

Consumer behavior, product innovation, and promotion mix: Basis for improved marketing strategies framework for oat industry

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ISSN: 2243-7770
Online ISSN: 2243-7789

Received: 20 July 2024

Revised: 13 August 2024

Accepted: 14 August 2024

OPEN ACCESS

Available Online: 15 August 2024

DOI: 10.5861/ijrsm.2024.1241

Abstract

The optimization of marketing strategies is crucial for increasing the consumption of oat products, enriching market choices, and ensuring the sustained prosperity of the oat industry. With the continuous evolution of the food industry, the oat industry must adopt innovative marketing methods to maintain its market position and effectively compete with other breakfast and health foods. The purpose of this study is to explore the interrelationships between consumer purchasing behavior, product innovation, and promotional strategies, and to develop a strengthened marketing strategy framework for the Chinese oat industry. In this study, the researchers used descriptive research methods to define the research conditions in detail and conducted in-depth evaluations of the variables studied. The research subjects are 385 consumers in Shandong Province, who were consciously selected based on specific purposes. The data collection was conducted through a survey questionnaire, followed by detailed data analysis using SPSS software. The analysis results show that the respondents' recognition of social influencing factors is at a moderate level, and brand loyalty and price sensitivity are key factors affecting consumer purchasing behavior. The oat industry is implementing product innovation strategies through market and consumer, product and process technology, and sustainable innovation recognized by respondents. At the same time, these companies are also conducting advertising, promotion, and sales activities as part of their promotional mix, which has gained recognition from respondents. Research has found significant correlations between brand loyalty and sustainable innovation, as well as between price sensitivity and sustainable innovation. Based on these findings, this study proposes an improved marketing strategy framework for the Chinese oat industry and suggests making appropriate adjustments according to industry characteristics to enhance its market competitiveness.

Keywords: organizational capabilities, business innovation, firm performance innovative business model framework, tourism enterprises

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1. Introduction

Marketing strategy refers to a systematic plan for a company to promote and sell its products and services in the market. It not only describes how to interact with potential customers and convert them into actual customers, but also covers key elements of enterprise core value transmission, customer information analysis, target market segmentation, and advanced market strategy. The formulation of marketing strategies can guide resource allocation, measure performance, and gain competitive advantages. In the current digital context, marketing strategies are more customer-centric, especially focusing on customer needs and interests, and are implemented accurately through the Internet. Consumer behavior analysis plays an important role in this by identifying customers' purchasing behavior and personalizing their experience. In addition, product innovation is also an indispensable part of marketing strategy, as it involves the development and application of new products, services, or processes. The marketing mix (4Ps) is equally crucial, as it covers aspects such as product, price, location, and promotion, helping businesses successfully position their market and meet their specific needs.

The market penetration and success of a company often depend on the effectiveness of its marketing strategy. Vitsentzatou et al. (2022) found that due to the digital revolution, the communication between businesses and customers is undergoing a transformation to meet the constantly changing needs and preferences of consumers. In the food and beverage industry, this change is particularly evident, as consumers' daily lifestyle changes directly affect their purchasing behavior. Therefore, marketers must adjust their strategies to ensure that their product innovation and marketing mix can effectively respond to market changes. The increasing emphasis of consumers on healthy eating, especially their preference for light and nutritious foods, is driving the development of the oat market. Oats have gradually become the preferred breakfast food for consumers due to their high nutritional value and convenient way of consumption. According to Mordor Intelligence, the global oat market is expected to maintain an average annual growth rate of 4.22% between 2023 and 2028, with the market size increasing from \$4.39 billion to \$5.4 billion. To seize this opportunity, oat producers and marketers need to develop strategies based on consumer behavior analysis, product innovation, and marketing mix, adapting to changes in market conditions and meeting consumer needs.

Although there have been many studies on marketing strategies in the food and beverage industry (Ofiaz, 2022; Pramudia et al., 2021; Bautista & Belandres, 2021), however, research on the oat industry is relatively limited. Although literature has discussed the health benefits of oats and related consumer trends (Smulders et al., 2018; Paudel et al., 2021), there is a lack of in-depth exploration of the factors that influence consumer behavior and purchasing decisions in the oat market. This study aims to fill this research gap by exploring marketing strategies in the oat industry, helping companies enhance their competitiveness, and promoting sustainable market development. As consumers' awareness of the health benefits of oats increases, the market demand for oat products is also constantly rising. This study will explore how companies in the oat industry can promote their products by applying marketing mix and understanding consumer behavior to meet the constantly changing preferences of consumers. Meanwhile, the study will analyze whether these marketing strategies can effectively attract consumers and meet their needs and interests.

Objectives of the study - This study conducted an in-depth analysis of the marketing strategies of China's oat industry and construct a strengthened strategy framework based on consumer behavior, product innovation, and promotional activities. The study evaluated consumer behavior from multiple dimensions, including their response to social impact, brand loyalty, and sensitivity to price changes. At the same time, the research also identified product innovation practices in the market, including customer and market demands, advances in product and process technology, and efforts in sustainable innovation. In addition, this study evaluated the

effectiveness of advertising, promotion, and advertising activities, and explored the correlation between these factors and consumer behavior and product innovation. Ultimately, based on these analyses, the study proposed an improved marketing strategy to promote the development and competitiveness of the oat industry.

2. Methods

Research Design - This study employed a descriptive research method. Hassan (2022) notes that a descriptive research design is a method used to describe or record the characteristics, activities, attitudes, beliefs, or opinions of a specific group. Its main purpose is to provide a comprehensive and accurate presentation of the collected data, rather than attempting to explore causal relationships between variables or predict future outcomes. This method helped to generate hypotheses, study trends, and identify patterns in the data. To identify predictor factors through correlation analysis, to establish predictive models through regression analysis and to collect primary data, researchers designed a survey questionnaire and validated its reliability and validity before distribution.

Participants - The research respondents are consumers of oat products. There are 384 respondents across China.

Instrument - The survey questionnaire is the primary tool for data collection in this study, used to understand the views of employees from various machinery manufacturing companies on the safety and empathy of banks and banking agreements. To design this questionnaire, researchers conducted an in-depth study of the literature related to the research variables and dimensions, and formulated the content of the questionnaire based on this foundation. During the questionnaire design process, researchers also obtained opinions from tutors and field experts, and thoroughly validated the questionnaire according to their feedback to ensure its content accuracy and relevance. The questionnaire is divided into three parts. The first part focuses on assessing consumer behavior, including aspects such as social influence, brand loyalty, and price sensitivity. The second part looks at product innovation practices, analyzing from the perspectives of market demand, customer feedback, product and process technology, and sustainable innovation. The final part aims to evaluate the corporate combination strategy in the fields of advertising, publicity, and promotion. To ensure the validity of the questionnaire, the researchers consulted academic advisors and adopted recommendations from an expert panel, enhancing the accuracy of the content and the reliability of the results. To test the reliability of the questionnaire, the Cronbach's Alpha coefficient was used. Data from at least 20 respondents were collected for this purpose.

Table 1

Reliability Test Results Summary Table

Indicator	Cronbach Alpha	Remarks
Social Influence	0.925	Excellent
Brand Loyalty	0.866	Good
Price Sensitivity	0.921	Excellent
Market and Customer Innovation	0.891	Good
Product and Process Technology Innovation	0.868	Good
Sustainable Innovation	0.880	Good
Advertising	0.886	Good
Publicity	0.908	Excellent
Sales Promotion	0.898	Good

> .90 – Excellent , > .80 – Good , > .70 – Acceptable , > .60 – Questionable , > .50 – Poor , < .50 – Unacceptable

Data Gathering Procedure - After incorporating the suggestions of the research advisor and finalizing the questionnaire design, the researchers utilized it as the primary tool for data collection. Following a successful reliability test, the researchers encoded the questionnaire using an online survey distribution platform in China and distributed it to the respondents. To ensure the smooth progress of the research, the researchers sent out formal letters to the management of the companies involved in the study, seeking permission to conduct customer perception research. Additionally, before the commencement of the research, the researchers ensured to obtain informed consent from all participants. The collected data was then summarized, analyzed, and provided

with a detailed explanation to draw the research conclusions.

Data Analysis - In this study, a variety of statistical techniques will be employed to analyze, code, and evaluate key documents and data. To achieve the research objectives, data will be processed using frequency distributions, weighted averages, and Pearson product-moment correlation analysis. All data will be examined and verified through statistical software. To ensure the reliability and validity of the data analysis, the study will use SPSS version 28.0 software to conduct a detailed analysis of the collected data.

Ethical Considerations - To ensure the validity and integrity of the research, the researchers strictly adhered to ethical standards throughout the process, ensuring that any information collected was used solely for research purposes. The researchers avoided any financial or personal conflicts of interest that could potentially influence their professional judgment from the outset. Before initiating the study, all necessary permissions were obtained, and participants were made aware of the purpose and process of the research. Researchers assured participants that the study was for academic purposes only and would in no way affect their safety or privacy. Researchers also ensured that respondents answered on a completely voluntary basis, and throughout the process, their safety and interests were fully protected. Ultimately, the research strictly guaranteed that no subjects were harmed or affected during the process.

3. Results & discussion

Table 2

Summary Table on Consumer Behavior

Key Result Areas	Composite Mean	VI	Rank
Social Influence	2.77	Agree	3
Brand Loyalty	2.81	Agree	1
Price Sensitivity	2.80	Agree	2
Grand Composite Mean	2.79	Agree	

Legend: 3.50 to 4.00: Strongly Agree · 2.50 to 3.49: Agree · 1.50 to 2.49: Disagree · 1.00 to 1.49: Strongly Disagree

Table 2 presents a summary of consumer behavior across key result areas. The grand composite mean of 2.79 reflects an overall agreement that these factors—brand loyalty, price sensitivity, and social influence—play important roles in consumer behavior. For the oat industry, this means that while building and maintaining brand loyalty is the top priority, addressing price sensitivity and leveraging social influence are also crucial for success. A well-rounded strategy that includes high-quality products, competitive pricing, and effective social engagement can help oat brands enhance their market position and meet consumer needs effectively. Brand loyalty ranks highest with a composite mean of 2.81, indicating strong agreement among consumers that loyalty to a brand is crucial. In the oat industry, this means that consumers are likely to stick with brands they trust and have positive experiences with. For oat brands, building and maintaining strong brand loyalty is essential for ensuring repeat purchases and a steady customer base. Effective strategies include delivering consistent product quality, engaging in effective marketing, and fostering a positive brand image to strengthen consumer attachment (Choudhary & Sahu, 2023).

Price sensitivity follows closely with a composite mean of 2.80, reflecting that consumers are notably attentive to price changes. In the context of the oat industry, this suggests that fluctuations in oat prices can significantly impact consumer purchasing decisions. Oat brands need to manage their pricing strategies carefully to balance affordability with profitability. Offering promotions, discounts, or bulk buying options can help mitigate the effects of price sensitivity and attract cost-conscious consumers. Social influence ranks third with a composite mean of 2.77, showing that consumers recognize the impact of social factors on their purchasing behavior. For oat products, this means that recommendations from friends, family, or social media influencers, as well as prevailing health trends, can affect consumer preferences. Oat brands can leverage social influence by engaging with influencers, garnering positive reviews, and aligning their products with popular health and wellness trends to enhance their appeal. Effective strategies include delivering consistent product quality,

engaging in effective marketing, and fostering a positive brand image to strengthen consumer attachment. Price sensitivity follows closely with a composite mean of 2.80, reflecting that consumers are notably attentive to price changes. In the context of the oat industry, this suggests that fluctuations in oat prices can significantly impact consumer purchasing decisions. In summary, for the oat industry, prioritizing brand loyalty while managing price sensitivity and leveraging social influence can drive consumer satisfaction and support sustained market growth (Weng & Song, 2015).

Table 3
Summary Table on Product Innovation

Key Result Areas	Composite Mean	VI	Rank
Market and Customer	2.80	Agree	2
Product and Process Technology	2.74	Agree	3
Sustainable Innovation	2.92	Agree	1
Grand Composite Mean	2.82	Agree	

Legend: 3.50 to 4.00: Strongly Agree, 2.50 to 3.49: Agree, 1.50 to 2.49: Disagree, 1.00 to 1.49: Strongly Disagree

In Table 3, the summary of product innovation is organized into three key result areas (KRAs) and is evaluated based on their composite means and verbal interpretations. The Grand Composite Mean of 2.82 falls within the "Agree" range, indicating that there is a general consensus on the importance of the assessed KRAs in product innovation. This mean suggests that respondents generally agree with the significance of the key result areas in driving effective product innovation. Sustainable Innovation ranks highest with a composite mean of 2.92, reflecting a strong agreement on its importance. This area includes practices such as developing energy-efficient products, utilizing alternative energy sources, and improving waste and water management. The high ranking indicates that respondents view sustainable innovation as crucial for enhancing environmental performance and meeting sustainability goals. For industries like oat production, focusing on sustainable innovation helps in reducing environmental impact and aligning with global sustainability trends (Bocken et al., 2020).

Market and Customer is ranked second with a composite mean of 2.80. This area involves understanding market needs, improving product design, and enhancing customer engagement. The agreement in this area suggests that addressing market demands and customer preferences is essential for successful product innovation. In the context of oat production, this means designing products that meet consumer expectations and adapting to market trends to maintain competitiveness. Product and Process Technology ranks third with a composite mean of 2.74. This area focuses on technological advancements in product design manufacturing processes. While still agreed upon, utilizing alternative energy sources, and improving waste and water management. The high ranking indicates that respondents view sustainable innovation as crucial for enhancing environmental performance and meeting sustainability goals. For industries like oat production, focusing on sustainable innovation helps in reducing environmental impact and aligning with global sustainability trends. it ranks slightly lower compared to the other KRAs, indicating that while technology is important, it may be perceived as less critical than sustainable innovation and market/customer focus. For the oat industry, improving technology in production processes and product development is important but may be secondary to addressing sustainability and market needs (Marin et al., 2016).

Table 4
Summary Table on Promotion Mix

Key Result Areas	Composite Mean	VI	Rank
Advertising	2.80	Agree	2
Publicity	2.83	Agree	1
Sales Promotion	2.76	Agree	3
Grand Composite Mean	2.80	Agree	

Legend: 3.50 to 4.00: Strongly Agree, 2.50 to 3.49: Agree, 1.50 to 2.49: Disagree, 1.00 to 1.49: Strongly Disagree

The summary table on the promotion mix highlights the effectiveness of different promotional strategies in

the context of the oat industry, as measured by their respective composite means. The key result areas (KRAs) of Publicity, Advertising, and Sales Promotion are evaluated to determine their impact and overall agreement among respondents. The grand composite mean of 2.80 indicates an overall agreement among respondents that these promotional strategies are effective, but it also suggests room for improvement. In the highly competitive oat industry, refining these strategies could further enhance brand visibility and customer engagement. Publicity ranks first, with a composite mean of 2.83, indicating that respondents generally agree on its importance as a promotional strategy. Publicity's leading position suggests that activities like exhibitions, business matching, and regular press releases are perceived as highly effective in promoting oat products. These strategies help in building brand awareness, connecting with potential partners, and reaching a broader audience, all of which are crucial for the competitive oat market (Wen & Song, 2015).

Advertising follows closely in second place with a composite mean of 2.80. This KRA highlights the role of social media, celebrity endorsements, and other advertising channels in driving consumer interest and product purchases. In the oat industry, advertising is vital for communicating the health benefits and unique selling points of oat products to a wide audience, particularly through platforms like Facebook and YouTube, which are popular among health-conscious consumers (Stewart & McDougall, 2014). Sales Promotion is ranked third, with a composite mean of 2.76. Although it ranks last, it still receives a solid agreement rating, emphasizing the value of special offers, discounts, and loyalty programs in encouraging purchases and fostering long-term customer relationships. For oat products, sales promotions can be particularly effective during trade fairs or special occasions, where consumers are more likely to try new products or brands.

Table 5
Relationship Between Consumer Behavior and Product Innovation

Variables	Rho	p-value	Interpretation
Social Influence			
Market and Customer	0.017	0.733	Not Significant
Product and Process Technology	-0.006	0.912	Not Significant
Sustainable Innovation	-0.009	0.855	Not Significant
Brand Loyalty			
Market and Customer	-0.083	0.105	Not Significant
Product and Process Technology	-0.081	0.115	Not Significant
Sustainable Innovation	-0.152**	0.003	Significant
Price Sensitivity			
Market and Customer	-0.088	0.086	Not Significant
Product and Process Technology	-0.080	0.117	Not Significant
Sustainable Innovation	-0.165**	0.001	Significant

***. Correlation is significant at the 0.01 level*

In Table 5, the computed rho-value of 0.17 suggests a weak but positive relationship, whereas a rho-value of -0.006 indicates an almost negligible relationship. Additionally, the p-values obtained were greater than 0.01, suggesting that the relationships in question were not statistically significant Rho-values as evidenced by a p-value less than 0.01. In the context of the oat industry, this means that consumers who perceive oat brands as leaders in sustainable practices environmental issues and prefer to support brands that align with their values. This is particularly relevant for oat products, which are often marketed as healthy, natural, and environmentally friendly alternatives. When an oat brand prioritizes sustainable innovation—such as using eco-friendly packaging, implementing water-saving agricultural practices, or reducing carbon emissions—it not only meets the immediate needs of environmentally conscious consumers but also strengthens long-term loyalty.

This relationship is supported by research that shows how sustainable innovation drives brand loyalty. According to Molden (2022), strategies like rainwater harvesting and desalination not only contribute to environmental sustainability but also reinforce a brand's commitment to responsible practices, which is key to securing consumer loyalty in industries that heavily rely on natural resources, such as oat production (Molden, 2022). Similarly, Teece (2022) emphasizes that dynamic capabilities, including sustainable product redesign, are crucial for companies looking to expand their market presence and maintain customer loyalty in a rapidly changing

environment (Teece, 2022). In the context of the oat industry, this means that consumers who perceive oat brands as leaders in sustainable practices are more likely to remain loyal to those brands. In today's market, consumers are increasingly aware of environmental issues and prefer to support brands that align with their values. This is particularly relevant for oat products, which are often marketed as healthy, natural, and environmentally friendly alternatives.

In the oat industry, this relationship is particularly relevant as consumers increasingly weigh the price of oat products against the sustainability initiatives of the brands offering them. Price sensitivity refers to how changes in price influence consumer behavior. When consumers are price-sensitive, they may be hesitant to pay a premium for products, even if those products are sustainably produced. However, a significant relationship between price sensitivity and sustainable innovation suggests that consumers are willing to consider sustainability as a factor in their purchasing decisions, even if it involves higher costs. This means that while consumers in the oat industry are concerned with price, they also value the sustainability efforts of the brands they choose, which can justify a higher price point. For oat brands, this relationship implies that investing in sustainable innovation can enhance their market appeal, even among price-sensitive consumers. For instance, if an oat brand implements sustainable farming practices, such as using less water or adopting renewable energy in production, it may initially face higher production costs. However, if these practices are effectively communicated to consumers, they might perceive the product's value as higher, justifying the price.

This dynamic is supported by research that underscores the importance of aligning pricing strategies with sustainability efforts. According to Krajewski, Ritzman, and Malhotra (2022), effective production planning that incorporates sustainable practices can lead to cost savings in the long run, which can be passed on to consumers or reinvested in further innovation (Krajewski, Ritzman, & Malhotra, 2022). Additionally, Teece (2022) argues that firms with strong dynamic capabilities, including the ability to innovate sustainably, are better positioned to navigate the challenges of price sensitivity while maintaining their competitive edge (Teece, 2022). They may be hesitant to pay a premium for products, even if those products are sustainably produced. However, a significant relationship between price sensitivity and sustainable innovation suggests that consumers are willing to consider sustainability as a factor in their purchasing decisions, even if it involves higher costs. This means that while consumers in the oat industry are concerned with price, they also value the sustainability efforts of the brands they choose, which can justify a higher price point. For oat brands, this relationship implies that investing in sustainable innovation can enhance their market appeal, even among price-sensitive consumers. For instance, if an oat brand implements sustainable farming practices, such as using less water or adopting renewable energy in production, it may initially face higher production costs.

Table 6
Relationship Between Consumer Behavior and Promotion Mix

Variables	Rho	p-value	Interpretation
Social Influence			
Advertising	-0.036	0.486	Not Significant
Publicity	-0.032	0.536	Not Significant
Sales Promotion	-0.078	0.127	Not Significant
Brand Loyalty			
Advertising	-0.010	0.845	Not Significant
Publicity	0.007	0.895	Not Significant
Sales Promotion	-0.037	0.475	Not Significant
Price Sensitivity			
Advertising	-0.019	0.716	Not Significant
Publicity	-0.002	0.976	Not Significant
Sales Promotion	-0.047	0.359	Not Significant

** Correlation is significant at the 0.01 level

In Table 6, the range from -0.032 to -0.078, suggest a minimal indirect relationship between social influence and the components of the promotional mix. Specifically, 0.010 indicates a very weak indirect connection between brand loyalty and advertising, while 0.037 shows a similarly weak link between brand loyalty and

promotions. Moreover, a ρ /rho of 0.007 points to a minimal direct association between brand loyalty and awareness. The range of ρ /rho values from -0.002 to -0.047 further underscores the very weak indirect relationship between social influence sub-variables and the promotional mix. Overall, these findings suggest that consumer behavior does not exhibit a statistically significant correlation with the promotional mix, as evidenced by p-values exceeding 0.01. The lack of a statistically significant relationship between consumer behavior and the promotion mix suggests that the promotional strategies employed may not be directly influencing consumer behavior in a meaningful way within the oat industry. This finding can have several implications for how oat brands approach their marketing and promotional efforts.

In general, the promotion mix encompasses various tools like advertising, publicity, sales promotion, and personal selling, which are used to communicate with consumers and encourage them to purchase products. However, if these strategies are not significantly affecting consumer behavior, it could indicate that the current promotional efforts are either not resonating with the target audience or that other factors—such as product quality, price, or brand loyalty—are playing a more critical role in driving consumer decisions. For the oat industry, this could mean that traditional promotional methods, such as discounts or advertisements, might not be as effective in swaying consumer choices as one might expect. Consumers of oat products may prioritize other factors, such as the nutritional content, sustainability practices of the brand, or even the brand's reputation, over the promotional tactics used. Furthermore, it could be useful for oat brands to explore more personalized and targeted marketing strategies that cater to the specific preferences and behaviors of their consumers. As highlighted by Holliman and Rowley (2022), digital content marketing that is engaging and tailored to the audience's needs can be more effective than broad, traditional promotions. This approach could include creating content that emphasizes the health benefits of oat products, their environmental impact, or stories about the farms and processes behind the brand.

Table 7
Relationship Between Product Innovation and Promotion Mix

Variables	Rho	p-value	Interpretation
Market and Customer			
Advertising	0.073	0.155	Not Significant
Publicity	0.066	0.200	Not Significant
Sales Promotion	0.015	0.773	Not Significant
Product and Process Technology			
Advertising	0.072	0.157	Not Significant
Publicity	0.062	0.229	Not Significant
Sales Promotion	0.001	0.981	Not Significant
Sustainable Innovation			
Advertising	0.016	0.752	Not Significant
Publicity	-0.002	0.974	Not Significant
Sales Promotion	-0.048	0.348	Not Significant

***. Correlation is significant at the 0.01 level*

In Table 7, the rho values ranging from 0.015 to 0.073 indicate only a slight direct relationship between market customers and the components of the promotional mix. Similarly, ρ /rho values between 0.001 and 0.072 reveal a very weak direct association between product and process technology and the promotional mix components. A ρ /rho of 0.016 suggests a modest direct link between sustainable innovation and advertising. However, the ρ /rho values of -0.002 and -0.048 for sustainable innovation with publicity and promotion, respectively, reflect minimal connections. These results indicate an absence of a significant statistical relationship between product innovation and the promotional mix, as the p-values are higher than 0.01.

This suggests that product innovation has little impact on the effectiveness of promotional strategies in the oat industry. Product innovation typically involves the development of new products or the improvement of existing ones to meet consumer needs, enhance performance, or offer new features. However, the promotional mix, which includes marketing strategies such as advertising, promotions, and publicity, aims to communicate these innovations. Ideally, product innovation should enhance the effectiveness of the promotional mix by

highlighting the unique selling points of the products.

The lack of a significant relationship indicates that in the oat industry, product innovation may not be effectively integrated into promotional strategies, or consumers may not perceive these innovations as influential in their purchasing decisions. This may indicate a disconnect between the content of innovation and the way it is communicated to the market. Although brands may have made progress in innovating products, such as improving nutritional content, developing new flavors, or enhancing sustainability, these efforts may not have been effectively translated into successful promotional strategies. Consumers may not respond positively to promotional activities, possibly because the marketing of innovations does not meet their needs or values, or the innovations themselves are not considered significant factors in purchasing decisions. Ideally, product innovation should enhance the effectiveness of the promotional mix by highlighting the unique selling points of the products. These results suggest that oat brands need to more closely integrate product innovation with promotional strategies. A potential strategy is to better communicate the unique advantages of innovations through targeted advertising that addresses consumer concerns, such as health benefits or environmental sustainability. In addition, Krajewski, Ritzman, and Malhotra (2022) noted that effective production processes and supply chain management are crucial to ensuring that product innovations can be marketed effectively.

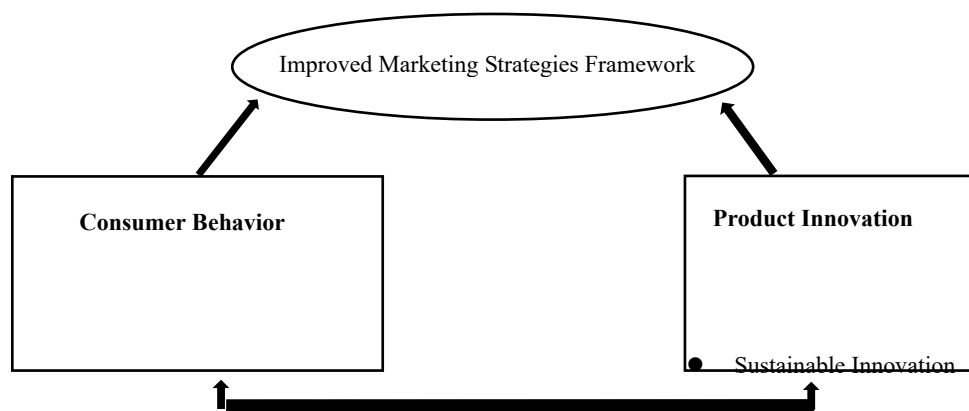


Figure 1. *Innovative Business Framework*

The Oat Industry Improved Marketing Strategy Framework proposed by the researcher was based on the relationship among factors affecting marketing strategies such as consumer behavior (brand loyalty and price sensitivity) and product innovation particularly sustainable innovation. The framework recognizes the significant relationship between brand loyalty and sustainable innovation. Oat brands can build and sustain consumer loyalty by consistently delivering products that align with consumers' values, such as environmental consciousness and health benefits. Understanding how price sensitivity influences purchasing decisions is crucial for positioning oat products competitively. The framework suggests strategies that balance pricing with perceived value, particularly in relation to sustainability. For example, premium pricing for sustainably sourced oats might be justified if consumers perceive a corresponding value in terms of quality or environmental impact.

The framework highlights the importance of sustainable innovation as a driver of both product differentiation and consumer loyalty. In the oat industry, this could involve developing more energy-efficient production processes, using environmentally friendly packaging, or creating products that cater to eco-conscious consumers, such as organic or non-GMO oats. The framework proposes an integrated approach to marketing, where consumer behavior insights and product innovation efforts are aligned. For example, advertising campaigns should highlight the brand's sustainable practices to appeal to environmentally conscious consumers, while sales promotions could offer incentives for trying new, sustainably produced products. Recognizing the interplay between price sensitivity and sustainable innovation, the framework suggests tailored promotions that appeal to different segments of the market. For instance, offering discounts on bulk purchases of sustainably produced oats can attract price-sensitive consumers while maintaining a focus on sustainability.

4. Conclusion and recommendations

The respondents showed a moderate level of agreement on social influence, brand loyalty and price sensitivity as factors affecting consumer behavior. The oat industry is manifesting product innovation strategies in terms of market and customer, product and process technology and sustainable innovation as agreed by the respondents. The companies are practicing advertising, publicity and sales promotion as part of the promotion mix as agreed by the respondents. There were significant relationships that exist between brand loyalty and sustainable innovation and price sensitivity and sustainable innovation. An improved marketing strategies framework for oat industry was developed.

Managers of oat brands may consider focusing on education, convenience, taste, and emotional connection to win over consumers and establish a strong market position. Oat companies may host innovation challenges like organizing contests or hackathons to crowdsource ideas for new oat products, packaging, or marketing campaigns. For improved marketing strategies, the oat industry in China may consider utilizing the proposed framework. Future researchers may use other dimensions of marketing strategies like value proposition and product positioning.

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