INDONESIAN JOURNAL OF
MULTIDISCIPLINARY SCIENCE

P-ISSN: 2808-5957
E-ISSN: 2808-6724

The Influence of Attitudes, Subjective Norms, Perception of Behavioral Control, and Product Attributes on Salvaco Cooking Oil Purchase Decisions

Muhammad Farras Alif, Yudha Heryawan Asnawi, Sufrin Hannan
Institut Pertanian Bogor, Indonesia
Email: mfarrasalif@gmail.com, yudha.asnawi@apps.ipb.ac.id, sufrin1963@gmail.com

Keywords:
QSPM, Theory of Planned Behavior, Structural Equation Modeling

ABSTRACT

The aims of this research are (1) to identify the consumer characteristics of Salvaco cooking oil (2) to analyze the influence of attitudes, subjective norms, behavioral control perceptions, and product attributes on the purchase decision of Salvaco cooking oil consumers (3) to formulate a marketing strategy that can be applied in the marketing of Salvaco cooking oil. Sampling is done by non-probability sampling method with purposive sampling technique. The result showed that the majority of respondents aged 26-35 years old, dominated by women as much as 60.2%, domiciled in Medan City, and working as private employees with upper middle income categories. SEM-PLS analysis results show that subjective attitudes and norms have a positive and significant effect on purchasing decisions as well as product prices and quality on product attributes have a positive and significant effect on purchasing decisions. The more positive the consumer attitude and the stronger the social drive around them, the more their tendency to buy Salvaco cooking oil will increase. Based on the results of QSPM analysis, Salvaco's first strategic priority is to expand distribution channels and digitize marketing. The second strategic priority is to increase brand awareness and add product variants. The last strategic priority is to utilize healthy products and internal raw materials for expansion into the UMKM market and premium segments.

INTRODUCTION

Cooking oil is one of the basic necessities that plays an important role in the cooking activities of the Indonesian people. The high consumption of cooking oil in Indonesia is supported by a diet that largely involves the frying process (Abed et al., 2018; Azme et al., 2023; Mannu et al., 2019; Monika et al., 2023; Sarno & Iuliano, 2019). According to the National Food Agency (*BPS* 2023), the per capita consumption of cooking oil for Indonesians in 2023 reached 9.56 kilograms per year, an increase of 0.9% compared to the previous year. This trend shows the importance of cooking oil in people's daily lives. In 2019, cooking oil consumption in Indonesia reached 8.8 kilograms per capita, with total national demand of around 2.4 million tons per year. This figure continues to increase along with population growth and changes in the lifestyle of urban communities. Based on data from Katadata (2023), in 2022 per capita cooking oil consumption rose to 9.46 kilograms, with national demand reaching 2.6 million tons.

Sales of cooking oil in the domestic market show significant fluctuations. In 2020, the COVID-19 pandemic impacted cooking oil consumption patterns, with sales of premium packaged cooking oil decreasing by 15% compared to the previous year. However, in 2021 there was an increase in demand due to economic recovery, with sales reaching 2.5 million tons for packaged cooking oil (Baso et al., 2022; Huda & Sidiq, 2023; H. Zhang et al., 2014).

Cooking oil consumption in Indonesia continues to grow significantly, in line with the development of the food industry and public habits of using cooking oil as a main ingredient in various cooking processes (Ganesan et al., 2019; Keogh-Brown et al., 2019; Mhatre et al., 2020; Y. Zhang et al., 2021; Zhuang et al., 2020). Based on data from the Central Statistics Agency (*BPS*), Indonesia is one of the countries with the highest level of cooking oil consumption in the world, considering its role in the daily lives of its people (*BPS* 2023). Cooking oil is used not only in households, but also in the processed food industry such as restaurants, food stalls, and factories. This high consumption is directly related to people's diets, which are dominated by a variety of fried foods, as well as to the availability of cooking oil at relatively affordable prices (Mucti et al., 2023; Nugroho & Salsabila, 2022; PASPI-Monitor, 2021; Puspita Sari et al., 2022; Yuliati et al., 2023).

These brands have good and consistent product quality and have been present in the market for a long time, which has earned them consumer trust. In addition, these brands have wide distribution throughout Indonesia, both in urban and remote areas, thus strengthening their dominance in the cooking oil market. The existence of these brands creates fierce competition in the cooking oil market, but still provides room for new products to innovate.

One of the relatively new cooking oil brands that has begun to gain public attention is Salvaco. Salvaco cooking oil is produced by PT Industri Nabati Lestari (*INL*), a subsidiary of the Nusantara Plantation Holding. Salvaco strives to meet domestic consumer needs by offering good product quality at competitive prices, targeting various consumer segments. Salvaco cooking oil is made from palm oil and produced by a company committed to quality and affordability. Although not as popular as other big brands, Salvaco seeks to capture market attention by providing quality cooking oil at more affordable prices (Salvaco 2023). It is claimed to have good nutritional value for health because it is processed using technology that helps preserve its nutritional content. As consumer awareness of the importance of health and environmentally friendly products increases, Salvaco has an opportunity to secure a larger share of the Indonesian market.

To compete with major brands, Salvaco must consistently promote its product through effective marketing strategies and expand its distribution across Indonesia. Even though it is still smaller compared to well-established brands, Salvaco has the potential to compete with them—especially if it can maintain product quality and meet the needs of health-conscious consumers. With affordable prices and an environmentally friendly production process, Salvaco can become an attractive alternative in the Indonesian cooking oil market (Wahyudi 2022). Therefore, Salvaco has the opportunity to achieve significant market share over time if its marketing strategy and product quality continue to be improved and aligned with consumer needs, particularly in relation to factors that influence purchasing decisions.

Consumers' purchasing decisions are influenced by various internal and external factors. Previous research has shown that product quality, price, and promotion have a significant effect on consumer decisions in choosing a product (Yok et al. 2023). In addition, lifestyle, product quality, and discounts are also important factors affecting the consumer decision-making process. The results of this study reinforce the understanding that a combination of these factors can significantly influence consumer preferences (Trisnawati et al. 2020).

According to Suryani (2013), in studying consumer behavior, there are three main dimensions to consider: internal factors, external factors, and situational factors. Internal factors include consumer perceptions and preferences, while external factors involve elements such as promotion and brand image. Situational factors, on the other hand, relate to the context of purchase and also influence buying decisions. These three factors interact with one another and provide an important basis for companies seeking to understand and predict consumer behavior in a competitive market (Ongsano and Sondak 2021).

Consumers' purchasing decisions are often shaped by various psychological factors and product attributes. In the context of consumer behavior, process. Theet al. (2022) found that product attributes significantly influence cooking oil purchasing decisions in Indonesia, with quality and price emerging as the most important factors. This research indicates that consumers tend to choose products that offer the best value according to their needs.

In the last five years, the Indonesian cooking oil market has faced various challenges, including fluctuations in raw material prices, intense brand competition, and changing consumer preferences. In 2022, the price of crude palm oil (*CPO*) rose sharply, directly affecting domestic cooking oil prices. This price increase altered consumption patterns, with some consumers switching from premium packaged cooking oil to bulk cooking oil. For Salvaco, as a brand aiming to expand its market share, these conditions highlight the importance of understanding consumer behavior comprehensively. In this context, the Theory of Planned Behavior can be used to analyze consumers' purchase intentions, while product attributes can be evaluated to identify which factors matter most to them.

Testing the variables that influence Salvaco cooking oil purchasing decisions using the Theory of Planned Behavior approach is important for developing an effective marketing strategy. This study aims to analyze how attitudes, subjective norms, and perceptions of behavioral control—as well as product attributes such as quality, price, and brand—affect consumer purchase decisions. It is also expected to make a practical contribution to companies in designing marketing strategies grounded in a deep understanding of consumer behavior. Furthermore, this study can serve as a reference for future research exploring the influence of attitudes, subjective norms, perceptions of behavioral control, and product attributes in different contexts.

METHOD

This research was conducted online through the distribution of questionnaires. Data collection took place from January 2025 to February 2025, while data processing was carried out in March 2025. The data used in the study consisted of primary data obtained through a survey by distributing an online questionnaire to consumers who had purchased Salvaco cooking oil. In addition, primary data was obtained from direct interviews with two experts who were considered to have the ability, capacity, and understanding of the company's condition through *the in-depth interview* method.

Sampling was conducted using *a non-probability sampling* method with a *purposive sampling* technique. *Purposive sampling* was used to collect questionnaire data from consumers who had purchased Salvaco cooking oil at least once, with an age group above 18 years old (Kusmiran 2011). *Purposive sampling* is a technique for determining samples with a specific purpose (Sugiyono 2016). The sample size in this study was determined using the formula by Hair *et al.* (2010), calculated as five times the number of indicators. The variables in the study comprised a total of 34 indicators, resulting in a required sample size of 170 respondents.

This research employed *a mixed method*, which combines quantitative and qualitative approaches in a single study to obtain a deeper and more comprehensive understanding (Asyari 2024). The quantitative approach utilized descriptive analysis and *SEM-PLS* analysis, while the qualitative approach applied a strategic framework, namely external factors, internal factors, *SWOT* matrices, and *QSPM*.

RESULTS AND DISCUSSION

Results of Internal Factor Analysis

Table 1 VRIO calculation results

No	Resources/Capabilities	V	R	I	Or	Evaluation Results
1	Raw material supply support from INL Holding	✓	✕	✕	✓	Temporary Competitive Advantage
2	Healthy and environmentally friendly cooking oil products	✓	✓	✓	✓	Sustainable Competitive Advantage
3	The price of the product is more affordable than the big competitors	✓	✕	✕	✓	Temporary Competitive Advantage
4	New brand image in the market (low brand awareness)	✓	✓	✕	✓	Competitive Parity
5	Emerging digital distribution and marketing strategies	✓	✕	✕	✓	Temporary Competitive Advantage

Source: primary data, processed data (2025)

Description: a. ✓✓✓✓ : Sustainable Competitive Advantage

b. ✓✓✓✕ : Temporary Advantage

c. ✓✓✕✕ : Competitive Parity

d. ✓✕✕✕ : Competitive Disadvantage

Healthy and environmentally friendly cooking oil products

a. Value

Cooking oil products that are positioned as healthy and environmentally friendly represent a resource of strategic value, in line with the shift in contemporary consumer preferences that increasingly pay attention to individual health and environmental sustainability. In the context of the cooking oil industry in Indonesia which is generally competitive in terms of price and volume, the existence of products with functional and ethical attributes provides significant differentiation opportunities. In particular, there is a tendency to increase demand from urban, upper-middle, and younger consumer segments, who show a preference for products with better nutritional content (such as low saturated fat, cholesterol-free, and vitamin fortification) and sustainable production processes (such as certified plantation-based, low carbon footprint, and deforestation-free). Thus, the characteristics of these Salvaco products not only provide direct benefits to consumers, but also strengthen the company's position in competition which increasingly leads to non-price value-added aspects.

In terms of economic value, this product opens up opportunities to achieve a higher level of profit margin than ordinary commodity products, considering that consumers in this segment tend to have lower price elasticity for products with guaranteed quality and ethical value. In addition, this product also allows Salvaco to access specialized and premium markets, including modern retail, certified hotels and restaurants, *e-commerce channels* dedicated to healthy products, and export markets that apply strict sustainability standards. The development of this product has long-term strategic implications, especially in the face of possible changes in domestic and international regulations related to the sustainability of palm oil-based products. Salvaco, through this product, can be considered to have better strategic resilience to regulatory dynamics and global market expectations. Thus, the "healthy and environmentally friendly" attributes of these products meet the "*value*" criteria in the VRIO analysis framework, as they provide economic, reputational, and strategic benefits relevant to the challenges and opportunities in the cooking oil industry today.

b. Rare

The cooking oil industry in Indonesia is still dominated by products that are oriented towards price efficiency and production volume, without prioritizing aspects of nutrition-based differentiation and sustainability. Products with a healthy and environmentally friendly image are still a niche segment that has not been massively worked on by major industry players, both in terms of product formulation, production process, and brand communication approach. Therefore, Salvaco products that explicitly target the market of consumers who are aware of health and environmental issues can be considered as an offering that is not commonly found in the domestic market. This scarcity is further reinforced by the fact that to produce products with "healthy and environmentally friendly" claims, access to sustainable supply chains, standardized production processes, and consistent quality control systems is required. In addition, meeting health and environmental certification requirements (e.g. RSPO, ISO 22000, or additive-free certification) also requires a significant investment of resources, both in terms of finance, time, and organizational capabilities.

Salvaco is in a relatively unique competitive position, as not all competitors have the strategic incentives or internal capacity to develop products with similar specifications. So, although in the long term the potential for imitation remains, as of now products with these characteristics are still relatively rare, especially in the domestic cooking oil market which is still oriented towards cost efficiency and distribution volume. Thus, in the *Rare dimension*, PT Salvaco's healthy and environmentally friendly cooking oil products meet the scarcity criteria because there are not many similar companies that offer similar value propositions with comparable quality, consistency, and market orientation.

c. Inimitable

The uniqueness of Salvaco's product formulations that combine health aspects (such as low saturated fat and free of trans cholesterol) with sustainability principles makes them not only innovative, but also difficult for competitors to replicate. This complexity is reinforced by long-term investments in research on alternative plant-based feedstocks, such as sustainable palm oil and local coconut oil, which require significant time and resources to replicate.

Good relationships with local farmers are not only contractual, but also involve social and cultural aspects, such as community-based coaching, training, and empowerment. These elements create *social* complexity, which is an intangible dimension that cannot be bought or imitated instantly by other companies. The combination of *causal ambiguity*, *historical uniqueness*, and *social embeddedness* makes these advantages highly inimitable, and the foundation of Salvaco's long-term competitive advantage in the increasingly competitive healthy cooking oil market.

d. Organized

The success of Salvaco's differentiation strategy is determined not only by the existence of unique resources, but also by the level of readiness of the organization in managing, coordinating, and utilizing those resources strategically. Salvaco demonstrates a high *organizational alignment capacity* through a managerial structure that supports sustainability practices and product innovation. This is reflected in the establishment of a special research and development unit (RdanD) that focuses on the formulation of healthy cooking oil, as well as the integration of *green supply chain management* principles into the company's supply chain.

In addition, *data-driven decision-making* systems, the use of environmentally friendly production technologies, and periodic training for the workforce in terms of quality, cleanliness, and sustainability, show that organizations not only have superior strategies, but also internal capabilities to execute them consistently.

Salvaco also leverages information technology to oversee operational efficiencies and ensure compliance with environmental certification standards (such as ISPO or RSPO), which indirectly enhances brand credibility in premium markets. With an adaptive, responsive, and sustainability-oriented organization, Salvaco is able to convert resource excellence into *sustainable competitive advantage*.

The *sustainable competitive advantage* owned by Salvaco through the development of oil products provides high *value* because it answers market trends that are increasingly leading to *health-conscious consumption* and *green consumerism*. Its *rare* characteristics are reflected in the limited number of players in the domestic cooking oil industry who are able to combine the two attributes consistently. In addition, Salvaco's success in developing formulations, managing green supply chains, and building strong relationships with local farmers and certification bodies makes it *difficult to imitate*. The support of the organizational structure, trained human resources, and quality management and sustainability systems show that the company has been *well-organized* in executing the strategy. Therefore, these advantages are long-term and difficult to match.

To maintain and maximize the sustainable competitive advantage of healthy and environmentally friendly cooking oil products, Salvaco needs to develop a long-term strategy that focuses on selectively expanding the market into the domestic premium segment as well as opening up export market access to countries with a high awareness of health and sustainability, such as Japan, Europe, and Australia. This strategy needs to be supported by strengthening brand positioning through educational campaigns that highlight the added value of products, such as low saturated fat, free of trans cholesterol, and produced through verified environmentally friendly processes. In addition, to increase public credibility and trust, Salvaco is advised to adopt various international sustainability certifications such as RSPO, ISO 14001, as well as compile structured and transparent ESG reports as a form of accountability to consumers and investors. Internally, companies also need to encourage product innovation in a sustainable manner by developing new formulations that are relevant to today's health trends through collaboration with research institutions, academics, and healthy food industry players. This *co-creation* approach not only increases market relevance, but also strengthens consumers' emotional attachment to the Salvaco brand. By combining a strategic market approach, strengthening a reputation for sustainability, and sustainable and organized innovation, Salvaco can ensure that its competitive advantage not only lasts in the long term, but also lays the foundation for more inclusive growth and is adaptive to global market dynamics.

Emerging digital distribution and marketing strategies

a. Value

The digital distribution and marketing strategy being developed by Salvaco has strategic value in responding to changes in consumer behavior and increasingly digitized market dynamics. The digitalization of distribution channels allows Salvaco to reach consumers more efficiently, especially in areas not covered by conventional distribution networks. In addition, social media-based digital marketing and e-commerce provide flexibility in building brand communication, increasing product visibility, and driving customer acquisition at a relatively low cost. The value of this strategy is even more relevant in the context of the national cooking oil industry, where the shift in consumer preferences to online platforms has increased significantly after the COVID-19 pandemic. Therefore, the existence of this strategy contributes to the increase of Salvaco's competitiveness, although it is still in the development stage.

Another challenge in responding to changing consumer preferences, the digital strategy developed by Salvaco contributes directly to operational efficiency and expanded market access. Companies can minimize reliance on conventional distributors by adopting a direct-to-consumer sales model through digital platforms, which in turn lowers distribution costs and increases profit margins. In the context of the Indonesian cooking oil market which is very sensitive to prices, this efficiency is an important factor to maintain product competitiveness, especially in the lower middle segment. On the other hand, this strategy also opens up opportunities for Salvaco to access the urban market segment and millennials who have a high tendency to make online purchases. Thus, the strategic value of the digital distribution and marketing approach lies not only in the expansion of sales channels, but also in the company's ability to adapt adaptively to digital transformation in the food sector.

b. Sweet

In the salvaco process in providing digital strategies to create value, this approach is not classified as a rare resource, because it has become a common practice among food industry players, including small to large-scale cooking oil producers. Most of the major competitors in the industry have adopted digital platforms for both marketing and distribution, as well as having greater resources to expand their digital reach. Therefore, Salvaco's use of digital channels does not create significant differentiation in the market, as similar approaches are also implemented by many companies in relatively similar scope and scale. This strategy indicates that Salvaco has not been able to make its digital approach a differentiating factor that provides an exclusive advantage.

The digital distribution and marketing strategies used by Salvaco do not reflect the characteristics of scarcity in the context of the national cooking oil industry. Digital transformation has become a common response adopted by various companies, both small and large, along with the increasing penetration of information technology and changes in consumer behavior post-pandemic. Large companies such as Filma, Bimoli, and Tropical have already integrated digital marketing into their business ecosystems with wider reach and effectiveness. The digital marketing practices carried out by Salvaco are currently within the limits of a relatively uniform strategy with competitors. The absence of uniqueness in approaches, technologies, and distribution channels shows that this strategy is not classified as a *rare resource*, so it cannot be the foundation of sustainable competitive advantage.

c. Inimitable

From an imitability point of view, the digital distribution and marketing strategy implemented by Salvaco does not meet the element *of inimitable*, as it does not contain components that are complex, causally ambiguous, or based on a long history that is difficult to replicate. The digital models used, such as the use of marketplaces and social media, are open technologies that can be accessed and applied by anyone in the industry. In addition, there are no specificities in the organization's system or culture that make this strategy unique and difficult for competitors to replicate. As a result, these strategies are particularly vulnerable to replication, especially by competitors with greater price competitiveness, brand equity, or digital promotion capacity.

The digital strategy executed by Salvaco does not have unique characteristics that are difficult for competitors to emulate. Key components such as the use of social media, the use of e-commerce, and distribution based on digital platforms are common and widely available to all industry players. The technology used does not require high investment or special expertise that creates structural imitation barriers. Salvaco's digital marketing approach also does not show a close connection to the company's historical context, exclusive organizational culture, or internal social complexities that can create its own uniqueness. The larger organizational capacity of competitors even allows for the replication of this strategy on a faster and more massive scale. The absence of imitation barriers makes this strategy a generic resource and open to practice by other business entities.

d. Organized

Salvaco has demonstrated the existence of an organizational structure that supports the gradual and targeted implementation of digital strategies. The company began building a digital marketing team, conducting data-driven market segmentation, and utilizing online platforms to improve the effectiveness of communication with consumers. These efforts reflect that Salvaco has organized digital resources systemically, although not yet on an optimal scale. The organization's ability to manage digital distribution strategies provides a strong enough foundation to increase the company's competitiveness in the national cooking oil market that is increasingly open to online transactions. However, the maturity level of this system still needs to be strengthened in order to be able to compete with other industry players who have optimized digital transformation more comprehensively.

Salvaco's organizational structure has accommodated the implementation of digital strategies through the formation of a marketing team focused on online channels. The use of e-commerce and social media platforms has been consistently carried out by the relevant work units, although still on a limited scale. The coordination flow between departments handling production, marketing, and distribution shows that there is an integrated management basis in supporting digital transformation. The company's internal capacity is starting to be directed to adapt its operations to the needs of the increasingly digitized market. Management's willingness to allocate resources, develop online communication strategies, and build relationships with digital distribution partners is an indicator that the company has organized these capabilities functionally.

Based on the results of the evaluation, Salvaco's digital distribution and marketing strategy produces a *temporary competitive advantage*, because the strategy has value and has been managed quite well, but it is not rare and easy to imitate. In the context of a highly competitive and player-dense cooking oil market, this position provides Salvaco with the opportunity to grow rapidly in the short term, especially in reaching the digital-native segment and expanding distribution directly to consumers. However, in the absence of technological differentiation, a strong brand narrative, or comprehensive digital integration, this advantage risks being lost due to pressure from competitors with more aggressive and massive digitalization capabilities.

To strengthen its competitive position and turn a temporary advantage into a sustainable advantage, Salvaco needs to develop a more integrated, innovative, and data-driven digital approach. Strategies that can be applied include strengthening its own e-commerce system, personalizing communication based on consumer behavior algorithms, and collaborating with digital platforms that have a wide customer base. In addition, the development of *digital storytelling* that highlights the value of sustainability, health, and social impact of Salvaco products can also increase consumers' emotional attachment to the brand. By directing digital strategies on aspects that are more difficult to replicate and based on the company's unique values, Salvaco can increase the chances of achieving a long-term competitive advantage.

Results of External Factor Analysis

Table 2 Calculation results *Porter's Five Forces*

No.	Category Ports	Parameter	Average Score	Information
1	The Threat of Newcomers	Product differentiation	4.0	Tall
		Capital requirements	4.3	Tall
		Cost advantages	4.3	Tall
		Supplier access	4.0	Tall
		Government policy	4.0	Tall
2	Substitution Products	The presence of the product of the same function	4.0	Tall
		Technological development rate	4.0	Tall
		Price of substitution products	4.7	Very High
		Product switching costs	4.0	Tall
3	Bargaining Buyers	Number of customers	3.0	Keep
		Product uniqueness	4.0	Tall
		Buyer redirection fees	4.0	Tall
		Profits earned by buyers	4.0	Tall
		The importance of product quality	4.3	Tall
4	Supplier Bargaining	Number of customers	3.3	Keep
		Number of suppliers	3.3	Keep
		Differentiation of supplied products	3.0	Keep
		The role of products in the industry	4.0	Tall
		Customer importance for suppliers	4.3	Tall
		Threat of substitution products	4.0	Tall
		Threats of future integration by suppliers	4.7	Very High
5	Competition Between Competitors	Number of competitors	4.3	Tall
		Industry growth	4.3	Tall
		Fixed costs	3.7	Keep
		Capacity building	4.3	Tall
		Competitor characteristics	4.3	Tall
		Differentiation	3.7	Keep

Source: primary data, processed data (2025)

The threat of newcomers

Based on Table 2, the threat of new entrants has a score of 4.1 with a high category. This value shows that the barriers to entry into the cooking oil industry can be overcome by new players, especially through a competitive pricing approach, digitalization of distribution, and market penetration with new proposition value. The open market structure and homogeneity of products make this market highly susceptible to disruption by adaptive and innovative newcomers. Salvaco must mitigate this through brand strengthening and distribution access.

The structure of the cooking oil industry in Indonesia shows a relatively high level of openness to new players. Newcomers can enter this industry if they are able to meet the requirements of capital, licensing, and distribution access that are increasingly affordable due to digital technology. The existence of homogeneous products and consumer preferences that are not yet completely loyal to one brand increase the likelihood of successful market penetration by new companies. Salvaco faces a potential threat from new companies that adopt aggressive marketing strategies and offer competitive pricing. The imbalance of brand power and limited market penetration make Salvaco more vulnerable to market share erosion. In this context, companies need to strengthen their unique value proposition and increase barriers to entry through certification, distribution partnerships, and consumer education on product excellence.

The level of threat from newcomers in the cooking oil industry is reinforced by the low differentiation of products in most markets, which makes the psychological barriers of consumers to try new brands low. Newcomers with aggressive digital promotional capabilities, extensive online distribution networks, and strong sustainability narratives have the potential to erode the market share of existing players, including Salvaco. The penetration of technologies such as *e-commerce* and *quick commerce* (Q-commerce) platforms opens up market access that was previously concentrated in large players who have physical distribution infrastructure. The ease of this technology reduces the dependence of newcomers on traditional distribution channels, thereby accelerating product entry time and adoption by the market.

In the context of regulations, although SNI certification and BPOM distribution permits remain a must, the OSS (Online Single Submission)-based licensing system has accelerated the business legality process. This means that newcomers can enter the market at a higher speed than before, if they have a lean and adaptive business model. In addition, changes in post-pandemic consumption patterns that tend to support healthy, environmentally friendly, and transparent products in the supply chain have created a new space in this industry landscape. This is favorable for new players who are able to respond quickly to trends, but it is a challenge for companies like Salvaco that are in the process of building consumer loyalty and strengthening their brand.

To respond to the high threat from new entrants, Salvaco needs to implement a comprehensive strategy that focuses on increasing barriers to entry through sustainability-based differentiation of products and additional nutritional value, such as the use of eco-friendly packaging and vitamin fortification. Companies must also build consumer loyalty through an emotional and educational approach that emphasizes health excellence and commitment to the environment. In addition, Salvaco needs to establish exclusive partnerships with local distributors and digital platforms to lock distribution access and inhibit the penetration of new products. Strengthening the value chain through collaboration with farmer cooperatives and agritech startups will increase operational efficiency while strengthening the company's social legitimacy. On the internal side, optimization of production technology and digitization of the supply chain must be carried out to lower unit costs and create a competitive economies of scale, so as to be able to withstand price attacks from aggressive new competitors. These strategies must be implemented in an integrated manner so that Salvaco can maintain its position and increase its resilience to market disruptions by new players in the cooking oil industry.

Threat of substitution products

Based on Table 2, the threat of substitution products has a score of 4.3 with a very high category. This score indicates that consumers have many alternatives to cooking oil products, both in terms of similar products (coconut, olive, canola) and new cooking methods (air fryer, steam). Health trends and a low-oil lifestyle are accelerating the consumer shift. This poses a critical threat to the sustainability of demand if Salvaco does not carry out product innovation and market education.

The existence of substitute products in the cooking oil sector is increasing as consumer awareness of health and sustainability grows. Products such as coconut oil, canola, olive oil, as well as low-oil cooking methods (such as *air fryers*) have become potential substitutes that directly shift demand to conventional cooking oils. Substitution products have a significant impact on consumer purchasing behavior, especially in the upper middle segment who have high nutritional literacy and purchasing power. Salvaco, which offers healthy and environmentally friendly products, has the opportunity to adapt to these changes, but the success of such adaptation is highly dependent on the effectiveness of value-added communication and product differentiation against more popular substitutions.

The high threat of substitution products in the cooking oil industry reflects a shift in consumer preferences towards healthier alternatives, such as olive oil, coconut oil, and the use of oil-free cooking technology, which are increasingly accessible as e-commerce and public health education grow. Under these conditions, Salvaco must position itself not only as a cooking oil manufacturer, but as a provider of healthy cooking solutions that are relevant to modern lifestyle trends. Strategies that can be implemented include health-based product innovation, such as low-cholesterol oils, strengthening sustainability narratives in marketing communications, and educating consumers about product excellence through digital channels and partnerships with healthy lifestyle communities. In addition, Salvaco needs to expand its product line targeting specific segments such as young housewives, vegans, or environmentally conscious consumers, in order to narrow the substitution space. By strengthening the emotional and functional differentiation of products, Salvaco can create high brand loyalty and reduce consumers' dependence on generic and functional substitution options.

Buyer's bargaining power

Based on Table 2, the buyer's threat has a score of 3.9 with a high category. This value reflects that consumers have strong bargaining power because the market is filled with many choices of comparatively comparable quality. Switching between brands is very easy and is influenced by promotions, pricing, and availability. Salvaco, which does not have high brand loyalty, is in a vulnerable position if it does not build a strong value proposition and consumer engagement. Consumers in the cooking oil industry have high bargaining power due to the wide availability of product alternatives and their ability to make price and quality comparisons quickly. In addition, the low cost of switching between brands increases the likelihood of *switching behavior*. Salvaco is facing pressure to maintain customer loyalty amid price competition and promotions. Although the products offered have health value, the lack of brand awareness reduces the company's *bargaining position*. Therefore, the medium-term strategy needs to be focused on creating higher value through packaging innovation, educational *branding*, and customer loyalty programs that are not yet a *concern* for the company.

The high bargaining power of buyers in the cooking oil industry is influenced by the homogeneity of products in the market, easy access to price information, and low costs of switching between brands which gives consumers high flexibility in purchasing decision-making. This condition is reinforced by consumer behavior that is increasingly rational and price-sensitive, causing loyalty to brands to become weak, especially in the lower middle class segment. To deal with these pressures, Salvaco must systematically build a value differentiation strategy, emphasizing health, sustainability, and food safety aspects that competitor brands do not have. In addition, Salvaco needs to develop digital-based loyalty programs, expand brand communication through educational campaigns, and collaborate with the housewife community and MSME actors to increase emotional attachment to products. Salvaco is also advised to implement an adaptive *pricing* approach based on market segmentation, in order to remain competitive without sacrificing quality perception. These strategies, when implemented consistently and integrated, will strengthen the company's bargaining position with consumers and reduce its vulnerability to demand fluctuations caused by *switching behavior*.

Competition between competitors

Based on Table 2, the buyer's threat has a score of 4.1 with a high category. This high score reflects that the cooking oil industry is experiencing very intense competition, characterized by many large players, price wars, and high volume needs. Salvaco had to face old players who had a large economy, a wide distribution network, and market dominance. To survive, Salvaco needs to make strategic differentiation based on added value and distribution efficiency.

Competition in the cooking oil industry in Indonesia is very intensive, characterized by the large number of established players, product homogeneity, and high price sensitivity among consumers. The dependence on large sales volumes encourages manufacturers to continue to compete in terms of pricing, distribution, and promotion. Salvaco's biggest challenge lies in its inability to compete directly with market leaders in terms of distribution scale and market dominance. Nevertheless, a differentiation strategy based on health and sustainability values can be a competitive advantage when combined with proper market segmentation and consistent brand communication support. Salvaco must pursue production cost efficiency while building strong brand equity in the environmentally and health-conscious consumer segment.

The high level of competition between companies in the cooking oil industry in Indonesia is influenced by the competitive market structure, the number of dominant players such as Bimoli, Filma, SunCo, and Tropical, and the homogeneity of products that cause differentiation to be limited. The characteristics of the capital-intensive and distribution-intensive industry cause companies to compete not only in terms of price, but also in product availability, distribution speed, and brand strengthening in various sales channels, both traditional and digital. In these conditions, Salvaco, which is still in the growth phase, faces direct pressure from large companies that already have consumer loyalty, a wide distribution network, and superior production costs. To be able to survive and grow in an intensive competitive structure. Salvaco needs to design and implement a focus strategy based on market segmentation that specifically targets consumer groups with specific preferences for value-added products, such as health, environmental sustainability, and food safety aspects, in order to create a non-generic competitive advantage, such as health-conscious and environmentally conscious consumers. In addition, Salvaco must optimize digital marketing technology to increase brand visibility and accelerate market penetration. *Value-based differentiation*, strategic distribution partnerships, and the integration of brand messages in the sustainability narrative can improve a company's competitive position. This strategy needs to be supported by operational efficiency and organizational agility, so that Salvaco can compete dynamically in the face of market changes and growing competitive pressures.

The results of Porter's Five Forces' analysis of the cooking oil industry show that Salvaco operates in a highly competitive and pressured industrial environment from various strategic directions. The threat of new entrants (score 4.1) is relatively high, as low barriers to entry and ease of adoption of digital distribution technology have opened up opportunities for new brands to enter the market through aggressive pricing or promotional strategies. On the other hand, the threat of substitution (score 4.3) is even more significant, driven by a shift in people's consumption patterns towards healthier alternatives such as olive oil, coconut oil, and the use of low-oil cooking utensils such as air fryers, which are now increasingly popular among urban and young consumers.

The bargaining power of buyers (score of 3.8) also shows high pressure, along with high price sensitivity, many product alternatives, and consumer behavior that is easy to change brands due to the perception of cooking oil as a homogeneous commodity. In this case, Salvaco has to face the fact that consumer loyalty has not been firmly established, especially in the midst of the dominance of big brands that have been present in the market for a long time. The bargaining power of suppliers (score of 3.9) is also a challenge, given Salvaco's dependence on CPO raw materials, whose prices and supply are greatly influenced by global dynamics, export-import regulations, and the concentrated structure of the palm oil market. Although Salvaco receives supplies from INL Holding, the company still needs to anticipate fluctuating risks that come from outside of internal control. Finally, the competition between existing players (score 4.1) is in the high category, with a market that has been dominated by large manufacturers such as Bimoli, Filma, Tropical, and SunCo that have distribution scale, brand strength, and operational efficiency that are difficult to compete with by new players.

The current condition of the cooking oil market is also characterized by two major trends: first, there is price pressure due to government intervention in the highest retail price policy (HET); and second, increasing consumer awareness of healthy and sustainable products. In the midst of this landscape, Salvaco has the opportunity to pursue value-based differentiation by prioritizing products that are not only healthy, but also produced environmentally and socially responsible. However, this opportunity can only be realized if the company is able to develop a strong marketing strategy, build loyalty through education, and streamline operations through strategic partnerships and technology. Thus, Salvaco needs to position itself not only as a cooking oil producer, but as an innovative player in the category of healthy and sustainable food products, in order to be able to survive and grow in this highly competitive industry structure.

SWOT Matrix

Table 3 Results of SWOT matrix analysis

Internal / External	**Strength (S)**	**Weakness (W)**
	1. Quality and healthy products. 2. More affordable prices 3. Promotion and marketing are growing 4. Raw material support from INL Holding	1. Brand image is still low 2. Uneven distribution 3. Limited product variants
Opportunity (O)	S-O Strategy	W-O Strategy
1. The growth of the food industry and MSMEs is a trend 2. Government support for local products 3. Fluctuations in the price of CPO raw materials	1. Utilizing a healthy image and affordable prices to enter the MSME and local markets through active promotions (S1, S2 and O1) 2. Collaboration with the government and MSME programs (S4 and O2)	1. Increase brand awareness through local campaigns. (W1, W2, O1, and O2) 2. Expand product variants to better attract growing market segments (W3,O1, O2)
Threat (T)	S-T Strategy	W-T Strategy
1. Fierce competition from big brands 2. Economic instability and people's purchasing power 3. Changes in export and distribution regulations	1. Use the power of promotion and product quality to face the competition of big brands (S2, S4 and T1) 2. Strengthen positions at affordable prices (S1, S3, and T2)	1. Diversification of distribution channels so as not to be affected by regulations and purchasing power (W2 and T3) 2. Invest in brand improvement so as not to sink in the market. (W3 and T1)

Source: primary data, processed data (2025)

Table 3 shows eight alternative strategies resulting from a combination of internal and external factors. The alternative strategies obtained are as follows:

a. Strategi S-O (*Strengths – Opportunities*)

An S-O strategy is a strategy that uses the internal power of a restaurant to take advantage of external opportunities. The Salvaco company leverages internal strengths in the form of healthy product quality and competitive prices to seize opportunities from the food industry's growth trends and government support for local products.

Salvaco cooking oil products that prioritize elements of health, sustainability, and affordable prices are the main weapon to fill the niche market for MSMEs and consumers who are increasingly aware of the importance of healthy food. In the context of the current national market, the demand for low-cholesterol and environmentally friendly products has increased significantly, especially from the middle to upper household sector as well as local culinary actors. Salvaco, which gets raw material supplies from INL's holding, has high bargaining power to maintain price stability amid global vegetable oil supply uncertainty. By leveraging its growing promotions, Salvaco can expand its distribution and reach potential new market segments, while strengthening its position as a mid-sized player with strong differentiation value.

b. Strategi W-O (*Weaknesses – Opportunities*)

The W-O strategy is a strategy to overcome weaknesses by taking advantage of existing opportunities. Salvaco overcomes internal weaknesses in the form of low brand perception and limited product variants by taking advantage of food industry growth opportunities and government support for the MSME sector.

The current condition of the cooking oil market shows the dominance of large brands that have been established nationally. On the other hand, there is an increase in consumer preference for products with a local, healthy, and value-added identity. In this situation, Salvaco can increase market penetration by strengthening digital-based brand awareness campaigns and partnership programs with government-assisted MSME actors. This effort can also be enriched by the development of diversification of product variants that adapt to local consumer preferences, such as economical packaging sizes, vitamin fortification options, or organic variants. Through this approach, Salvaco not only closes internal weaknesses but also transforms into a player that is adaptive to changes in consumer behavior.

c. Strategi S-T (*Strengths – Threats*)

S-T strategy is a strategy that uses the company's strength to avoid or reduce the impact of external threats. Salvaco companies leverage the key strengths of internal raw material support, active promotion, and price competitiveness to face external threats such as stiff competition from big brands and national economic pressures.

The cooking oil industry in Indonesia is in a competitive situation, characterized by many large players implementing low price strategies and wide distribution. Salvaco needs to prioritize value-added advantages such as healthy quality and partisanship to local products to attract consumers who do not only consider price. With a stable supply of raw materials from its own business group, the company has the advantage of maintaining cost efficiency while maintaining continuity of supply. Additionally, promotions that emphasize aspects of sustainability and partnerships with local farmers can create strong emotional differentiation. This strategy is important in the midst of price fluctuations and pressure on people's purchasing power due to national economic uncertainty.

d. Strategi W-T (*Weaknesses – Threats*)

The W-T strategy is a strategy that is carried out to reduce internal weaknesses and avoid external threats. The Salvaco company seeks to minimize internal weaknesses and anticipate external threats by gradually restructuring distribution and repositioning the brand.

In a market situation marked by economic uncertainty, changes in export regulations, and pressure from big brands, Salvaco needs to adapt through mitigating strategies. Weaknesses such as uneven distribution and low brand awareness can be compensated for by the use of digital distribution channels (e-commerce) as well as expansion into modern retail on a local scale. This strategy can cut long distribution lines and improve logistics efficiency. In addition, the gradual repositioning of the brand needs to be carried out with an emphasis on the narrative of quality, health, and social impact, to increase consumer engagement. With this approach, Salvaco can survive and maintain operational sustainability even in high-risk and dynamic market conditions.

The results of the SWOT matrix analysis show that Salvaco has a combination of internal strength that is quite maintained and stable, especially in healthy product quality and competitive prices, supported by the support of raw material supply from internal holding and promotions that are starting to develop. Externally, companies are faced with huge market opportunities as consumer awareness of healthy food products increases and government support for local industries. However, Salvaco also faces internal challenges in the form of a strong brand perception, uneven distribution, and limited product variants that can limit market expansion. Externally, dynamics such as price competition from major players, economic instability, and potential regulatory changes are threats that need to be anticipated adaptively.

Based on the company's position in the IE Matrix in Cell II, the suggested strategy is the "*Grow and Build*" strategy. This means that Salvaco is in a fairly good internal condition and has high market opportunities, so the company needs to strengthen internal resources while expanding the market gradually and selectively. The combination of SO and WO strategies is a priority, namely by utilizing existing strengths to seize growth opportunities, as well as minimizing structural weaknesses in order to compete more effectively in the rapidly growing healthy cooking oil market. Therefore, the recommended strategic direction is to increase investment in digital marketing activities, strengthen distribution, and innovate product variants in accordance with consumer trends. This integrated and consistent SWOT-based strategy will be a solid foundation for Salvaco to grow sustainably and build a competitive advantage in the increasingly competitive cooking oil industry.

Salvaco's strategy recommendations based on priorities

Table 4. Salvaco's strategic priorities

Strategy Code	Types of Strategies	Brief Description of the Strategy	TAS Score	Priority Order
A3	ST/WT	Expanding distribution channels and digitizing marketing to face competition and regulatory changes	4.86	1
A2	WO	Increase brand awareness and add product variants to attract new consumers	3.64	2

A1	SO	Utilizing healthy products and internal raw materials for expansion into the MSME market and premium segments	3.59	3

Source: primary data, processed data (2025)

The results of the QSPM analysis show that of the three alternative strategies prepared based on a combination of SWOT, the A3 strategy (ST/WT Strategy) obtained the highest Total Attractiveness Score (TAS) score of 4.86, followed by the A2 strategy (WO Strategy) of 3.64, and the A1 strategy (SO Strategy) of 3.59. This score reflects the relative attractiveness of each strategy in addressing internal and external factors that have been identified through the previous IFE and EFE matrices.

Based on Table 4, the first strategic priority is formulated as a strategy, namely expanding distribution channels and marketing digitalization to face competition and regulatory changes. Salvaco is in a highly competitive cooking oil industry, dominated by large brands that have wide distribution, massive promotions, and high bargaining power. In this context, Salvaco faces threats in the form of fierce competition (T1), consumer purchasing power instability (T2), and dynamic distribution and export regulations (T3). However, Salvaco has strengths in the form of raw material support from internal holding (S4) and growing promotional capabilities (S3). Therefore, the main strategy suggested is to expand digital-based distribution channels, through the optimization of e-commerce platforms, integration into national marketplaces, and digital marketing based on consumer data.

The second strategy priority is to formulate a strategy, which is to increase brand awareness and add product variants to attract new consumers. The main weakness of Salvaco lies in its unstrong brand image (W1), limited product variants (W3), and uneven distribution (W2). Meanwhile, external opportunities in the form of government support for local products (O2) and the growth of the food industry and MSMEs (O1) are very relevant to be utilized through brand identity strengthening strategies. A2's strategy focuses on increasing brand visibility through integrated value-based campaigns that are "healthy, local and sustainable," as well as product innovations that adapt to market preferences, such as fortified cooking oils, economical packaging, and sub-segment products (e.g. for small culinary businesses).

The last strategy priority is to utilize healthy products and internal raw materials for expansion into the MSME market and premium segments. The A1 strategy relies on the use of healthy quality products (S1), affordable prices (S2), and raw material support (S4) to seize opportunities from the growing market, especially the MSME segment and premium consumers who prioritize health and sustainability aspects (O1, O2). Although this strategy has long-term potential, its level of urgency is still relatively lower than that of A3 and A2, as it has not directly addressed market pressures and Salvaco's main weaknesses.

Overall, the first priority strategy (A3) is highly relevant to the current conditions of the cooking oil market and Salvaco's position in Cell II of the IE Matrix, which recommends a grow and build approach. This strategy is realistic, adaptive, and can be implemented in the near future with the company's existing resource capital. The second and third strategies

(A2 and A1) can be carried out gradually as a complement, to build a strong brand foundation and penetration into a wider and more diverse market segment.

CONCLUSION

The characteristics of the respondents in this study show that the majority are aged 26–35 years (51.5%) and predominantly women (60.2%), all domiciled in the city of Medan. Of these, 54.4% work as private employees, and 40.9% have a monthly income ranging from Rp 5,000,001 to Rp 10,000,000. The *SEM-PLS* analysis revealed that attitudes and subjective norms have a positive and significant effect on the purchase decision of Salvaco cooking oil, while the perception of behavioral control has a positive but insignificant effect. From the product attributes, price and quality show a positive and significant influence, while packaging and brand have a negative and insignificant effect. The most influential indicators include belief in product benefits, the influence of respectable people, and the affordability of price and packaging quality. Priority strategies to increase sales include expanding distribution channels and digitizing marketing, increasing brand awareness and diversifying product variants, as well as capitalizing on healthy product positioning for expansion into the *MSME* market and premium segments. These strategies are expected to attract new consumers and enhance competitiveness.

REFERENCES

Abed, K. A., El Morsi, A. K., Sayed, M. M., Shaib, A. A. E., & Gad, M. S. (2018). Effect of waste cooking-oil biodiesel on performance and exhaust emissions of a diesel engine. *Egyptian Journal of Petroleum*, *27*(4). https://doi.org/10.1016/j.ejpe.2018.02.008

Asyari, D. P. (2024). *Metode penelitian kombinasi (mixed method)*. CV Gita Lentera.

Azme, S. N. K., Yusoff, N. S. I. M., Chin, L. Y., Mohd, Y., Hamid, R. D., Jalil, M. N., Zaki, H. M., Saleh, S. H., Ahmat, N., Manan, M. A. F. A., Yury, N., Hum, N. N. F., Latif, F. A., & Zain, Z. M. (2023). Recycling waste cooking oil into soap: Knowledge transfer through community service learning. *Cleaner Waste Systems*, *4*. https://doi.org/10.1016/j.clwas.2023.100084

Badan Pangan Nasional. (2023). Konsumsi minyak goreng per kapita Indonesia naik pada 2023. https://databoks.katadata.co.id/demografi/statistik/

Baso, F., Yaqub, A., Djaoe, A. N. M., & Diab, A. L. (2022). Power Oligarchy: The Game of Cartel in Cooking Oil Scarcity. *Jurnal Penelitian Hukum De Jure*, *22*(3). https://doi.org/10.30641/dejure.2022.v22.361-370

Ganesan, K., Sukalingam, K., & Xu, B. (2019). Impact of consumption of repeatedly heated cooking oils on the incidence of various cancers- A critical review. In *Critical Reviews in Food Science and Nutrition* (Vol. 59, Issue 3). https://doi.org/10.1080/10408398.2017.1379470

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis* (7th ed.). Prentice Hall.

Huda, E. N., & Sidiq, S. (2023). COOKING OIL PRICE CONTROL POLICY IN INDONESIA (A review of Ibn Taimiyah's thoughts). *Reinforce: Journal of Sharia Management*, *2*(1). https://doi.org/10.21274/reinforce.v2i1.7313

Keogh-Brown, M. R., Jensen, H. T., Basu, S., Aekplakorn, W., Cuevas, S., Dangour, A. D., Gheewala, S. H., Green, R., Joy, E. J. M., Rojroongwasinkul, N., Thaiprasert, N., Shankar, B., & Smith, R. D. (2019). Evidence on the magnitude of the economic, health and population effects of palm cooking oil consumption: An integrated modelling approach with Thailand as a case study. *Population Health Metrics*, *17*(1). https://doi.org/10.1186/s12963-019-0191-y

Mannu, A., Ferro, M., Di Pietro, M. E., & Mele, A. (2019). Innovative applications of waste cooking oil as raw material. *Science Progress*, *102*(2). https://doi.org/10.1177/0036850419854252

Mhatre, S., Rajaraman, P., Chatterjee, N., Bray, F., Goel, M., Patkar, S., Ostwal, V., Patil, P., Manjrekar, A., Shrikhande, S. V., Badwe, R., & Dikshit, R. (2020). Mustard oil consumption, cooking method, diet and gallbladder cancer risk in high- and low-risk regions of India. *International Journal of Cancer*, *147*(6). https://doi.org/10.1002/ijc.32952

Monika, Banga, S., & Pathak, V. V. (2023). Biodiesel production from waste cooking oil: A comprehensive review on the application of heterogenous catalysts. In *Energy Nexus* (Vol. 10). https://doi.org/10.1016/j.nexus.2023.100209

Mucti, S., Purwasih, R., & Destiana, I. D. (2023). Analisis Mutu Minyak Goreng yang Dipakai oleh Pedagang Gorengan di Pasar Pujasera Subang. *EDUFORTECH*, *8*(1). https://doi.org/10.17509/edufortech.v8i2.54642

Nugroho, A., & Salsabila, P. G. (2022). Analisis Fenomena Harga Minyak Goreng di Indonesia dan Dampaknya terhadap Sektor Penyediaan Makan Minum. *Seminar Nasional Official Statistics*, *2022*(1). https://doi.org/10.34123/semnasoffstat.v2022i1.1209

PASPI-Monitor. (2021). Minyak Goreng Sawit Dalam Perubahan Konsumsi Minyak Goreng di Indonesia. *Palm Journal*, *2*(25).

Puspita Sari, S., Yuliati, E., Damayanti, S., & Shayida, H. (2022). Gambaran Pola Konsumsi Minyak Goreng Pada Rumah Tangga. *Prosiding Seminar Nasional Multidisiplin Ilmu*, *4*(1).

Sarno, M., & Iuliano, M. (2019). Biodiesel production from waste cooking oil. *Green Processing and Synthesis*, *8*(1). https://doi.org/10.1515/gps-2019-0053

Yuliati, E., Sari, S. P., & Metty, M. (2023). Implementasi uji validitas isi: Pengembangan kuesioner perubahan pola konsumsi minyak goreng pada rumah tangga. *Ilmu Gizi Indonesia*, *7*(1). https://doi.org/10.35842/ilgi.v7i1.412

Zhang, H., Li, L., Zhou, P., Hou, J., & Qiu, Y. (2014). Subsidy modes, waste cooking oil and biofuel: Policy effectiveness and sustainable supply chains in China. *Energy Policy*, *65*. https://doi.org/10.1016/j.enpol.2013.10.009

Zhang, Y., Zhuang, P., Wu, F., He, W., Mao, L., Jia, W., Zhang, Y., Chen, X., & Jiao, J. (2021). Cooking oil/fat consumption and deaths from cardiometabolic diseases and other causes: prospective analysis of 521,120 individuals. *BMC Medicine*, *19*(1). https://doi.org/10.1186/s12916-021-01961-2

Zhuang, P., Mao, L., Wu, F., Wang, J., Jiao, J., & Zhang, Y. (2020). Cooking Oil Consumption Is Positively Associated with Risk of Type 2 Diabetes in a Chinese Nationwide Cohort Study. *Journal of Nutrition*, *150*(7). https://doi.org/10.1093/jn/nxaa103