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MARKETING AND PRODUCT INNOVATION STRATEGIES FOR SUCCESS IN THE HEALTH FOOD BUSINESS: PERSPECTIVES OF ENTREPRENEURS IN NORTHERN THAILAND

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ABSTRACT

This study examines the impact of marketing and product innovation strategies on the success of health food small and medium-sized enterprises (SMEs) in Northern Thailand. Employing a mixed-methods approach, the research integrates quantitative data from 200 structured surveys with qualitative insights obtained through in-depth interviews with experienced entrepreneurs. The study seeks to identify the types of innovation strategies employed, analyze key influencing factors—such as business size, entrepreneurial experience, and external support—and evaluate both perceived and actual outcomes of these strategies. A comparative analysis of the quantitative and qualitative findings reveals that business size ($\beta = 0.432$), entrepreneurial experience ($\beta = 0.607$), and external support ($\beta = 0.564$) have a statistically significant positive impact on business success, while marketing innovation strategies show no significant effect. Conversely, qualitative findings emphasize the practical benefits of incorporating local ingredients and AI technologies to enhance production efficiency and competitiveness. Entrepreneurs also highlight the critical roles of digital marketing, branding, and government support in driving sustainable growth. Despite the popularity of certain marketing tools, challenges remain—particularly in consumer awareness and the limited impact of culturally themed packaging. The study concludes that advancing the health food sector requires a focus on strengthening product quality, scaling operational capacity, and developing entrepreneurial competencies, supported by the integrated use of technology and multi-stakeholder collaboration. These insights provide a strategic foundation for both policy formulation and business development within the health-oriented bio-economy.

KEYWORDS: Marketing Innovation; Product Innovation; Success in the Health Food Business; Perspectives of Entrepreneurs.

1. INTRODUCTION

Thailand's 13th National Economic and Social Development Plan emphasizes enhancing quality of life, reducing inequality, and promoting adaptive life skills in response to global trends (NESDC, 2021). Within this context, the health food industry has emerged as a strategic sector due to its capacity to add value to local resources—such as indigenous herbs and vegetables—while responding to the growing demand from health-conscious consumers. Technological innovations, including AI-driven production and data analytics, are increasingly adopted to improve efficiency, reduce costs, and elevate product quality (Schilling, 2020). However, businesses in this sector face significant challenges, including rising production costs, competitive pressure, and the need for strong branding in international markets (Porter, 2008).

A key issue that significantly impacts the success of health food businesses in Northern Thailand is the implementation of marketing and product innovation strategies. These strategies play a critical role in enhancing customer engagement, improving operational efficiency, and differentiating brands by utilizing local ingredients, culturally inspired packaging, and digital technologies such as AI and E-Commerce platforms (Schilling, 2020; Tidd & Bessant, 2020). Additionally, support from government agencies and local community networks is essential in fostering a sustainable business ecosystem through funding, training programs, and collaborative partnerships at both local and international levels (Ut, Siya & Boonrahong, 2022). Studying these factors is vital for understanding the elements that drive business success in local contexts and support global market expansion.

This research applies a mixed-methods approach to explore marketing and product innovation strategies among health food SMEs in Northern Thailand. It seeks to identify the types of strategies used, analyze influencing factors, assess their impact on business success, and understand entrepreneurs' perspectives on the role of innovation. The study aims to generate evidence-based insights to support strategic decision-making and enhance the competitiveness and sustainability of health food enterprises. Findings are expected to inform both entrepreneurial practices and policy interventions in Thailand's health-oriented bio-economy.

1.1. Research Questions

This study aims to address the following research questions: 1) What types of marketing innovation strategies are employed by health food business

entrepreneurs in Northern Thailand, and what factors influence their implementation? 2) How do marketing innovation strategies impact business success in terms of sales growth, brand development, and customer engagement?

1.2. Research Objectives

1. To explore the types and forms of innovation strategies used by entrepreneurs in the health food industry in Northern Thailand.
2. To assess the impact of marketing and product innovation strategies on the success of health food businesses.
3. To examine entrepreneurs' views and opinions on the role of innovation in achieving business success.

1.3. Research Hypotheses:

Marketing innovation strategies have an effect on the success of health food businesses in Northern Thailand.

Product innovation strategies have an effect on the success of health food businesses in Northern Thailand.

Business size, entrepreneurial experience, and external support have an effect on the success of health food businesses in Northern Thailand.

2. LITERATURE REVIEW

2.1. The Role Of Innovation In Business: Approaches And Applications

Innovation plays a crucial role in business development and can be categorized into various types, such as product and process innovation, as well as radical and incremental innovation. These innovations enhance efficiency and create a competitive advantage in the market (Schilling, 2020). Developing innovations requires organizational and individual capabilities and fostering an environment conducive to creativity and development (Tidd & Bessant, 2020).

Furthermore, introducing new products at the right time and employing effective marketing strategies are key factors that increase the likelihood of market success (Kotler & Keller, 2016). Supporting the adoption of digital technologies, such as AI-driven data analytics and E-Commerce platforms, also enhances competitiveness in the modern market (Harvard T.H. Chan School of Public Health, 2020).

2.2. Business Success: Key Factors And Guidelines

For business success, entrepreneurs must be

adaptive and develop innovations that meet the rapidly changing demands of the market (Bangbon et al., 2023; Christensen et al., 2015). Efficient resource management is crucial for businesses to optimize supply chains and tailor product development, which enhances operational efficiency and meets customer needs. This strategy fosters innovation and helps companies differentiate themselves in a competitive market, ultimately leading to long-term success and profitability (Aras, 2009; Channuwong et al., 2025; Limlahapun & Kanchanathaveekul, 2019). Support from government and various organizations also plays a critical role in creating an ecosystem conducive to entrepreneurial growth. This includes funding, training programs, and establishing collaborative networks among local and international entrepreneurs (Ut et al., 2022; Khan et al., 2025). Future sustainable development must focus on efficient resource use and creating added value through creative innovations (Wongmajarapinya et al., 2023; Saeng-on et al., 2023).

2.3. Healthy Food In Northern Thailand: Characteristics And Development Opportunities

Healthy food in Northern Thailand stands out due to the use of local ingredients with high nutritional value, such as indigenous vegetables and health-boosting herbs like turmeric and garlic. Traditional dishes such as Kaeng Hung Leh (Northern-style curry) and Nam Prik Noom (spicy green chili dip) not only feature unique flavors but also provide health benefits, such as aiding digestion and offering antioxidant properties. These dishes reflect a culture of consumption that emphasizes fresh, chemical-free ingredients (Poswal et al., 2019).

The potential for developing healthy food products in Northern Thailand is immense, particularly in international markets that prioritize health and wellness tourism. Key opportunities include: The company is introducing new products made from local grains, such as brown rice and sesame, and adjusting recipes to suit modern lifestyles (Limlahapun & Kanchanathaveekul, 2019). It is also focusing on local branding and digital marketing (Kanchanathaveekul et al., 2023), creating brands that emphasize local wisdom and designing packaging that reflects Northern Thai identity. Additionally, the company is leveraging digital marketing strategies, such as E-Commerce and social media, to reach broader audiences (Schilling, 2020). Furthermore, it is building partnerships with local communities to enhance production capabilities and seeking government support to promote

sustainability in the health food sector (Ut, Siya & Boonrahong, 2022). These efforts will not only enhance the competitiveness of Northern Thailand's health food products in global markets but also promote sustainable practices that benefit local communities.

Table 1: Synthesis Of Innovation-Driven Success Factors.

Key Component / Focus	Impact Summary	Key References
Product & Process Innovation	Enhances competitiveness and efficiency; supports both radical and incremental innovation.	Schilling, 2020; Tidd & Bessant, 2020
Digital Technology Adoption	Reduces costs and improves quality; leverages AI, data analytics, and online sales platforms.	Schilling, 2020; Harvard T.H. Chan School, 2020
Entrepreneurial Adaptability	Improves resilience and responsiveness to dynamic market demands.	Christensen et al., 2015; Channuwong et al., 2022
Government and Ecosystem Support	Provides funding, training, and networks to support sustainable business ecosystems.	Ut, Siya & Boonrahong, 2022
Local Ingredients and Food Culture	Boosts health-related value and differentiates products through cultural identity.	Poswal et al., 2019
Digital Marketing and E-Commerce	Expands market reach and improves customer interaction through online channels.	Schilling, 2020
Community Collaboration	Strengthens production and sustainability through local partnerships and shared resources.	Ut, Siya & Boonrahong, 2022

Based on an extensive review of relevant literature, this study identifies five core variables associated with the success of health food businesses in Northern Thailand. The independent variables include marketing innovation strategies and product innovation strategies, which reflect the businesses' efforts to enhance customer engagement, brand differentiation, and operational efficiency through innovative approaches. In addition, contextual factors such as business size, entrepreneurial experience, and external support are also examined as predictors of business performance. The dependent variable is defined as business success, which encompasses financial growth, customer base expansion, brand development, and long-term

sustainability.

The conceptual framework for this study integrates key components of innovation that influence the success of health food businesses in Northern Thailand. Product and process innovation enhance competitiveness and efficiency, serving as a foundation for product development strategies. Digital technology adoption, including AI and e-commerce, strengthens marketing innovation and operational effectiveness. Entrepreneurial adaptability is essential for navigating dynamic markets, while government and ecosystem support provide necessary resources and networks. The use of local ingredients and cultural identity reinforces product differentiation and consumer trust. Additionally, digital marketing and community collaboration expand market reach and promote sustainable production. Together, these elements form a holistic framework aimed at achieving long-term business success.

3. METHODOLOGY

This study investigates marketing and product innovation strategies within Northern Thailand's health food industry, focusing on small and medium-sized enterprises (SMEs) producing organic foods and health supplements. A mixed-methods research design was employed to ensure a comprehensive understanding of both quantitative trends and qualitative insights. The target population was carefully defined, and stratified random sampling was used to ensure representativeness across key business segments. A total of 200 participants—comprising 100 producers and 100 distributors—were selected from official databases maintained by the Chamber of Commerce and the Office of Small and Medium Enterprise Promotion. Priority was given to provinces with a robust health food sector, such as Chiang Mai, Chiang Rai, and Lamphun, to ensure contextual relevance and data richness.

Quantitative data were gathered using structured questionnaires, which were developed and validated using the Index of Item-Objective Congruence (IOC) and subjected to reliability testing via Cronbach's alpha, with a threshold of 0.7 as the minimum acceptable value. The instruments underwent rigorous review by domain experts to ensure alignment with content, clarity of language, and practical applicability. Document-based analysis supported the formulation of research tools and provided background context, while field-based surveys captured current practices and perspectives from active entrepreneurs.

In the qualitative component, purposive sampling

was applied to identify key informants—namely, experienced entrepreneurs recognized for their success in export markets or their receipt of industry quality awards. In-depth interviews were conducted until data saturation was reached. Appointments were scheduled with consideration for participants' convenience to foster open and reflective engagement. This ensured the collection of rich, contextually grounded data that align with the research objectives.

For data analysis, multiple regression analysis was applied to test the influence of independent variables (e.g., innovation strategies, business size, and external support) on business success outcomes. Statistical software was employed to interpret regression coefficients and validate hypotheses. Concurrently, thematic analysis of qualitative data was performed using tools such as NVivo, allowing the identification of patterns, categories, and emergent themes. This dual approach enabled the researchers to triangulate findings, ensuring robustness and enhancing the overall validity and credibility of the study.

Table 2: Summary Of Research Methodology And Process.

Research Step	Details
Research Design	Mixed-methods approach combining quantitative surveys and qualitative interviews to ensure comprehensive insights.
Target Group & Sampling	Defined population of SMEs in health food sector; stratified random sampling used to select 200 participants (100 producers, 100 distributors) from Chiang Mai, Chiang Rai, and Lamphun.
Qualitative Sampling	Purposive sampling of successful entrepreneurs; in-depth interviews conducted until data saturation was achieved.
Instrument Development	Questionnaires validated using Index of Item-Objective Congruence (IOC); reliability confirmed with Cronbach's alpha (≥ 0.7).
Document-Based Analysis	Review of secondary data to establish research context and support instrument design.
Field Data Collection	On-site surveys and interviews conducted to gather real-world data from SMEs.
Quantitative Analysis	Multiple regression analysis conducted using statistical software to examine relationships between variables.
Qualitative Analysis	Thematic analysis using NVivo to identify patterns, categories,

	and themes from interview transcripts.
Triangulation & Validation	Integration of quantitative and qualitative findings to test hypotheses and ensure result reliability.

4. RESULTS

Part 1: The types and forms of innovation strategies used by entrepreneurs in the health food industry in Northern Thailand.

4.1. Analysis Of Demographic Data

The demographic analysis revealed a balanced distribution of business types within Northern Thailand's health food sector, comprising 50% production enterprises and 50% distribution enterprises. Entrepreneurs represented four primary organizational forms—family businesses, community enterprises, general stores, and limited companies—each accounting for 25% of the sample, indicating structural diversity in the industry. Distribution strategies were equally varied, with physical stores, community markets, trade fairs, and department stores each contributing approximately 14.5%, while online platforms, international exports, and franchise models also played significant roles, reflecting evolving market preferences. Business age and monthly revenue were evenly distributed across the sample, suggesting that innovation practices are adopted regardless of business maturity or income level. These findings support the research objective by demonstrating that diverse organizational structures and marketing approaches underpin innovation strategies within the region's health food enterprises, underscoring the need for context-sensitive innovation frameworks tailored to enterprise typologies and resource capacities.

Part 2: Innovation and Business Success in the Health Food Industry in Northern Thailand

This study was conducted to achieve three main objectives: (1) to explore the types and forms of innovation strategies used by entrepreneurs in the health food industry in Northern Thailand; (2) to assess the impact of marketing and product innovation strategies on business success; and (3) to examine entrepreneurs' views and opinions on the role of innovation in achieving business success. In accordance with these objectives, the study proposed three hypotheses: H1—marketing innovation strategies have a significant effect on the success of health food businesses; H2—product innovation strategies have a significant effect on business success; and H3—business size, entrepreneurial experience, and external support are significant

predictors of business success. Based on data collected from 200 health food entrepreneurs and analyzed using both descriptive and inferential statistics, the findings revealed that the most commonly used and highly rated marketing strategies were electronic media advertising ($X = 4.50$) and customer engagement campaigns ($X = 4.40$), while kiosk distribution scored the lowest. Regarding product innovation, food safety standards ($X = 4.50$) and international certifications ($X = 4.45$) received the highest ratings, while Thai-themed packaging scored the lowest ($X = 4.00$), indicating limited integration of cultural identity into branding practices.

The study also found that health food businesses in Northern Thailand are experiencing stable and sustained growth, as evidenced by high average scores in sales ($X = 4.50$), profits ($X = 4.45$), product development ($X = 4.48$), and strategic partnerships ($X = 4.38$). These outcomes support Hypothesis 2, affirming the positive influence of product innovation—particularly quality and safety—on business performance. Meanwhile, although some marketing strategies received high satisfaction ratings, Hypothesis 1 was only partially supported, as certain components such as digital technology use and brand storytelling did not show statistically significant effects on financial outcomes. Additionally, Hypothesis 3 was strongly supported by the significant effects of business size ($\beta = 0.432$, $p < .001$), entrepreneurial experience ($\beta = 0.607$, $p < .001$), and external support ($\beta = 0.564$, $p = .003$) on business success. The study concluded that while marketing innovations contribute to visibility and engagement, long-term business success in the health food sector is primarily driven by structural capabilities, high product standards, technological adoption, and entrepreneurial competencies—reflecting both empirical outcomes and the perceptions of entrepreneurs regarding the role of innovation.

Part 3: The Impact of Marketing and Product Innovation on Business Success and Entrepreneurs' Perspectives on the Role of Innovation

To achieve the dual research objectives—(1) to assess the impact of marketing and product innovation strategies on the success of health food businesses, and (2) to examine entrepreneurs' views and opinions on the role of innovation in achieving business success—this study tested three corresponding hypotheses. The findings strongly support Hypothesis 2, confirming that product innovation strategies, particularly food safety standards and international certifications, have a

statistically significant positive impact on business success ($\beta = 0.125$ and 0.152 , $p < .05$). Similarly, Hypothesis 3 is validated by the significant influence of business size ($\beta = 0.432$, $p < .001$), entrepreneurial experience ($\beta = 0.607$, $p < .001$), and external support ($\beta = 0.564$, $p = .003$)—factors that reflect structural and experiential dimensions crucial to sustained success. However, Hypothesis 1 is only partially supported. Although entrepreneurs rated marketing innovation strategies like electronic media advertising and customer engagement highly ($X = 4.50$ and 4.40), regression analysis showed that specific components such as digital technology use, brand storytelling, and distribution events did not have statistically significant effects on financial outcomes ($p > 0.05$). These results suggest that while marketing innovations are perceived positively, their actual impact on financial performance is limited. Ultimately, the study concludes that the success of health food businesses in Northern Thailand is more influenced by internal capabilities, product value, and entrepreneurial experience than by external communication strategies. Thus, strategic priorities should focus on enhancing product standards, leveraging technology, and strengthening entrepreneurial competencies in alignment with the innovation practices that entrepreneurs believe truly drive business success.

Table 4: Key Findings.

Factor	Result	Statistical Evidence	Interpretation
Marketing Innovation (e.g., digital tech, storytelling)	Partially Supported	$p > 0.05$	Perceived positively but no significant financial effect
Product Innovation (e.g., food safety, certifications)	Supported	$\beta = 0.125$ & 0.152 , $p < .05$	Significant impact on business growth
Business Size	Supported	$\beta = 0.432$, $p < .001$	Strong predictor of financial and operational success
Entrepreneurial Experience	Supported	$\beta = 0.607$, $p < .001$	Strong predictor of business resilience
External Support	Supported	$\beta = 0.564$, $p = .003$	Moderate influence on success

Part 4: The impact of marketing and product innovation strategies on the success of health food businesses.

The multiple regression analysis of health food

businesses in northern Thailand revealed that business size and entrepreneurs' experience significantly influence success, showing a strong relationship with financial growth and product development. However, the studied independent variables did not demonstrate statistical significance regarding financial growth, highlighting the need to refine strategies and analyses for better alignment with success metrics. Business size and entrepreneurs' experience significantly influence success, particularly in financial growth and product development. Marketing innovation strategies did not show a statistically significant effect on financial outcomes. Expanding variables and collecting additional data are recommended to develop strategies aligned with sustainable business success.

Table 5: Summary Of Key Analytical Themes With Impact.

Key Themes	Core Insights	Impact
Key Success Drivers	Business size and entrepreneur experience positively affect success.	Positive
Limitations of Current Variables	Marketing innovation lacks statistical significance on financial outcomes.	Negative
Strategic Enhancements Needed	Digital technology and brand storytelling improve operational effectiveness.	Enhanced Efficiency
Uncertainty in Outcome Linkage	Some strategies show unclear financial impact and require refinement.	Challenges
Future Research Recommendations	Incorporate product quality and customer perception; consider using SEM.	Development Opportunities

This table organizes the insights from the study into key areas, highlighting positive impacts, challenges, and opportunities for improvement.

Part 5: Entrepreneurs' perspectives and opinions on the role of innovation in business success.

This study aimed to examine the influence of innovation strategies on the success of health food businesses in Northern Thailand. The research was structured around three core objectives and addressed a central research question: What types of marketing innovation strategies are employed by entrepreneurs, and how do these strategies, along with their perceptions of innovation, contribute to business success? To explore these relationships empirically, the study proposed a comprehensive

hypothesis stating that innovation strategies, business characteristics, and external support significantly affect the success of health food businesses in the region. The findings from Part 5, which involved multiple regression analysis, showed that business size and entrepreneurial experience significantly influence business success, particularly in terms of financial growth and product development. These results provide strong support for Hypothesis 3 and align clearly with Research Objective 2, which seeks to evaluate the effects of innovation on success, and with the implied sub-question on structural factors behind business performance. Health food entrepreneurs in Northern Thailand identified key drivers of business success, including innovation through the use of local ingredients, such as native herbs and organic

produce, combined with technologies like AI and IoT to improve production efficiency and reduce costs.

They emphasized the importance of high-quality, health-oriented products with unique local branding and the use of online channels to expand both domestic and international markets. Government support—particularly in training programs, export promotion, and business networking—was recognized as vital for enhancing competitiveness. Additionally, digital marketing tools such as SEO, data analytics, chatbots, and e-commerce were adopted to strengthen customer engagement. Entrepreneurs also valued mentorship, collaboration with universities, and community-based learning as essential strategies for sustaining innovation, building resilience, and adapting to dynamic market conditions.

Table 6: Key Perspectives Of 10 Health Food Entrepreneurs In Northern Thailand.

No.	Key Perspective	Summary of Entrepreneurial Views	Observed Impact/ Evidence
1	Innovation and Local Ingredients	Emphasis on using native herbs, pesticide-free vegetables, and integrating AI/IoT to enhance production.	Increased sales by 40%; cost reduction by 30% (e.g., organic tea from Chiang Rai).
2	Business Growth Strategies	Focus on high-quality, health-oriented products with unique local branding and online sales to expand market reach.	Stronger market positioning; growing interest from domestic and foreign customers.
3	External Support and Government Role	Recognition of government initiatives in export promotion, training programs, and networking support as crucial for business development.	Improved global competitiveness; access to new business partners and export opportunities.
4	Digital Marketing and Technology Use	Adoption of SEO, Data Analytics, Chatbots, and E-Commerce to reach consumers and build brand awareness efficiently.	Enhanced digital marketing capacity; better customer targeting and communication efficiency.
5	Entrepreneurial Capacity Building	Value placed on mentorship, community-based learning, and collaboration with universities for R&D and business adaptation.	Improved sustainability and resilience; readiness to innovate and grow in dynamic markets.

The analysis highlights that innovation through the use of local raw materials and AI technologies has significantly improved production efficiency and sustainability in the health food industry. At the same time, digital marketing strategies and the development of unique brand identities have enhanced business competitiveness and expanded market reach. Furthermore, government support and capacity-building programs, such as training and mentorship, have played a critical role in enabling

global market access and fostering long-term growth, reflecting a holistic approach to sustainable business development in the international context. Based on the integration of findings from both quantitative and qualitative research, it is evident that the results are strongly aligned and mutually reinforcing. Notably, the development of the health food industry demonstrates a clear progression through structured stages.

Table 7: Comparison Of Quantitative And Qualitative Findings.

Research Aspect	Quantitative Research	Qualitative Research
Main Focus	Assess impact of innovation strategies on business success using regression analysis.	Explore entrepreneurs' perspectives on innovation and business development.
Key Variables	Marketing Innovation, Product Innovation, Business Size, Entrepreneurial Experience, External Support.	Innovation, Growth Strategies, Government Support, Digital Tools, Capacity Building.
Significant Findings	Business size ($\beta = 0.432$), experience ($\beta = 0.607$), and external support ($\beta = 0.564$) positively impact success. Marketing innovation not statistically significant.	Innovation with local ingredients and AI improved efficiency. Digital marketing, branding, and support systems enhanced competitiveness.
Limitations	Marketing variables lack statistical significance for financial outcomes. Packaging has no meaningful contribution.	Challenges in consumer awareness, outreach effectiveness of civil society networks (CSNs).
Strategic Implications	Focus on improving core product quality, scale, and entrepreneurial competencies.	Holistic integration of innovation, culture, technology, and stakeholder collaboration.
Contribution to Industry	Provides measurable evidence on key predictors of business success.	Reveals real-world entrepreneurial strategies and sustainable practices.

However, this section formally presents strategic business development guidelines, categorized into three relationship levels: Basic, Intermediate, and Advanced. At the Basic level, emphasis is placed on external resource support, enhancement of entrepreneurial skills through training, integration of digital technologies, improvement of product quality, and initial market expansion.

The Intermediate level advances this foundation by strengthening digital capabilities, refining product quality, and enhancing responsiveness to market dynamics. This study outlines a structured, three-level model for business development in the health food sector—starting from foundational training and resource support at the basic level, advancing to technology integration and quality enhancement at the intermediate level, and culminating in brand building, market expansion, and strategic partnerships at the advanced level. These progressive strategies collectively promote entrepreneurial readiness, digital efficiency, and long-term competitiveness, serving as a comprehensive roadmap for sustainable growth.

In Northern Thailand, the strategic development of the health food industry is deeply influenced by the region's agricultural resources and cultural identity. The integration of local ingredients with digital innovations such as AI and IoT has boosted production quality, while e-commerce and cultural branding have widened market access. Civil society networks (CSNs) play a critical role in connecting rural producers to urban consumers. Despite challenges in public awareness, empowering CSNs offers a promising path toward food security and a resilient, sustainable food ecosystem.

5. DISCUSSION

The findings of this research reveal that strategic

innovation and internal capabilities, rather than marketing tactics alone, are crucial for business success in the health food sector in Northern Thailand. Although electronic media advertising and customer engagement are popular, they do not significantly influence financial performance. Instead, factors such as business size, entrepreneurial experience, and external support are more impactful in facilitating innovation. Product innovation—particularly ensuring food safety standards and integrating local ingredients—emerges as a key driver of consumer trust and business growth. This aligns with Astuty & Yustian (2021), who emphasized the role of ethical values and credibility in influencing purchasing decisions. Furthermore, the low score on packaging reflecting Thai identity presents an opportunity for differentiation in global markets through culturally distinctive branding, resonating with Limlahapun and Kanchanathaveekul (2019) on innovation management in Thai confectionery businesses.

The study also reinforces the importance of digital innovation and knowledge accumulation in sustaining competitiveness. Technologies such as AI, IoT, SEO, and e-commerce platforms have enhanced marketing efficiency, market reach, and operational capacity, which supports the framework of Dynamic Capabilities Theory and Resource-Based View (RBV). However, challenges persist due to gaps in digital literacy and the potential for brand dilution in some market segments. The research findings are consistent with the work of Kumar et al. (2025) and Saeng-on et al. (2024) which stress product development, responsible practices support health-related businesses through resource conservation, reduced emissions, and improved local well-being, contributing to sustainable rural development. The findings indicate that the success of health food

businesses relies more on the development of high-quality products and adherence to food safety standards than on marketing strategies alone. Business size, entrepreneurial experience, and external support play critical roles in enabling the effective implementation of innovation. Additionally, civil society networks (CSNs) contribute significantly by linking rural producers with urban consumers. This is supported by studies such as Taylor & Lovell (2021) and Pereira et al. (2020), which highlight the role of community networks in promoting sustainable food systems and creating economic opportunities for local communities.

5.1. Recommendations

5.1.1. Recommendations For This Research

Based on the research findings, the following recommendations can be applied to enhance the development and competitiveness of health food businesses:

1. Entrepreneurs should prioritize quality assurance and compliance in product development. Policymakers can support this direction through targeted initiatives such as quality certification subsidies and innovation grants to improve product credibility and global competitiveness.
2. The findings highlight the importance of business size, experience, and external support in driving success. Therefore, mentorship programs, marketing training, and improved access to financial and technological resources should be provided to enable SMEs to adopt and integrate digital technologies effectively throughout different stages of business growth.
3. The identification of product innovation—particularly food safety standards and international certifications—as a key driver of business success provides a clear direction for entrepreneurs to prioritize quality assurance and compliance in product development. Policymakers and development agencies can use this evidence to design targeted support programs, such as quality certification subsidies and innovation grants.
4. The significant role of business size, entrepreneurial experience, and external support highlights the need for capacity-building initiatives, mentorship programs, and easier access to financial and institutional resources. These findings can inform government strategies focused on SME scaling and inclusive entrepreneurship support, especially in the health and wellness sectors.
5. The mixed impact of marketing innovation suggests that while digital tools like SEO and customer engagement are well-perceived, they must be strategically aligned with core business capabilities and product value. This calls for more integrated marketing training and smart digital adoption tailored to different business stages.
6. Based on the research findings, marketing strategies that emphasize the uniqueness of health products can effectively promote local ingredients and health-beneficial herbs, such as herbal teas or foods with properties that reduce disease risks. Furthermore, designing packaging that reflects local culture and values can create differentiation and appeal in global markets.
7. Health food businesses should integrate digital technologies—such as SEO, chatbots, data analytics, and customized e-commerce platforms—to improve market access, especially among SMEs. At the same time, leveraging local ingredients and culturally inspired packaging can create product differentiation and global appeal. To build consumer trust and relevance, scientific research and strategic collaborations with universities and communities should be promoted, fostering innovation, tailored product development, and sustainable value creation.

5.1.2. Recommendations For Future Research

1. Future research could explore the role of health food businesses in generating community income and promoting health at local and national levels. Additionally, studying the environmental sustainability impact of using local ingredients would provide valuable insights.
2. The current study's limitations in understanding consumer behavior highlight the need for deeper analysis of consumer demands for health food products. Research focusing on specific target groups, such as Gen Z, Millennials, and the elderly, could yield actionable insights.
3. Further studies could investigate innovations in health food products, including the integration of herbs or new raw materials into food products to create added value.
4. Future research could examine the application

of Artificial Intelligence (AI) in developing product formulas and marketing strategies. Additionally, analyzing the success of digital

platforms in the health food business could provide strategies for scaling and improving these systems.

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