Innovation in Natural Fiber Agroindustry Development: Business Model Canvas Approach and Ten Types of Innovation at Seratnusa

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Abstract

This study investigates how the integration of the Business Model Canvas (BMC) and the Ten Types of Innovation Framework facilitates the development of a sustainable business model for natural fibre-based agribusiness. Increasing consumer awareness of sustainability and the need for inclusive innovation models have created opportunities for small enterprises to strengthen competitiveness through collaboration and co-creation. Using the case of Seratnusa—a company producing eco-friendly products from agricultural fibers such as banana pseudostems—this research examines how customer co-creation and partnership-led innovation contribute to value creation and business sustainability. A qualitative case study approach was employed, combining semi-structured interviews with key stakeholders, direct observations, and document analysis. Findings reveal that integrating BMC with the Ten Types of Innovation enables Seratnusa to build strategic partnerships with e-commerce platforms, creative communities, and local artisans while engaging customers in product development and brand advocacy. These innovations enhance customer engagement, foster shared value, and expand access to global markets. The study underscores the importance of collaborative innovation in driving sustainable agribusiness transformation. Future research could examine how co-creation and partnership-led approaches influence long-term business resilience and sustainability across different agricultural value chains.

Keywords: *business model canvas; co-creation; natural fibre; sustainability; ten types of innovation.*

1. INTRODUCTION

In recent decades, attention to environmental sustainability has increased significantly, prompting various industrial sectors to adopt more environmentally friendly business models. This shift was driven by several factors, including regulatory changes and increased consumer awareness sparked by concerns about climate change. Thus, sustainability is recognised as a way to balance economic development and environmental conservation (Espinoza-Castro et al., 2024). One initiative arising from this need is the use of natural fibres as raw materials to create products that support sustainability concepts. Natural fibres, such as banana stems and coconut fibre, as well as other organic materials, have great potential to replace synthetic materials that harm the environment. Derived from renewable sources, and have significantly lower environmental footprints than synthetic alternatives. Their biodegradability and low energy input make them ideal for sustainable product development. It also helps promote a circular model of reusing waste as raw material. This not only conserves natural resources but also opens up low-cost, eco-friendly material options (Konwar, 2018). Despite these advantages, the translation of natural fibre potential into scalable and competitive industrial applications remains a significant challenge.

Seratnusa represents a prominent example of a business entity that strategically leverages Indonesia's abundant natural fiber resources through a sustainability-oriented lens. Anchored in the

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principles of the circular economy and co-creation, the company not only produces environmentally responsible goods but also fosters socioeconomic empowerment by actively engaging local artisan communities in its production and innovation processes. By integrating traditional craftsmanship with modern sustainable design, Seratnusa contributes to the preservation of cultural heritage while promoting inclusive economic development. Furthermore, the enterprise utilises digital platforms to extend market reach, enabling global distribution without compromising its commitment to community-based and environmentally conscious practices. Within the scope of this research, Seratnusa's business model offers a compelling case study for examining the intersection of sustainability, technological innovation, and digital collaboration in the context of agroindustrial transformation. It illustrates how small and medium-sized enterprises (SMEs) can reconfigure their value propositions through business model innovation to align with evolving consumer expectations, environmental imperatives, and the dynamics of the digital economy.

Previous studies have underscored the importance of business model innovation as a mechanism for generating sustainable value, particularly for enterprises seeking to balance economic viability with social and environmental responsibility. The Triple Layered Business Model Canvas (TLBMC) proposed by Joyce and Paquin (2016), and subsequently applied in sustainability-oriented innovation contexts (Wit et al., 2021), provides a relevant analytical foundation for this study by enabling the systematic mapping of economic, social, and environmental value creation. This framework is particularly applicable to Seratnusa, as it allows the evaluation of how natural-fibre-based products contribute not only to market value but also to environmental conservation and community empowerment. Building on this approach, França et al. (2017) integrated the Business Model Canvas (BMC) with the Framework for Strategic Sustainable Development (FSSD), offering a structured method to assess whether short-term innovation initiatives are aligned with long-term sustainability principles—an aspect that is critical for Seratnusa's ambition to scale its operations without compromising ecological and social commitments.

In parallel, studies on digital transformation provide important insights for analysing Seratnusa's innovation challenges. König et al. (2019) demonstrate that non-digital enterprises often face slower and more constrained business model evolution compared to digital ventures, particularly in relation to market experimentation and distribution scalability. This finding is directly relevant to Seratnusa, which operates within a community-based, non-digital production context but seeks to expand through digital distribution channels. Furthermore, Baden-Fuller and Haefliger (2013) and Müller and Hundahl (2020) highlight the role of information technology as an enabler of business model reconfiguration, facilitating closer customer integration, improved supply chain coordination, and greater operational flexibility. These insights inform the present study's focus on assessing how digital tools and IT-enabled processes can support Seratnusa's transition towards a more adaptive and innovation-driven business model.

Visual tools, such as the Business Model Innovation Canvas (Jin et al., 2021) and the Innovation Canvas (Livesay et al., 2013), have proven effective in facilitating the systematic design of integrated product and market innovations. At the same time, the Ten Types of Innovation framework by Keeley et al. (2013), when applied in small business contexts (Hidhayah et al., 2023; Keeley et al., 2013), has demonstrated how combinations of process, channel, and customer engagement innovations can lead to stronger, more resilient business models. Overall, the literature underscores that both canvas-based approaches and innovation frameworks can help businesses overcome internal and external barriers to model innovation (Chesbrough, 2010; Rüb et al., 2017), build competitive advantage (Souto, 2015), and foster business transformation in SMEs (Kravchenko and Sydorchuk, 2020; Swasty, 2015).

Business model development has become a central concern for organizations facing increasing market volatility, digital disruption, and sustainability pressures. Business models are no longer understood merely as instruments for organizing resources and capturing economic value, but as strategic architectures through which firms generate economic, social, and environmental value simultaneously. Among the most widely adopted tools in this domain is the Business Model Canvas

(BMC) introduced by Osterwalder and Pigneur (2010). The BMC offers a clear and systematic visualization of key business components, including value propositions, customer segments, channels, key resources, and revenue streams, making it particularly useful for strategic alignment and communication within organizations.

Despite its widespread adoption, the BMC exhibits structural limitations, particularly in addressing sustainability-oriented challenges. The framework is predominantly economically driven, focusing on value creation and capture from a firm-centric perspective, while social and environmental considerations remain implicit or marginal (Osterwalder and Pigneur, 2012). As a result, issues such as environmental impact, social value distribution, and long-term ecological constraints are not systematically embedded in decision-making processes. Moreover, the static nature of the BMC limits its capacity to capture dynamic innovation processes, especially when organizations attempt to experiment with new value propositions or distribution models under uncertainty. Chesbrough (2010) highlights that such rigidity often creates tensions between existing business models and emerging innovation initiatives, which may ultimately inhibit transformative change. Rüb et al. (2017) further argue that without an experimental and learning-oriented approach, business model innovation remains incremental rather than strategic.

In response to these shortcomings, Joyce and Paquin (2016) proposed the Triple Layered Business Model Canvas (TLBMC), which extends the traditional BMC by incorporating social and environmental layers alongside the economic layer. The TLBMC enables organizations to evaluate their business activities more holistically by mapping social stakeholders, societal value creation, environmental impacts, and life-cycle considerations. Complementary to this, França et al. (2017) integrated the BMC with the Framework for Strategic Sustainable Development (FSSD), offering a structured approach for aligning business innovation with long-term sustainability principles. These developments represent significant progress in embedding sustainability into business model design and are particularly relevant for enterprises such as Seratnusa, which emphasize environmentally friendly production and community-based value creation.

However, despite these advances, the TLBMC still presents several conceptual and practical limitations. First, while it successfully broadens the scope of value beyond economic outcomes, it remains primarily a diagnostic and descriptive tool, offering limited guidance on how firms should innovate across different dimensions of their business model. Second, the TLBMC does not explicitly differentiate between types of innovation (e.g., process, channel, relationship, or revenue innovation), making it difficult to prioritize innovation efforts strategically. Third, the framework provides limited operational direction for digital transformation and market expansion, particularly in non-digital and community-based enterprises, where distribution and customer engagement are critical challenges. As noted by König et al. (2019), non-digital firms often struggle to adapt their business models due to slower iteration cycles and weaker technological integration. Although information technology can act as a catalyst for flexibility and scalability (Müller and Hundahl, 2020), the TLBMC alone does not specify innovation pathways through which such capabilities can be systematically developed.

To address these gaps, the Ten Types of Innovation framework developed by Keeley et al. (2013) offers a complementary and operational perspective. This framework categorizes innovation into ten distinct types across three broad domains: configuration (e.g., profit model, network, structure, process), offering (product performance and product system), and experience (service, channel, brand, and customer engagement). Unlike the BMC and TLBMC, which focus on what elements constitute a business model, the Ten Types of Innovation framework emphasizes how innovation can occur across multiple dimensions simultaneously. Empirical evidence suggests that firms combining multiple types of innovation achieve more sustainable competitive advantages than those focusing on a single dimension (Keeley et al., 2013).

Recent studies further support the relevance of this framework for SMEs and sustainability-oriented enterprises. Hidhayah et al. (2023) demonstrate that innovations in distribution channels and customer engagement significantly enhance market reach, while Swasty (2015) emphasizes the role of

brand innovation in strengthening SME competitiveness. Technological innovations, such as additive manufacturing, also enable resource efficiency and product personalization, contributing to environmental sustainability (Wit et al., 2021). From a systemic perspective, collaborative and customer-centered innovation—highlighted by Rohrbeck et al. (2013) and Souto (2015)—reinforces the importance of integrating multiple innovation types to build resilient business ecosystems.

Visual innovation tools, such as the Business Model Innovation Canvas (Jin et al., 2021) and the Innovation Canvas (Livesay et al., 2013), further operationalize these concepts by supporting cross-functional collaboration and iterative experimentation. These tools are particularly valuable for community-based MSMEs, where innovation must balance scalability with local values and social objectives. Incremental innovation strategies, such as adjusting cost structures or experimenting with new distribution channels, can serve as effective entry points for transformation without disrupting core identities (Giesen et al., 2007).

Nevertheless, a research gap remains concerning how the integrated application of BMC/TLBMC and the Ten Types of Innovation framework can be systematically employed to strengthen digital distribution strategies for natural-fiber-based agricultural products, particularly within community-based MSMEs. Existing studies tend to address sustainability, innovation, or marketing in isolation, offering limited guidance on their synergistic integration (Citraresmi et al., 2021; Purnomo et al., 2017). Moreover, empirical evidence on the practical use of innovation canvas tools in addressing value chain and distribution challenges in non-food agro-industrial sectors remains scarce.

Accordingly, this study aims to address this gap by examining how the combined use of the Business Model Canvas and the Ten Types of Innovation framework can evaluate value creation for customers, local communities, and the environment, while enhancing global competitiveness. In addition, this research identifies the challenges faced by Seratnusa in implementing sustainability-oriented innovations and proposes strategic recommendations for developing a more resilient, adaptive, and digitally enabled business model.

2. MATERIAL AND METHODS

This research employs a qualitative approach, utilizing a case study method, to analyze the business model and innovation implemented by Seratnusa in utilizing natural fibers as raw materials for sustainable products. This approach was chosen because it enables an in-depth examination of the implementation of business strategies, their impact on sustainability, local community empowerment, and the company's competitiveness in the market. This research is exploratory and descriptive, focusing on key elements of the business model and collaborations that support sustainability. The research was conducted from May to August 2024, spanning data collection and analysis.

The research's analytical framework combines two primary approaches: the Business Model Canvas (BMC) and the Ten Types of Innovation Framework. The BMC is used to identify key elements of Seratnusa's business model, such as Value Proposition, Customer Segments, and Revenue Streams. Meanwhile, the Ten Types of Innovation framework complements the analysis by evaluating broader dimensions of innovation, including profit models, networks, branding, and customer engagement. This combination allows the research to understand how strategically sustainable Seratnusa implements innovation.

Data collection was conducted through a combination of primary and secondary data. Primary data included semi-structured interviews & purposive sampling with management representative, one local artisans, and five customers, as well as direct observation of production and distribution processes. Secondary data were obtained from company documents, including sustainability reports and marketing strategies, as well as relevant literature from journals and industry reports. Data analysis was conducted systematically using thematic analysis methods to identify key themes, such as innovation and sustainability, and framework-based analysis to evaluate strengths and opportunities in business model development. Data validity was maintained through triangulation, member checking, and peer review to ensure the research findings were relevant and credible.

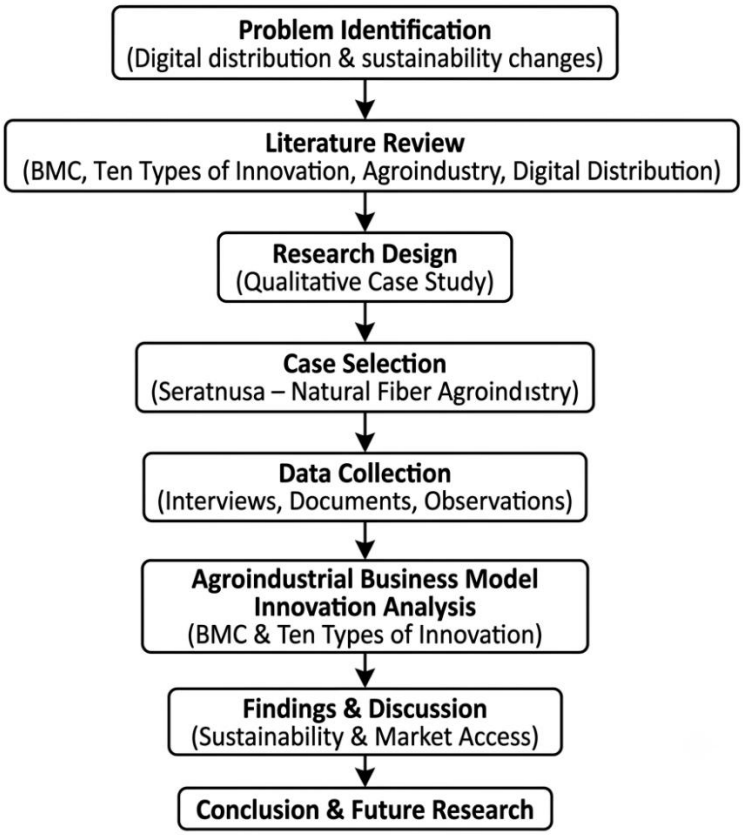

Figure 1. Research flow of the study on agroindustrial business model innovation in the natural fiber agroindustry (case study of Seratnusa).

3. RESULTS AND DISCUSSION

To strengthen its competitiveness and relevance in the global market, Seratnusa has made significant improvements to its business model by integrating sustainability-based innovation and a more inclusive approach. The company is now expanding its customer segment, targeting not only traditional markets such as housewives and corporate clients, but also reaching new groups, including the younger generation concerned about sustainability, as well as professionals like architects, interior designers, and construction companies that require eco-friendly materials for their projects. Furthermore, Seratnusa is strengthening its value proposition by offering customizable eco-friendly products, implementing a circular economy approach to product recycling, and providing digital services such as sustainability consulting and eco-craft training.

Innovation is also applied in its distribution channels, where Seratnusa utilizes global digital platforms such as Etsy and Amazon Handmade to expand access to international markets, and opens physical, experiential marketing stores to provide direct interaction with customers. The company's branding is strengthened through storytelling that highlights its commitment to sustainability and social impact, with stories connecting customers to the product creation process and the involvement of local artisans. This strategy creates a strong differentiation compared to competitors in the market.

Furthermore, Seratnusa focuses on strengthening customer relationships through a community-based approach and a loyalty program that incorporates gamification. Customers are encouraged to participate in social campaigns and sustainability initiatives, earning points or incentives for their contributions. With these steps, Seratnusa not only increases the appeal of its products but also builds long-term relationships that strengthen the sustainability ecosystem and the company's relevance in the global market.

The following table presents Seratnusa's business model development strategy, structured around eight key innovation areas. This strategy reflects a comprehensive transformation spanning

customer, product, distribution, revenue, and relationships and communications, to support sustainable and socially relevant growth. Each area is not merely reactive to market changes but also proactive in developing long-term competitive advantages.

Table 1. Business Model Development Strategy of Seratnusa

No.	Innovation Area	Strategy
1	Redefining Customer Segments	Expand Target Market: Targeting Gen Z and international markets through platforms like Etsy and Amazon Handmade. Segmentation by Use Case: Reaching architects, interior designers, and construction companies.
2	Developing New Value Propositions	Customizable Eco-friendly Products: Products can be tailored for hotels, offices, and special clients. Circular Economy: Focus on recycled products and circular economic models. Digital Products: Offering consulting or training services in sustainable crafts.
3	Revenue Stream Innovation	Subscription Model: Subscription-based services for individuals and businesses. Partnership Revenue: Income from sustainability projects with governments/NGOs. Product as a Service: Recurring rental model for products.
4	Distribution Channel Diversification	Digital Platforms: Sales through global e-commerce platforms. Offline Experiential Stores: Physical stores with immersive product experiences. Collaborative Retailing: Sales collaborations via pop-up stores or with other brands.
5	Process and Product Innovation	Smart Production and Efficiency: Automation of production using banana pseudo-stem fiber. Waste Reduction Strategy: Utilizing other organic waste materials. Product Innovation: Development of multifunctional and easily customizable products.
6	Collaboration and Partnerships	Strategic Partnerships: Becoming partners in corporate CSR programs. Co-Creation with Customers: Involving customers in designing eco-friendly products.
7	Branding and Communication Innovation	Storytelling: Product narratives based on local artisans and social impact stories. Content Marketing: Sustainability and production process stories as core marketing material.
8	Strengthening Customer Relationships	Community Building: Developing a community of environmentally conscious customers. Gamification of Loyalty Programs: Point-based loyalty programs and customer participation in green campaigns.

The strategies above demonstrate that business model innovation relies not only on internal structural changes but also on how the company connects with the broader social, technological, and environmental ecosystems. By implementing these approaches, Seratnusa not only strengthens its market position as a producer of environmentally friendly products but also drives a paradigm shift in

the Indonesian handicraft industry. Seratnusa demonstrates that MSMEs can be agents of industrial transformation through a collaborative and innovative approach rooted in local values. If implemented strategically and consistently, this business model will serve as a model for sustainability-based MSMEs in Indonesia and can even contribute globally by exporting value and best practices that support a circular economy and cultural preservation.

Through a series of comprehensive improvements to its business model elements, Seratnusa has demonstrated its ability to adapt to the needs of a modern market that is increasingly concerned with sustainability. By integrating innovation across various business model blocks, such as redefining customer segments, developing value propositions, diversifying distribution channels, and strengthening customer relationships, Seratnusa has successfully created added value that is not only economically relevant but also has a positive environmental and social impact. These steps provide a strong foundation for Seratnusa to compete in the global market, expand its market reach, and strengthen its position as a leader in the sustainable natural fiber-based industry. By continuing to leverage sustainability-based innovation and strategic collaboration, Seratnusa has significant potential to create a significant long-term impact for a more inclusive and sustainable business ecosystem.

To ensure broad collaboration and accelerate innovation, Seratnusa can utilize a Co-Creation and Co-Innovation Partnership approach in every innovation it implements. This approach not only involves customers in creating value but also fosters strategic partnerships with various parties to enhance competitiveness and market relevance. The following are specific steps that can be taken for each type of innovation to support sustainability and increase business impact.

Table 2. Ten Types of Innovation Strategy of Seratnusa

Type of Innovation	Customer-Led Innovation	Partnership-Led Innovation
Co-Creation	Involving customers in setting pricing structures or product packages, such as discounts for loyal customers (Huang, 2019).	Partnering with e-commerce platforms to offer flexible payment models like pay-per-use or installment payments (Alao et al., 2025).
Co-Innovation Partnership	Collaborating with local artisans and creative communities to design socially relevant new products (Wasono et al., 2018).	Establishing strategic partnerships with large companies or nonprofits to develop new sustainable products or services (de Vries et al., 2024).
Profit Model	Allowing customers to choose pricing packages that fit their needs, including subscriptions or bundling (Bailey et al., 2009).	Collaborating with digital platforms to offer dynamic pricing structures based on customer preferences (Alao et al., 2025).
Network	Building a customer community as a source of ideas and participatory innovation (Inderhees & Spiller, 2025).	Connecting multiple stakeholders in the distribution ecosystem to strengthen the value chain (Alao et al., 2025).
Structure	Involving employees and local partners in strategic decision-making regarding production and logistics (Eskiyerli & Schmid, 2024).	Partnering with tech companies to automate the processing of raw materials (e.g., banana pseudo-stem), improving operational efficiency (OECD, 2023).

Type of Innovation	Customer-Led Innovation	Partnership-Led Innovation
Process	Engaging customers in developing eco-friendly processes, such as household waste processing into raw materials (Eskiyerli & Schmid, 2024).	Collaborating with universities or technology partners for joint research to improve production efficiency and sustainability (OECD, 2023).
Product Performance	Inviting customers to test prototypes and provide feedback before full-scale product launch (Pee, 2016).	Partnering with designers or creative institutions to develop innovative products aligned with market trends and sustainability needs (Eskiyerli & Schmid, 2024).
Product System	Developing modular or multifunctional products that can be assembled and customized by customers (Livesay et al., 2013).	Collaborating with other sustainability-focused brands to co-create exclusive value-added products (Eskiyerli & Schmid, 2024).
Service	Offering additional services such as free consultations or hands-on training for optimal product use (Huang, 2019).	Developing digital platforms with technology partners to provide after-sales support like personalization and extended warranties (Clauss et al., 2019).
Channel	Involving customers in choosing their preferred distribution channels: physical stores, e-commerce, or mobile apps (Inderhees & Spiller, 2025).	Partnering with international e-commerce platforms to reach global markets without building standalone distribution infrastructure (Alao et al., 2025).
Brand	Encouraging customers to become brand ambassadors through marketing campaigns or logo and product design contests (Inderhees & Spiller, 2025).	Co-branding with other sustainability-supporting brands to strengthen positioning and market appeal (Eskiyerli & Schmid, 2024).
Customer Engagement	Building customer communities through online forums to share ideas and feedback supporting product development (Clauss et al., 2019).	Partnering with digital platforms to create interactive experiences, such as product design apps or sustainability-based digital projects (Alao et al., 2025).

Implementation of Co-Creation and Co-Innovation Partnerships at Seratnusa:

(1) Collaboration with Artisans and Customers: Seratnusa can create products tailored to customer needs by involving them in the design process. This can also be done with local artisans, where innovation is carried out collaboratively to improve product quality and value.
(2) Partnerships with Other Environmentally Conscientious Brands: Seratnusa can partner with large companies committed to sustainability to produce merchandise or promotional products. This partnership allows Seratnusa to enter a larger market while bolstering its partner's brand reputation.
(3) Interactive Platform for Customer Engagement: Seratnusa can build a digital platform where customers can participate in the production process, from selecting designs to providing input

on new product development. This can be a powerful element of engagement and increase customer loyalty.

The following is a recommended new business model for Seratnusa, designed to strengthen sustainability, increase global competitiveness, and maximize strategic collaboration. This model integrates key elements such as co-creation, product innovation, digital transformation, and a circular economy approach to create added value that is relevant to modern market needs.

<table>
<tr><th colspan="5">Business Model Canvas (BMC)</th></tr>
<tr><th>Key Partners</th><th>Key Activities</th><th>Value Proposition</th><th>Customer Relationship</th><th>Customer Segment</th></tr>
<tr><td>Local artisans and community-based producer groups</td><td>Co-creation of products with artisans and customers</td><td>Customizable eco-friendly products made from natural fibers</td><td>Community-based engagement and long-term relationships</td><td>Environmentally conscious Gen Z and Millennials</td></tr>
<tr><td>Government agencies and nonprofit organizations</td><td>Sustainable product design and innovation</td><td>Circular economy-based production and recycling model</td><td>Interactive digital engagement via online platforms</td><td>Eco-friendly companies, hotels, and corporate clients</td></tr>
<tr><td>International e-commerce platforms (e.g., Etsy, Amazon Handmade)</td><td>Digital transformation of marketing and distribution</td><td>Digital consulting and sustainability-based training services</td><td rowspan="2">Active customer involvement in product design and innovation processes</td><td rowspan="6">Architects and interior designers requiring sustainable materials</td></tr>
<tr><td rowspan="5">Educational institutions and R&D centers</td><td>Collaborative retailing through pop-up and partner stores</td><td rowspan="5">Personalized customer experience through co-creation</td></tr>
<tr><td>Key Resources</td><td>Channels</td></tr>
<tr><td>Skilled local artisans and creative communities</td><td>Global digital marketplaces (Etsy, Amazon Handmade)</td></tr>
<tr><td>Natural fiber processing and production technology</td><td>Offline experiential stores and exhibitions</td></tr>
<tr><td>Digital platforms and global e-commerce infrastructure</td><td rowspan="2">Collaborative retailing through pop-up stores and partner brands</td></tr>
<tr><td>Strong eco-friendly and sustainability-oriented brand identity</td></tr>
<tr><td colspan="3">Cost Structures</td><td colspan="2">Revenue Streams</td></tr>
<tr><td colspan="3">Fixed Costs: production facilities, digital infrastructure,</td><td colspan="2">Subscription-based product and service models</td></tr>
<tr><td colspan="3">Variable Costs: raw natural fiber materials, logistics,</td><td colspan="2">Product-as-a-Service (rental or recurring usage models)</td></tr>
<tr><td colspan="3">Investment Costs: R&D and new sustainable product</td><td colspan="2">Revenue from partnerships, CSR programs, and sustainability</td></tr>
</table>

Figure 2. Business Model Canvas (BMC) Seratnusa

Seratnusa's business model combines environmental and social values (eco-friendly products, circular economy, empowering local artisans) with digitalization strategies (global market channels, digital platforms, consulting services), strengthening its customizable value proposition and co-creation with customers. This integration achieves a balance between local resources and technological capabilities—minimizing distribution costs through e-commerce while opening up new revenue streams (subscriptions, product-as-a-service, CSR partnerships). Thus, the canvas shows that Seratnusa's competitive advantage relies heavily on strengthening strategic partnerships, sustainable R&D investment, and consistent community relationship management to scale international access without eroding the brand's socio-ecological value.

With a focus on co-creation, Seratnusa not only offers eco-friendly products but also empowers customers and local artisans to participate directly in the product design and innovation process. This

creates deeper relationships with customers and strengthens local economies through collaboration. Furthermore, the implementation of the Circular Economy reinforces Seratnusa's commitment to sustainability, enabling customers to participate in the continuous product lifecycle.

Innovation is also evident in the way Seratnusa diversifies its distribution and revenue channels, including through global e-commerce platforms like Etsy and Amazon Handmade, as well as subscription services that provide regular access to new, customized products. The use of technology to support more efficient production processes, along with digital consulting services in interior design and sustainability-based training programs, further strengthens Seratnusa's competitiveness. With this model, Seratnusa is able to reach a global market without incurring high costs for physical infrastructure, while maintaining personal relationships with customers through an omnichannel strategy and digital platform-based engagement.

4. CONCLUSIONS

This research demonstrates that the Business Model Canvas (BMC) and the Ten Types of Innovation Framework can be used synergistically to analyze and develop innovative and sustainable business models. The BMC provides a structured framework for identifying core elements of a business model, such as Value Proposition, Customer Segments, and Revenue Streams. The Ten Types of Innovation Framework complements this analysis by highlighting broader dimensions of innovation, such as innovation in processes, networks, and customer experience.

In the case of Seratnusa, combining these two approaches allows for the identification of opportunities to create new value, strengthen customer engagement, and enhance competitiveness in the global market. The BMC helps map the basic structure of the business model, while the Ten Types of Innovation provides insights into how each element can be developed through diverse innovations. For example, Seratnusa's Value Proposition is strengthened by a circular economy approach, and Revenue Streams are developed through subscription models and strategic partnerships.

These results demonstrate that combining the BMC and the Ten Types of Innovation Framework not only enables a more comprehensive analysis but also provides practical guidance for sustainable innovation. This approach is relevant for companies seeking to adapt to modern market needs and create a positive social and environmental impact. In other words, the integration of these two frameworks can serve as a strategic tool for managing the complexity of modern business, driving sustainability-oriented innovation, and enhancing competitive advantage.

Future research could extend this study by applying the proposed integration of the Business Model Canvas and the Ten Types of Innovation framework to multiple agroindustrial commodities to assess its scalability and generalizability across different production contexts. Employing quantitative or mixed-method approaches would also allow for a more robust evaluation of the impacts of digital distribution strategies on firm performance, sustainability outcomes, and community livelihoods. Additionally, longitudinal studies could provide insights into the dynamic evolution of digitally enabled business models in agroindustrial SMEs over time. Further research may also explore digital platforms as agroindustrial innovation ecosystems, including issues of value distribution and governance, as well as examine the role of policy and institutional support in facilitating sustainable and inclusive digital transformation in agroindustry.

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