV P	MK	PB C	SE B	SEI	SN
AE	0,8 63							
CP	0,1 04	0,8 36						
CV P	0,5 08	0,2 13	0,8 91					
M K	0,5 43	0,1 50	0,7 58	0,8 73				
PB C	0,2 74	0,1 64	0,6 29	0,4 61	0,8 96			
SE B	0,4 25	0,0 90	0,2 80	0,3 70	0,0 24	0,8 42		
SE I	0,4 29	0,2 58	0,6 80	0,4 51	0,5 84	0,3 20	0,8 75	
SN	0,4 82	0,1 25	0,5 56	0,3 84	0,4 59	0,2 07	0,5 38	0,8 82

Similarly, the Fornell-Larcker criterion confirms discriminant validity, as the square roots of AVE values (diagonal elements: AE = 0.863; CP = 0.836; CVP = 0.891; MK = 0.873; PBC = 0.898; SEB = 0.903; SEI = 0.882; SN = 0.807) are all greater than their corresponding inter-construct correlations (off-diagonal elements). This indicates that each construct shares more variance with its own indicators than with other constructs. Taken together, these results demonstrate that discriminant validity is established in the measurement model, ensuring that constructs such as cultural value perception, market knowledge, community & policy support, attitude toward entrepreneurship, subjective norm, perceived behavioral control, sustainable entrepreneurial intention, and sustainable entrepreneurial behavior are empirically distinct and suitable for further structural model analysis.

4.3 Regression Analysis and Hypothesis Conclusion

In Table 5, the structural model demonstrates robust explanatory power, accounting for 54.7% of the variance in Sustainable Entrepreneurial Intention (SEI) and 10% of the variance in Sustainable Entrepreneurial Behavior (SEB). These results indicate that the model has moderate predictive capability for entrepreneurial intentions and modest explanatory power for subsequent behavior. Effect size analysis (f^2) further highlights the relative contributions of the predictors. Cultural Value Perception (CVP) exhibits the largest effect ($f^2 = 0.157$), underscoring its central role in shaping sustainability-oriented intentions. Sustainable Entrepreneurial Intention (SEI) itself also shows a meaningful effect on behavior ($f^2 = 0.114$), confirming its mediating position between antecedents and sustainable entrepreneurial behavior. Other constructs including Attitude toward Entrepreneurship (AE), Community and Policy Support (CP), Market Knowledge (MK), Perceived Behavioral Control (PBC), and Subjective Norm (SN)—demonstrate smaller yet notable effects, suggesting that while cultural heritage and intention are the most decisive drivers, the interplay of psychological, social, and institutional factors also contributes to entrepreneurial outcomes.

The results show that Attitude toward Entrepreneurship (AE) has a positive and statistically significant effect on SEI ($\beta = 0.124$, $t = 2.393$, $p = 0.017$). This suggests that when individuals evaluate entrepreneurship as desirable, fulfilling, and worthwhile, they are more inclined to develop intentions that align with sustainability goals. A favorable attitude toward entrepreneurship not only motivates individuals to consider self-employment but also increases the likelihood that they will integrate social and environmental concerns into their entrepreneurial vision. This is in line with the Theory of Planned Behavior (Ajzen, 1991), which emphasizes attitude as a key determinant of intention. Moreover, prior research by Le et al. (2024) and Effendy & Xiao (2025) confirms that positive evaluations of entrepreneurship encourage stronger sustainability commitments. Within the Northwest ethnic textile sector, this finding underscores the role of personal motivation in transforming cultural heritage into viable, sustainability-driven business opportunities. Therefore, H1 is supported. The indirect effect of AE on SEB through SEI is significant ($\beta = 0.138$, $t = 1.905$, $p = 0.007$). This indicates that while a favorable attitude directly fosters sustainable entrepreneurial intention, it also indirectly contributes to actual sustainable behavior when intention serves as a mediator. In other words, individuals who positively evaluate entrepreneurship are more likely to develop sustainability-driven intentions, which then translate into concrete business actions such as adopting eco-friendly methods and preserving traditional practices. This mediating pathway reinforces Ajzen's (1991) conceptualization of intention as the closest antecedent to behavior. Hence, H8a is supported.

Community and Policy Support (CP) also exerts a positive and significant influence on SEI ($\beta = 0.109$, $t = 2.049$, $p = 0.041$). This indicates that supportive structures, such as cultural preservation policies, government incentives, and

encouragement from local communities, are essential in fostering sustainable entrepreneurial intentions. Entrepreneurs who receive guidance, recognition, and legitimacy from their communities and policymakers are more confident in pursuing business ventures that balance profitability with sustainability. This result is consistent with Phan (2024), who demonstrated that policy frameworks and collective support systems significantly influence consumer and entrepreneurial orientations toward sustainability. In the context of the Northwest ethnic textile sector, these findings suggest that institutional and social backing helps entrepreneurs overcome structural barriers, enhancing their willingness to align their entrepreneurial goals with cultural and environmental objectives. Accordingly, H2 is supported. The mediating effect of CP on SEB through SEI is not statistically significant ($\beta = 0.035$, $t = 1.640$, $p = 0.102$). While CP directly encourages the formation of sustainability-oriented intentions, these intentions do not strongly mediate the pathway toward actual sustainable entrepreneurial behavior. This suggests that although policy frameworks and community support are important, their influence may require complementary factors such as entrepreneurial motivation or market access to translate intentions into practice. In the Northwest context, this reflects the reality that supportive policies and collective encouragement may raise awareness but are insufficient on their own to trigger behavioral change. Thus, H8b is rejected.

Table 5: Structural Equation Modelling Results Estimates and Hypothesis Conclusion

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values	Results
AE -> SEI	0,124	0,126	0,052	2,393	0,017	Accepted
CP -> SEI	0,109	0,105	0,053	2,049	0,041	Accepted
CVP -> SEI	0,495	0,488	0,095	5,195	0,000	Accepted
MK -> SEI	-0,171	-0,167	0,049	3,496	0,001	Accepted
PBC -> SEI	0,231	0,234	0,068	3,415	0,001	Accepted
SN -> SEI	0,149	0,144	0,062	2,388	0,017	Accepted
SEI -> SEB	0,320	0,322	0,064	5,019	0,000	Accepted

AE -> SEI -> SEB	0.138	0.132	0.041	1.905	0.007	Accepted
CP -> SEI -> SEB	0.035	0.035	0.021	1.640	0.102	Rejected
CVP -> SEI -> SEB	0.158	0.155	0.037	4.296	0.000	Accepted
MK -> SEI -> SEB	0.055	0.053	0.018	3.036	0.003	Accepted
PBC -> SEI -> SEB	0.074	0.074	0.022	3.351	0.001	Accepted
SN -> SEI -> SEB	0.048	0.048	0.025	1.890	0.059	Rejected
Adjusted R ² : SEB: 0,100; SEI: 0,547						

Cultural Value Perception (CVP) shows the strongest positive effect on SEI ($\beta = 0.495$, $t = 5.195$, $p < 0.001$), making it the most influential predictor in the model. This highlights the centrality of cultural heritage as a source of identity, pride, and legitimacy in shaping sustainability-oriented entrepreneurial intentions. Entrepreneurs who perceive cultural traditions as valuable are more committed to preserving and promoting these traditions through their business ventures. Minha (2019) and Nirunpornputta (2022) similarly found that deeply embedded cultural perceptions motivate individuals to engage in practices that safeguard traditional knowledge and crafts. For entrepreneurs in the ethnic textile sector, this means that cultural identity not only strengthens personal motivation but also provides a form of market differentiation that supports sustainable business strategies. Thus, H3 is supported, reinforcing the importance of cultural heritage in entrepreneurship. The indirect effect of CVP on SEB through SEI is significant ($\beta = 0.158$, $t = 4.296$, $p < 0.001$). This demonstrates that cultural value perception not only directly shapes entrepreneurial intention but also indirectly influences sustainable behavior when intention acts as a mediator. Entrepreneurs who appreciate the cultural significance of traditional textiles are more likely to commit to sustainability goals, which subsequently materialize into business practices that protect cultural authenticity and

promote eco-friendly approaches. This finding reinforces prior research (Minha, 2019; Nirunpornputta, 2022), highlighting culture's dual role in shaping both mindset and practice. Hence, H8c is supported.

Interestingly, Market Knowledge (MK) has a significant but negative effect on SEI ($\beta = -0.171$, $t = 3.496$, $p = 0.001$). This result indicates that while entrepreneurs may possess knowledge of consumer trends, market demands, and commercial strategies, such insights may sometimes discourage sustainability-oriented intentions. One explanation is that entrepreneurs perceive a tension between adapting to market demands and preserving cultural authenticity. In some cases, entrepreneurs may prioritize profitability and competitiveness over cultural preservation, leading to a decline in sustainability-oriented intention. This finding contrasts with studies by Chantamool et al. (2024) and Anyanwu et al. (2022), which emphasized the positive role of market knowledge in fostering sustainable cultural identity. However, in the Northwest ethnic textile sector, the negative effect may reflect concerns that excessive market adaptation could dilute cultural value or commodify heritage in ways that conflict with long-term sustainability. Hence, H4 is supported. The indirect effect of MK on SEB through SEI is significant ($\beta = 0.055$, $t = 3.036$, $p = 0.003$). This highlights that market knowledge not only strengthens sustainability-oriented intentions but also indirectly fosters sustainable entrepreneurial behavior. Entrepreneurs who understand consumer preferences and global market trends are more likely to form intentions grounded in sustainability, which then guide their actual practices such as eco-friendly production and ethical branding. Thus, market knowledge plays a dual role: shaping intention and reinforcing sustainable behavior through intention. Therefore, H8d is supported.

Perceived Behavioral Control (PBC) has a positive and significant influence on SEI ($\beta = 0.231$, $t = 3.415$, $p = 0.001$). This finding suggests that entrepreneurs who feel confident in their ability to mobilize resources, manage business challenges, and execute strategies are more likely to form strong sustainability-oriented intentions. In other words, self-perceived capacity and control enhance the likelihood that individuals will pursue entrepreneurial goals aligned with cultural preservation and sustainability. Chowdhury (2024) emphasized that individuals with greater perceived control are better positioned to implement sustainability-oriented practices, even in resource-constrained contexts. In the case of Northwest ethnic textile entrepreneurs, perceived control may stem from technical skills in weaving, access to small-scale financing, or collective community support, all of which strengthen their determination to act sustainably. Thus, H5 is supported. The indirect effect of PBC on SEB through SEI is significant ($\beta = 0.074$, $t = 3.351$, $p = 0.001$). This shows that perceived behavioral control not only directly shapes intention but also indirectly drives sustainable entrepreneurial behavior. Entrepreneurs who feel confident in their abilities are more likely to form strong sustainability intentions, which in turn manifest as tangible practices such as eco-friendly production

methods and responsible supply chain management. Hence, H8e is supported.

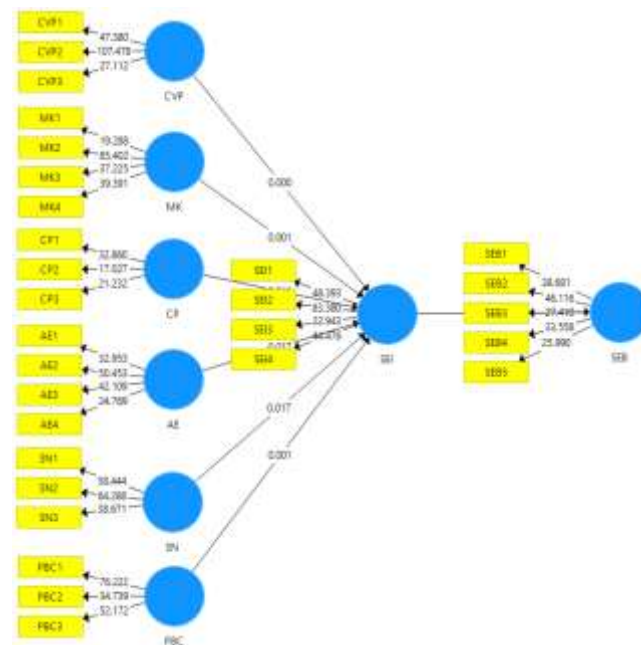


Fig. 1. PLS Bootstrapping Model

Subjective Norm (SN) has a positive and significant effect on SEI ($\beta = 0.149$, $t = 2.388$, $p = 0.017$). This result indicates that social expectations, collective norms, and community encouragement influence individuals' decision-making processes regarding sustainable entrepreneurship. In ethnic minority textile communities, societal values and family expectations often place emphasis on cultural preservation and intergenerational responsibility. Le et al. (2024) demonstrated that such social pressures and cultural obligations significantly drive sustainability-related choices. Accordingly, in the Northwest textile sector, entrepreneurs are likely to align their intentions with collective cultural values, reinforcing community identity while pursuing sustainability goals. Thus, H7 is supported. The mediating effect of SN on SEB through SEI is not statistically significant ($\beta = 0.048$, $t = 1.890$, $p = 0.059$). This suggests that while social expectations shape intentions, these intentions do not always translate strongly into actual behavior. In other words, social pressure alone may encourage individuals to form sustainability-oriented intentions, but without sufficient resources, market opportunities, or personal capacity, these intentions may remain unrealized. Therefore, H8f is rejected.

The results also reveal that Sustainable Entrepreneurial Intention (SEI) significantly predicts Sustainable Entrepreneurial Behavior (SEB) ($\beta = 0.320$, $t = 5.019$, $p < 0.001$). This finding confirms intention as a critical driver of actual entrepreneurial behavior, consistent with Ajzen's Theory of Planned Behavior (1991), which positions intention as the closest antecedent to action. Empirical studies by Alshebami et al. (2024) also emphasize that once individuals form clear sustainability-oriented intentions, they are more

likely to translate those intentions into tangible actions, such as adopting eco-friendly production methods or promoting ethical trade practices. For the Northwest ethnic textile sector, this means that entrepreneurs who commit to sustainability through intention are more likely to develop business models that integrate cultural preservation with environmental responsibility. Therefore, H6 is supported.

5. IMPLICATIONS AND CONCLUSION

This study contributes to the literature on sustainable entrepreneurship by extending its application to the domain of cultural heritage and traditional crafts. Building on the Theory of Planned Behavior (Ajzen, 1991) and sustainability frameworks (Kuckertz & Wagner, 2010; Muñoz & Cohen, 2018), it highlights how cultural value perception, market knowledge, community and policy support, attitude toward entrepreneurship, subjective norm, and perceived behavioral control jointly shape entrepreneurial intentions and behaviors. The findings emphasize the mediating role of sustainable entrepreneurial intention, demonstrating how cultural and social factors must first be internalized as intentions before they translate into sustainable entrepreneurial behavior. In doing so, this research expands the embeddedness paradigm by illustrating that entrepreneurial practices in ethnic textile communities are deeply intertwined with cultural identity, collective values, and intergenerational responsibilities. It also enriches the discourse on sustainability by framing entrepreneurship not only as an economic endeavor but also as a cultural act of preservation and adaptation.

The research results have many important practical implications for entrepreneurs, policy makers and community stakeholders, especially in the context of traditional textile and garment industry development in the Northwest region. For entrepreneurs, the findings highlight the importance of combining cultural authenticity and innovation in the process of building and developing business models. Maintaining indigenous cultural values is not only a conservation strategy but can also become a sustainable competitive advantage if skillfully integrated into products, brands and business stories. At the same time, entrepreneurs need to invest in improving market understanding, grasping modern consumer needs, and flexibly adjusting to social expectations related to social, environmental and cultural responsibilities. These factors will help businesses improve their market position, expand their customer base, while still maintaining the unique identity of traditional textile products. For policy makers, the study proposes a number of specific support policies to facilitate local businesses to develop in a sustainable direction. Specifically, the development and implementation of intellectual property protection mechanisms for brocade weaving products, traditional motifs and indigenous production techniques will contribute to protecting the cultural assets of the community. In addition, policies on granting fair trade certification, preferential credit support, and specialized training programs on business administration and digital skills also play a key role in enhancing the competitiveness of small

and micro enterprises in the region. Policies also need to be flexible, suitable to regional characteristics and ensure the participation of ethnic minorities in the planning and implementation process.

For community leaders and local organizations, the research results suggest that strengthening collective values through vocational training activities, organizing cultural festivals, and community capacity building programs is necessary to maintain intergenerational cohesion, especially in the context of many young people leaving traditional occupations to seek other jobs. These initiatives not only help preserve culture but also create motivation and a favorable environment for the younger generation to proactively approach and develop the weaving profession in a new, more modern direction.

In addition, in the context of digital transformation and economic integration, effectively exploiting digital platforms, e-commerce, and building a brand strategy associated with sustainable development opens up many opportunities to expand domestic and foreign markets. These channels allow traditional textile products to reach global customers without losing their local identity and core cultural values. At the same time, businesses also need to pay attention to ensuring transparency of information, origin of raw materials and production processes, in order to meet the ethical and environmental standards that are increasingly of interest to consumers.

From there, the authors also propose the following sustainable business model “Co-Creation for Culture” based on collaboration between ethnic minority communities, creative designers, and digital platforms to create indigenous textile products that are highly applicable and suitable for the modern market. This model emphasizes three main pillars: (1) Preserving culture; (2) Creating sustainable livelihoods for the community; and (3) Exploiting the market through innovation and digital transformation. Accordingly, the main components of the model may include:

Table 6: Key Components of the Co-Creation for Culture Model

Components	Description
Core resources	Traditional artisan weavers, local natural materials (hemp, cotton, natural dyes), digital platforms (website, e-commerce, social media), young design team.
Main activities	1. Co-creation of products between artisans and designers 2. Training and transferring digital skills to the community 3. Marketing on digital platforms associated with cultural stories

	4. Organizing cultural events and traditional fairs.
Value proposition	- Locally sourced fashion, home decor, and gift products - Linked to authentic, handmade, high-quality cultural stories - Ensuring fair trade, transparency, and sustainable development principles.
Target customers	- Domestic and international consumers interested in sustainable fashion, handmade goods - Souvenir retailers, interior design - Businesses ordering cultural gifts (B2B).
Distribution channels	- E-commerce (Shopify, Etsy, Tiktok Shop, Shopee) - Local cultural experience stores (Culture Hub) - Collaboration with international designers or fashion brands.
Revenue streams	- Direct product sales - Custom design services - Revenue from workshops, cultural experience tours - Crowdfunding for special collections.
Cost structure	- Production costs (raw materials, labor) - Digital platform and communication operating costs - Event organization and community training costs - Logistics and quality control costs.
Social and environmental impacts	- Increase income for ethnic artisans - Inspire and create jobs for the younger generation - Reduce environmental impact by using natural materials - Contribute to preserving the cultural identity of the highlands.

Several limitations should be acknowledged. Firstly, the research is context-specific, focusing on the Northwest ethnic textile sector in Vietnam, which may limit generalizability to other cultural industries or regions. Future research could undertake comparative studies across different ethnic groups or international contexts to broaden the applicability of the findings. Secondly, the cross-sectional design constrains the ability to capture changes in entrepreneurial intention and behavior over time. A longitudinal approach would provide deeper insights into how cultural, social, and market dynamics evolve in relation to sustainable entrepreneurship. Thirdly, this

study emphasizes perceptual and behavioral constructs but does not account for material conditions such as technological adoption, supply chain structures, or financial constraints. Future studies could integrate these dimensions to create a more comprehensive framework. Finally, exploring consumer perceptions of authenticity and sustainability in global markets could offer valuable perspectives on the economic viability of ethnic textiles. Addressing these limitations would advance both theoretical refinement and practical strategies for sustaining cultural heritage industries.

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