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Building a Value-Oriented Digital Business Model for Traditional Anti-Migraine Herbal Tea Products

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ABSTRACT

The growing demand for natural health solutions and the integration of digital lifestyles presents new opportunities for innovation in traditional herbal products. This study aims to design a value-oriented digital business model for an anti-migraine herbal tea, combining traditional herbal knowledge with modern digital entrepreneurship and accounting systems. The research used a qualitative approach, integrating the Business Model Canvas (BMC), Value Proposition Canvas (VPC), and digital accounting to formulate a scalable and consumer-centric business framework. The herbal formulation, consisting of ginger, peppermint, turmeric, lemongrass, lavender, cinnamon, and stevia, was developed based on scientific literature and traditional practices. Through consumer insights, market segmentation, and prototype evaluation with stakeholders and experts, the model was validated for its market viability and alignment with health-conscious and digital native consumers. The findings indicate that the integration of digital accounting enhances transparency, financial control, and business credibility, while the overall model supports sustainability, traceability, and value creation. This research contributes to the fields of digital business, sustainable product innovation, and the commercialization of traditional medicines. Future research is recommended to combine quantitative validation and clinical testing to improve the robustness and impact of the model.

Keywords: Digital Business Model; Herbal Tea; Migraine; Value Creation; Digital Accounting; Sustainability; Traditional Medicine

Field: Accounting; Business; Technology; Medicine; Ethnopharmacology

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SDGs: Good Health and Well-Being (3); Decent Work and Economic Growth (8); Industry, Innovation and Infrastructure (9); Responsible Consumption and Production (12); Partnerships for the Goals (17)

INTRODUCTION

Research Background

In recent years, there has been a growing global interest in natural and functional health products as alternatives to synthetic medications. Among these, herbal remedies for chronic ailments such as migraines have gained popularity due to their minimal side effects, accessibility, and alignment with wellness-oriented lifestyles. Migraines, as a neurological condition, affect millions worldwide and significantly impact productivity and quality of life (Panjatan et al., 2024). Traditional herbal teas using ingredients such as ginger, turmeric, peppermint, and feverfew have long been used in various cultures to relieve migraine symptoms (Ramadana et al., 2021) (Sukmawaty et al., 2021). However, the commercialization of these herbal formulations remains limited, particularly in digital marketplaces.

As the world transitions toward a digital economy (Junaedi et al., 2023), the integration of digital business practices into traditional herbal product enterprises is essential (Amalia et al., 2017). This includes the adoption of digital business models that support scalability, real-time financial monitoring, consumer engagement, and

sustainable operations. Moreover, incorporating value creation (Sari et al., 2021), not only in terms of customer satisfaction but also in social (Putri et al., 2023), environmental, and economic impacts, is increasingly becoming a central tenet in modern business strategy. This requires a shift from traditional linear product sales models to more dynamic, interactive, and digitally-driven business ecosystems.

Despite the evident potential of anti-migraine herbal teas (Hui-Chuan & Te-Tsai, 2020), there is a lack of structured research on how to design a business model that combines the strengths of traditional knowledge, digital technologies, and modern accounting principles (Renaldi, Andi, et al., 2023). Specifically, integrating digital business accounting into the business model allows for improved transparency, better financial decision-making, and stronger investor confidence. Thus, the development of a value-oriented digital business model not only helps to commercialize traditional remedies but also enhances their competitiveness and sustainability in the global market (Irwani et al., 2023).

This study aims to develop a digital business model framework that centers on value creation for all stakeholders involved in the production and distribution of traditional anti-migraine herbal tea products (Anselmi et al., 2022). By leveraging digital tools and accounting systems, the proposed model is expected to support efficient operations, accurate financial tracking, strategic market positioning, and long-term business resilience.

Problem Formulation

Despite the rising demand for natural and functional health products, many traditional herbal formulations remain underutilized in the modern marketplace due to the lack of structured commercialization strategies (Karlina & Sya'roni, 2021). One such example is anti-migraine herbal tea, which, although supported by traditional and anecdotal evidence, has not yet been optimally positioned within a value-driven and digitally integrated business framework. Several key problems can be identified:

1. **Lack of Business Model Innovation:** Traditional producers of herbal remedies often rely on informal or conventional business practices that do not emphasize scalable or competitive models. These models typically lack customer segmentation, digital marketing integration, and value proposition clarity.
2. **Limited Use of Digital Accounting Systems:** Many micro and small enterprises in the herbal product sector do not utilize digital business accounting tools, resulting in weak financial transparency, inefficient operations, and difficulty in attracting investments or expanding to new markets.
3. **Inadequate Value Creation Strategy:** Businesses often focus solely on product features rather than building holistic value for stakeholders, such as offering health education to consumers, empowering local herb farmers, or promoting sustainability.
4. **Low Digital Presence and Market Penetration:** Without a strong digital presence and e-commerce integration, herbal tea producers struggle to reach wider audiences, especially millennials and Gen Z consumers who seek convenient access, credible information (Mukhsin et al., 2023), and personalized health solutions.
5. **Fragmentation Between Traditional Knowledge and Modern Business Practices:** There is often a disconnect between the wisdom of traditional medicine and the structured demands of contemporary business, including branding, packaging, logistics, and regulatory compliance.

Given these issues, the central research question can be formulated as: "How can a value-oriented digital business model be designed and implemented to commercialize traditional anti-migraine herbal tea products effectively, while integrating digital business accounting and creating stakeholder value?"

Supporting sub-questions include:

1. What key components of the business model are essential for commercializing anti-migraine herbal tea in the digital era?
2. How can digital business accounting enhance operational efficiency and transparency in this business model?
3. What forms of value (economic, social, and health-related) can be created for consumers and producers through this model?
4. What are the challenges and enablers in integrating traditional herbal knowledge into a modern, digitally-driven business model?

Research Objectives

This research aims to design and propose a comprehensive digital business model for the commercialization of traditional anti-migraine herbal tea that emphasizes value creation and integrates digital business accounting. The specific objectives are as follows:

1. To identify the core components of a digital business model suitable for traditional anti-migraine herbal tea products.
2. To analyze how digital business accounting systems ¹⁹ can be integrated into the business model to enhance financial transparency and operational efficiency.
3. To explore strategies for value creation that benefit key stakeholders, including consumers, producers, local communities, and the environment.
4. To assess market potential and consumer behavior related to herbal tea products aimed at migraine relief in digital marketplaces.
5. To develop a prototype business model using ² tools such as the Business Model Canvas (BMC) and Value Proposition Canvas, tailored for digital implementation.

Research Benefits

1. Theoretical Benefits

- ¹ Contribute to the body of knowledge on digital business model development for traditional health products.
- Bridge the gap between traditional herbal medicine and modern business practices, especially in the context of digital transformation.
- Provide academic insights into the integration of digital business accounting with value-based entrepreneurship models.

2. Practical Benefits

- Offer a replicable business model prototype for startups or MSMEs interested in herbal health products.
- Empower local herbal product producers with strategies to enhance competitiveness and reach global markets (Purnamasari & Dheawanto, 2015).
- Provide actionable guidance for entrepreneurs on using digital accounting tools to support decision-making and financial management.
- Enhance the value chain of herbal tea products by aligning it with consumer needs, sustainability goals, and digital trends.

3. Societal and Economic Benefits

- Support public health by promoting natural and affordable alternatives for migraine relief.
- Encourage sustainable use of local medicinal plants and promote the preservation of traditional knowledge.
- Boost rural economic development through digitalization of local herbal industries.

LITERATURE REVIEW

Traditional Herbal Remedies and Anti-Migraine Treatments

Herbal medicine has long been recognized as ¹⁰ a complementary and alternative approach to treating various health conditions, including migraines. Plants such as feverfew (*Tanacetum parthenium*), peppermint (*Mentha piperita*), ginger (*Zingiber officinale*), and turmeric (*Curcuma longa*) have been widely studied for their anti-inflammatory and analgesic properties. Studies by Ernst (2000) and Cady et al. (2005) have shown the efficacy of feverfew and ginger in reducing the frequency and intensity of migraine attacks. However, while these plants are traditionally effective, there is limited integration of this knowledge into commercially scalable, value-driven product models.

Functional Food and Herbal Tea Markets

The functional food and beverage market has expanded significantly, driven by consumer demand for natural, health-enhancing products. Herbal teas positioned as functional beverages are gaining traction globally,

particularity in markets that value preventive healthcare. According to Global Market Insights (2023), the herbal tea market is projected to exceed USD 4.5 billion by 2028, reflecting growing opportunities for product innovation and branding. However, the potential of herbal teas targeting specific conditions, such as migraines, remains underdeveloped.

Business Model Innovation in the Herbal Sector

Business model innovation involves rethinking the way a business creates, delivers, and captures value (Osterwalder & Pigneur, 2010). In the context of herbal products, this includes not only the product design and distribution strategy but also how producers engage customers, manage partnerships, and ensure sustainability (Purnaningsih et al., 2024). The use of the Business Model Canvas (BMC) helps identify key elements such as customer segments, value propositions, revenue streams, and cost structures tailored to herbal product markets. However, studies show that many herbal-based businesses still operate without a formal business model, reducing their potential scalability and competitiveness.

Value Creation in Herbal Product Business Models

Value creation refers to delivering benefits that are meaningful to stakeholders, including consumers, employees, communities, and the environment. In herbal businesses, value can be created through sustainable sourcing of ingredients, ethical labor practices, health education, and environmental stewardship. Research by Chesbrough (2011) and Arret & Zou (2010) highlights that firms which embed multi-dimensional value creation into their business models tend to achieve greater differentiation and long-term loyalty (Jumadi et al., 2024).

Digital Business Accounting and Financial Transparency

Digital business accounting refers to the use of digital tools (e.g., cloud-based bookkeeping, automated inventory tracking, mobile accounting apps) to improve financial management. This is particularly relevant for SMEs and startups in the herbal product sector, which often lack traditional accounting systems. Studies show that the use of digital accounting enhances operational efficiency, reduces human error, and improves trust among stakeholders (Bock & Wier, 2013). Integrating digital accounting into business models also supports real-time data-driven decision-making and better financial compliance (Sociadewati et al., 2024).

Digitalization and E-Commerce in Herbal Products

Digital transformation enables herbal product businesses to expand their market reach through e-commerce platforms, digital marketing, and online payment systems. Research by Landon & Traver (2021) shows that digital channels allow for better consumer engagement, personalized product offerings, and effective brand storytelling, especially critical for health-related products where trust and transparency are essential. However, challenges remain in terms of regulatory barriers, standardization, and consumer education.

METHODOLOGY

Research Approach

This study adopts a qualitative descriptive approach with a design science research perspective. The aim is to explore, analyze, and design a digital business model that integrates traditional herbal knowledge, value creation, and digital business accounting for anti-migraine herbal tea products.

Research Design

The research follows the following stages:

1. Problem Identification and Literature Review

Identification of gaps in current herbal product commercialization, followed by literature analysis on herbal efficacy, business model innovation, digital accounting, and value creation.

2. Data Collection and Market Observation

Conducting interviews and focus group discussions (FGDs) with:

- Traditional herbal practitioners
- Health product consumers (especially migraine sufferers)
- MSME herbal tea producers
- Digital accounting and e-commerce experts

3. Business Model Development

Utilizing tools such as:

- **Business Model Canvas (BMC)** for structuring the overall business model
- **Value Proposition Canvas (VPC)** to align customer needs with product offerings
- **SWOT analysis** to evaluate internal and external strategic factors (Nyoto et al., 2023)
- Integration of digital accounting tools into the operational flow

4. Prototype Design and Validation

Designing a prototype digital business model and simulating its application through a mock platform (e.g., website or mobile interface with embedded accounting features), followed by expert validation sessions.

5. Refinement and Final Model Proposal

Revising the model based on feedback and proposing a scalable, digital-based business model framework that includes value creation for all key stakeholders.

3 Data Collection Techniques

Data collection techniques in this study are:

- In-depth interviews with 10–15 key stakeholders
- Focus Group Discussions (FGDs) with potential consumers
- Document and literature analysis from secondary data sources (journal articles, market reports, WHO guidelines, Bappenas data, etc.)

9 Data Analysis Techniques

Data analysis techniques used in this study are:

- **Thematic analysis** for qualitative data from interviews and FGDs
- Business model mapping using Osterwalder's Business Model Canvas framework
- Triangulation to cross-validate data from multiple sources

Research Instruments

Research instruments used in this study are:

- Interview guides (semi-structured)
- Value proposition mapping tools
- BMC and VPC templates
- Accounting flowchart models (for digital integration)

RESULTS AND DISCUSSION

Identification of Herbal Formulation and Consumer Insights

a. Herbal Formulation for Anti-Migraine Herbal Tea

The formulation of the anti-migraine herbal tea product is based on a combination of traditional knowledge, scientific literature, and herbalist interviews. After evaluating multiple herbs known for their anti-inflammatory, analgesic, and calming properties, the following composition was identified as both functionally synergistic and acceptable in taste.

Table 1. Herbal Ingredient of Traditional Anti-Migraine Herbal Tea Products

Herbal Ingredient	Function	Composition (%)
Ginger (<i>Zingiber officinale</i>)	Anti-inflammatory, pain relief	30%
Peppermint (<i>Mentha piperita</i>)	Muscle relaxant, cooling sensation	25%
Turmeric (<i>Curcuma longa</i>)	Anti-inflammatory, antioxidant	15%

Herbal Ingredient	Function	Composition (%)
Lemongrass (<i>Cymbopogon citratus</i>)	Calming effect, supports digestion	10%
Lavender (<i>Lavandula angustifolia</i>)	Stress relief, improves sleep	10%
Cinnamon (<i>Cinnamomum verum</i>)	Enhances flavor, improves circulation	2%
Stevia leaf (optional)	Natural sweetener	5%

This formulation offers a multi-dimensional approach to migraine relief, targeting muscle tension, inflammation, circulation, and stress simultaneously. It also takes taste, aroma, and consumer preferences into account to ensure acceptance.

b. Consumer Insights

A qualitative study involving in-depth interviews and small focus groups (10 participants aged 25–45 with a history of recurring migraines) revealed the following key insights:

- **Health-conscious habits:** Participants preferred natural remedies over synthetic drugs due to concerns about long-term side effects.
- **Convenience:** A strong preference emerged for tea in sachet form, or ready-to-brew packaging, particularly for busy professionals.
- **Digital behavior:** Consumers tend to discover and purchase herbal products via social media (Instagram, TikTok) and e-commerce platforms (Shopee, Tokopedia) (Rensaldi, Junaidi, et al., 2022).
- **Value perception:** Products that clearly communicate their health benefits, ingredients, and safety certifications (e.g., BPOM, Halal) are trusted more.
- **Brand story:** Consumers are drawn to herbal brands with strong storytelling, especially those emphasizing traditional wisdom, sustainability, and social impact.

Market Potential and Target Segmentation

a. Market Potential

The global herbal tea market has witnessed significant growth in recent years, driven by increasing consumer awareness of natural health solutions. According to market reports (e.g., Statista, Grand View Research):

- The global herbal tea market was valued at over USD 3.2 billion in 2022 and is expected to grow at a CAGR of 7–8% from 2023 to 2030.
- In Southeast Asia, particularly Indonesia, there is a growing interest in functional beverages for lifestyle diseases such as stress, insomnia, and migraines.
- The rise of digital health and wellness trends, including plant-based remedies, immunity-boosting drinks, and preventive self-care, creates an ideal environment for introducing an anti-migraine herbal tea with a strong value proposition.
- The COVID-19 pandemic accelerated consumer adoption of e-commerce for health products and reinforced trust in traditional medicine.

In Indonesia, the Ministry of Health (*Kemkes*) supports the development of jamu-based innovations. Additionally, online marketplaces report that herbal tea products and “natural remedies for migraines” are among the top-searched health keywords.

b. Target Segmentation

Using a psychographic and behavioral segmentation approach, the target market can be categorized into three main segments.

Table 2. Target Segmentation

Segment	Characteristics	Needs	How Product Addresses
Health-Conscious Millennials (Ages 25–40)	Urban, digital-savvy, seek preventive care	Safe, natural alternatives to over-the-counter meds	Tea sachets with transparency in ingredients and benefits

Segment	Characteristics	Needs	How Product Addresses
Professionals with High-Stress Jobs	Work long hours, often experience tension headaches	Quick relief, portable format	Ready-to-brew herbal tea for office/home use
Eco-conscious and Ethical Consumers	Concerned with sustainability, prefer artisanal/local brands	Environmentally responsible packaging, authentic brand story	Herbal blend sourced from local farmers with eco-packaging

Other niche segments include: Mothers looking for family-safe alternatives, Wellness communities and yoga practitioners, and Subscription box users for health products. Channel preferences: E-commerce platforms (Tokopedia, Shopee, Blibli), Social media commerce via Instagram Shops and TikTok Live, Collaborations with wellness influencers and local herbalist communities, and Pop-up events or wellness fairs in urban areas for product sampling. The market opportunity lies not only in herbal formulation but in the creation of a lifestyle brand supported by a digital business model that: Tells a story rooted in tradition, embraces technology for accessibility, and builds long-term trust through transparency and accountability (e.g., digital accounting, supply chain traceability).

Business Model Canvas (BMC) Development

To transform the traditional anti-migraine herbal tea into a value-oriented digital business, the following Business Model Canvas (BMC) outlines the strategic components:

1. Customer Segments
 - Health-conscious millennials seeking natural migraine relief
 - Professionals in high-stress environments (urban workers, tech employees)
 - Digital-native consumers who shop online and value convenience
 - Eco-conscious consumers who support sustainable, ethical brands
2. Value Propositions
 - Natural, non-pharmaceutical relief for migraines and stress
 - Transparent herbal formulation based on traditional and scientific evidence
 - Convenient herbal tea sachets for modern lifestyles (Mukhsin et al., 2024)
 - Support for local farmers and ethical sourcing
 - Digitally traceable supply chain and transparent pricing
 - Sustainable packaging aligned with eco-values
 - Integration of digital accounting and reporting tools for business transparency
3. Channels
 - Digital Platforms: E-commerce (Tokopedia, Shopee, Blibli), own website
 - Social Media Marketing: Instagram, TikTok, WhatsApp Business
 - Health & Wellness Influencer Collaborations
 - Community Pop-ups and Wellness Fairs
 - Subscriptions and Membership Plans through mobile app/website
4. Customer Relationships
 - Personalized migraine and herbal wellness tips via newsletter or chatbot
 - Educational content through blogs and videos about natural remedies
 - Customer feedback loop for product iteration
 - Loyalty programs and referral incentives
 - Online community building (e.g., "Herbal Wellness Circle")

5. Revenue Streams

- Direct-to-consumer sales (herbal tea boxes and sampler packs)
- Subscription-based sales model (monthly migraine relief kits)
- B2B partnerships with health stores, spas, or eco cafes
- Digital workshops or paid content on herbal wellness

6. Key Resources

- Formulated herbal blend (intellectual property)
- Partnerships with local herbal farmers and suppliers
- E-commerce platform and digital marketing assets
- Packaging and labeling facilities
- Accounting system with cloud integration (for financial transparency)
- Certification and permits (BPOM, Halal, Organic)

7. Key Activities

- Herbal sourcing, quality control (Ronaldo, Sudanto, et al., 2021), and blending
- Product packaging and inventory management
- Digital marketing campaigns (SEO, social media, influencer marketing)
- Sales and distribution logistics
- Financial management using digital accounting systems
- Customer service and community engagement

8. Key Partnerships

- Herbal cooperatives and farmer networks
- E-commerce logistics providers (e.g., JNE, SiCepat, GoSend)
- Digital marketing agencies or content creators
- IT and cloud accounting solution providers
- Certification bodies (BPOM, Halal MUI, Organic Indonesia)

9. Cost Structure

- Raw materials and labor (herbal processing)
- Packaging and eco-friendly material costs
- Digital infrastructure (website, accounting tools, app) (Ronaldo, Suhardjo, et al., 2021)
- Marketing and influencer engagement costs
- Logistics and fulfillment costs
- Licensing and regulatory compliance

Value Proposition Canvas (VPC) Alignment

The Value Proposition Canvas (VPC) is used to ensure that the anti-migraine herbal tea product truly aligns with the needs, desires, and pain points of the target customer. In this context, the VPC helps align the customer profile with the product value map, thus creating a targeted and high-value solution.

1. Customer Profile

a. Customer Jobs

The target customer has the following needs and goals:

- Relieve migraine symptoms naturally without relying on chemical medications.
- Finding a solution that is easy to prepare and carry, especially for workers with busy schedules.
- Supporting a healthy and environmentally conscious lifestyle.
- Purchasing products through easily accessible digital platforms.

b. Pains (Problems and Obstacles)

- Side effects from long-term use of migraine medication.
- Lack of trusted (Hadi et al., 2024), scientifically formulated herbal products.
- Difficulty finding products with clear composition and certification.
- Lack of educational information about the benefits and uses of herbal teas online.

c. Gains (Expected Benefits)

- Experience natural, fast, and safe migraine relief.
- Consume delicious, healthy, and mind-soothing tea.
- Gain easy access to products through e-commerce and social media.
- Support local products and environmentally friendly, sustainable practices.

2. Value Map

a. Products and Services

- Anti-migraine herbal tea in ready-to-brew sachets.
- Educational information and short consultations via chatbot or social media.
- Monthly product subscriptions (subscription boxes) for sustainable solutions.
- Tracking raw material origin and digital transparency via QR code.

b. Pain Relievers (Customer Pain Reliever)

- Use of natural herbal ingredients such as ginger, peppermint, turmeric, and lavender, which have been proven safe and effective.
- Product certification (BPOM, Halal) to increase consumer confidence.
- Explanation of the benefits and contents of each ingredient on the packaging and website.
- Product distribution through popular marketplaces (Shopee, Tokopedia, etc.).

c. Gain Creators (Added Value Creators)

- A pleasant, calming tea flavor.
- A strong brand story highlighting local wisdom and empowering herbal farmers.
- Eco-friendly and aesthetically pleasing packaging.
- A loyalty system and customer community called "Herbal Wellness Circle" is being used to increase engagement.

3. Strategic Fit: Alignment Between Needs and Solutions

There is a strategic alignment between customer profile and value proposition:

- The product addresses customer needs with a ready-to-consume, herbal-based solution that is easy to purchase digitally.
- The tea relieves pain associated with the side effects of chemical medications and the lack of natural options.
- The product and service create gains in the form of convenience, health value, and a seamless and transparent digital experience.

With this VPC alignment, the anti-migraine herbal tea business provides not only a product but also a value-based healthy lifestyle solution, wrapped in a scalable and sustainable digital business model.

Integration of Digital Business Accounting

The integration of digital business accounting in developing a business model for an anti-migraine herbal tea product not only aims to achieve financial efficiency but also creates strategic value in digital and health-based businesses. Digital accounting technology plays a crucial role in ensuring transparency and accountability, as well as strengthening consumer and investor trust in traditional plant-based businesses.

1. The Strategic Role of Digital Accounting

Digital business accounting not only replaces manual bookkeeping but also enables:

- Real-time financial monitoring
- Automated transaction recording and financial reporting
- Digital inventory management
- Automatic tax calculation
- Tracking profit margins per product or distribution channel

With this system, herbal tea MSMEs can avoid recording errors, save time, and gain financial insights that can be used for strategic decision-making, such as pricing, seasonal discounts, or investment decisions.

2. Implementation in the Business Model Canvas (BMC)

- **Key Resource:** A cloud-based accounting system (e.g., Jurnal.id, Accurate, or QuickBooks) serves as a key resource for operations and decision-making.
- **Key Activities:** Routine activities such as online sales recording, profit and loss reports, and cash management are automated and accessible at any time.
- **Value Proposition:** Offers transparency in pricing and raw material origins, supported by a digital accounting system that can be traced by consumers or partners.
- **Customer Relationships:** Financial reports can be used to build trust with B2B partners (e.g., health stores, distributors) and attract data-driven funding (investors/crowdfunding).
- **Revenue Stream:** With digital report analysis, businesses can evaluate the most profitable sales channels and develop new monetization strategies (e.g., subscription packages, upselling).

3. Implementation in Digital Operations

- **Integration with E-Commerce:** The digital accounting system can be connected to marketplaces such as Shopee, Tokopedia, or a personal website, so transactions are automatically recorded in the accounting system.
- **Financial Dashboard:** Entrepreneurs can monitor cash flow, accounts receivable and payable, and raw material inventory visually through the dashboard.
- **Third-Party Reports:** Reports can be shared directly with external parties (partners, investors, auditors, government) in digital formats (PDF, Excel, XBRL).

4. Tangible Benefits for Stakeholders

- **For Business Owners:** Full control over the financial health of the business and preparedness for audits or financing applications.
- **For Consumers:** Increased trust in products resulting from a transparent and accountable system.
- **For Investors & Partners:** Guaranteed professionalism and credibility through accurate and easily analyzed digital financial reports.

5. Challenges and Solutions

Table 3. Challenges and Solutions

Challenges	Solutions
Lack of digital accounting literacy among MSMEs (Suhandjo et al., 2023)	Digital accounting training and user-friendly application adoption
Accounting software subscription costs	Using free/low-cost platforms in the initial stages
Fear of data breaches	Using software with encryption and automatic backups

Prototype Model Evaluation and Feedback

After designing a digital-based (Renaldi, Hafni, et al., 2022), value-creating business model for an anti-migraine herbal tea product, the next stage is prototype evaluation. The purpose of this stage is to test the feasibility, acceptability, and potential improvements of the proposed model before its full implementation in a real-world business environment.

1. Prototype Description

The prototype developed in this research includes:

- Business Model Canvas (BMC), which includes all strategic elements (customer segments, value propositions, distribution channels, etc.).
- Value Proposition Canvas (VPC), aligns customer needs and desires with the value proposition (Renaldi, Sayono, et al., 2023).

Digital platform mockup (web/mobile-based) for:

- Online ordering of anti-migraine herbal tea products
- Article and video-based health education services
- Internal financial reporting dashboard using a digital accounting system
- QR code on packaging to transparently track basic product and financial information

2. Prototype Evaluation Method

The evaluation was conducted through Focus Group Discussions (FGDs) with potential users (consumers, herbal MSMEs, digital business consultants)

Semi-structured interviews with three experts:

- Digital marketing practitioners for health products
- Accountants with expertise in digital accounting systems for MSMEs
- Herbalists or medicinal plant experts

3. Evaluation Results and Findings

Here are some of the key feedback obtained:

Table 4. Key Feedback

Components	Feedback	Recommendations
Business Model Design	Comprehensive and easy to understand	It is recommended to add a risk map and mitigation plan.
Value Product (VPC)	Highly relevant to a healthy and natural lifestyle	It is necessary to emphasize more education on the benefits of each ingredient on social media.
Digital Accounting Integration	Innovative and boosts investor confidence	It is recommended to include a public dashboard (without sensitive data) for transparency.
Platform Mockup	Attractive and user-friendly	It is recommended to add a live chat feature and shipment tracking.
Product Packaging	Attractive visuals, local value is visible	It is necessary to test more environmentally friendly packaging materials.

4. Validity and Acceptability

Overall, the prototype received very high acceptance (>85% of focus group respondents stated that the model was worthy of further development). Experts assessed that a digital and accountable approach to selling traditional plant-based products was a much-needed innovation in the market, especially among the younger generation and urbanites.

5. Model Revision

Based on this feedback, several adjustments were made:

- Addition of interactive educational features to the digital platform
- Simplification of transaction input flow in the digital accounting system
- Integration of risk maps and financial projections into the business model

CONCLUSION

Conclusion

This study successfully developed a comprehensive digital business model for a traditional anti-migraine herbal tea product by integrating value creation, digital business accounting, and modern entrepreneurial practices. Through the combination of traditional herbal knowledge and digital innovation, the proposed business model enables scalability, transparency, and competitive positioning in a health-conscious and tech-savvy market. The use of the Business Model Canvas (BMC), Value Proposition Canvas (VPC), and digital accounting integration proved effective in aligning stakeholder needs with strategic objectives.

Prototype evaluation demonstrated high feasibility and market acceptance, particularly among millennials and professionals seeking natural, practical, and trusted migraine treatments. This model addresses key business challenges by offering not only a health product but also a complete lifestyle solution integrated within a transparent, value-added, and digitally driven system.

Implications

Theoretical Implications: This research bridges the gap between traditional herbal medicine and contemporary digital business theory, contributing to academic discourse on digital entrepreneurship, value-based business models, and sustainable innovation. **Practical Implications:** This model provides a replicable framework for MSMEs in the herbal product sector to transition into digitally integrated, financially transparent, and consumer-centric businesses. **Policy Implications:** Government agencies and health institutions should be encouraged to support digital transformation in the herbal sector and promote traceable and quality-controlled traditional medicine.

Limitations

This study primarily used a qualitative approach with limited quantitative market validation. This herbal formulation, while supported by literature and expert interviews, has not undergone clinical or pharmacological trials. Implementation simulations were conducted at the prototype level, not in a full-scale, real-world market environment. The financial projections and risk models are still conceptual without long-term operational data.

Recommendations

MSMEs should adopt cloud-based accounting systems and integrate them early into their operational strategies to achieve financial transparency and scalability. Herbal tea businesses should invest in storytelling, certification, and eco-friendly packaging to increase trust and competitiveness. Collaborating with digital influencers and the health community can increase brand visibility and consumer education.

Future Research

Future studies could use quantitative methods to measure customer satisfaction, willingness to pay, and post-implementation market performance (Sardono et al., 2022). Research could explore AI-based customization of herbal tea blends based on consumer health profiles. Further research is needed to assess clinical efficacy and safety through formal pharmacological trials. Comparative studies between digitally integrated and conventional herbal businesses would further validate the effectiveness of digital transformation strategies in this sector.

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