



Consumer Loyalty in the Poultry Feed Industry: Examining the Influence of Service, Product Quality and Satisfaction

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Abstract

As global demand for safe and high-quality poultry products continues to grow, fostering consumer loyalty in the livestock feed industry has become increasingly vital. Despite its importance, limited empirical research has examined the behavioural factors driving loyalty in this sector, particularly within the Malaysian context. This study investigates the determinants of consumer loyalty toward poultry feed by assessing the influence of service quality (opinion leader), product quality (feed certification, company image, perceived product quality), and satisfaction (consumer satisfaction, consumer trust). Data were collected from 152 poultry feed consumers through a structured questionnaire and analysed using SPSS. The results indicate that opinion leadership, feed certification, perceived product quality, and consumer satisfaction significantly influence consumer loyalty, while company image and consumer trust show no significant effect. These findings underscore the importance of aligning feed production with quality assurance, certification compliance, and responsive service strategies. The implications are particularly relevant for feed manufacturers and agri-food marketers, as they highlight the need to prioritise certification credibility, strengthen value delivery, and improve customer satisfaction to enhance loyalty. The study offers actionable insights for industry stakeholders and sets the groundwork for future investigations into loyalty formation across agri-food and livestock value chains.

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1. Introduction

The global livestock industry plays a vital role in ensuring food security and supporting economic growth, particularly in developing and emerging economies (Food and Agriculture Organization of the United Nations [FAO], 2020) ^[24]. Among livestock commodities, poultry meat continues to be one of the most widely consumed protein sources due to its affordability, efficiency of production, and nutritional value (Hosain *et al.*, 2021) ^[29]. However, this poultry production growth is not evenly distributed. While countries such as Thailand and Mexico are expected to experience production gains due to cost advantages and favourable breeding conditions, others, like the United Kingdom and Brazil, face setbacks from disease outbreaks, labour constraints, and softening global demand (Ahmer *et al.*, 2022) ^[3]. In Southeast Asia, Malaysia stands out as a major poultry producer, supported by a robust feed manufacturing sector and increasing domestic consumption of poultry meat (Nurshuhada *et al.*, 2021) ^[44]. The consumer products and services sector, represented in the Bursa Consumer Products and Services Index, is one of the largest on the Bursa Malaysia Main Market (World Federation of Exchanges, 2022) ^[62], with the poultry industry contributing significantly to its growth.

At the core of Malaysia's poultry industry lies the feed sector, which comprises 44 operational feed mills producing approximately 4.99 million metric tons of animal feed annually, of which poultry feed accounts for 54.1% or 2.701 million metric tons (Potential Application of Circular Economy Concept in Livestock Production, 2020) ^[50]. Feed costs constitute over

65% of total broiler production expenses, making feed quality, price, and availability central to farm profitability (Department of Statistics Malaysia [DOSM], 2022) ^[21]. Moreover, Malaysia imports the majority of its feed raw materials, particularly corn and soybeans, from countries such as Argentina, Brazil, and the United States (Malaysian Feed Millers Association, 2015; Ferlito, 2020) ^[41, 23]. This high dependency on imports not only exposes the industry to price volatility and currency fluctuations but also intensifies the need for assurance mechanisms such as certification and compliance with standards like ISO 22000 and HACCP to ensure feed quality and safety (Saidin *et al.*, 2018; Liu *et al.*, 2021) ^[52, 37]. Despite widespread certification efforts, manufacturers continue to face challenges in retaining loyal customers, particularly smallholder farmers who may prioritise affordability, perceived effectiveness, and service responsiveness over formal quality labels (Garber *et al.*, 2022; Tobon & García-Madariaga, 2021) ^[25, 58]. Existing studies in agricultural supply chains tend to focus on production efficiency, price determinants, or supply chain traceability, often overlooking the experiential and relational aspects that influence customer loyalty (Aung & Chang, 2014) ^[12]. Addressing these overlooked dimensions is essential to developing a more comprehensive understanding of the factors that influence customer loyalty in the poultry feed industry, particularly within Malaysia's regional farming contexts.

In response, this study investigates whether service quality (opinion leader), product quality (feed certification, company image, and perceived product quality) and satisfaction (consumer satisfaction and consumer trust) significantly influence loyalty among poultry feed consumers. By addressing this gap, the study contributes to both theoretical and practical knowledge. Theoretically, it advances the understanding of loyalty formation in an underexplored agri-industrial context by integrating constructs commonly studied in service marketing and consumer behaviour. Practically, the findings offer valuable insights for feed manufacturers, marketers, and agricultural policymakers on improving customer retention strategies, enhancing feed value propositions, and strengthening stakeholder trust in the livestock supply chain. Additionally, this research aligns with Malaysia's broader national goals of enhancing food self-sufficiency, ensuring halal integrity, and building a resilient and sustainable poultry sector.

2. Literature Review

2.1 Consumer Loyalty

Consumer loyalty is a central concept in marketing and business sustainability, defined as a customer's commitment to consistently repurchasing or preferring a specific brand or service over time, even in the face of competing offerings (Akroush & Mahadin, 2019; Saidon *et al.*, 2023) ^[5, 53]. It reflects a psychological attachment rooted in past satisfaction, brand trust, and perceived value, manifesting in repeated purchases and resistance to switching behaviours (Ahmad *et al.*, 2021) ^[2]. Loyal consumers not only ensure steady revenue streams but also contribute to lower marketing costs and positive word-of-mouth, making consumer loyalty a critical strategic asset for firms operating in competitive environments (Ali *et al.*, 2021) ^[7]. In agricultural and feed-related industries, where brand differentiation is often subtle, fostering consumer loyalty

becomes particularly vital to maintain market share and sustain long-term profitability (Liu *et al.*, 2021) ^[37].

Studies have shown that consumer loyalty is multidimensional and influenced by a range of interrelated factors, including product quality, brand image, price fairness, service experience, and location convenience (Ebrahim, 2019; Suhartanto *et al.*, 2019) ^[22, 57]. For instance, brand loyalty emerges from consistent satisfaction and emotional attachment to a specific brand, while service loyalty is strongly tied to the responsiveness and empathy of staff or service channels (Bahadur *et al.*, 2019; Yu *et al.*, 2021) ^[13, 63]. Moreover, in industries with high substitution potential, such as feed manufacturing, customers may prioritise factors like affordability and reliability over formal quality certifications (Tobon & García-Madariaga, 2021) ^[58]. Therefore, understanding and managing the distinct dimensions of consumer loyalty, like brand, product, service, price, and location, offers a more nuanced and effective approach to building lasting customer relationships (Lu *et al.*, 2019; Soliha *et al.*, 2021) ^[39, 54]. These insights are particularly relevant in the context of the Malaysian poultry feed industry, where smallholder farmers' purchasing decisions are shaped not only by economic factors but also by relational and experiential dynamics.

2.2 Service Quality

Opinion Leader

In the context of service quality, opinion leaders play a pivotal role in shaping consumer perceptions and driving loyalty, particularly in industries where purchase decisions carry perceived risks, such as animal feed. Opinion leaders are individuals who exert significant influence over others' attitudes, beliefs, and behaviours through their expertise, trustworthiness, and social connectivity (Tobon & García-Madariaga, 2021) ^[58]. These individuals often function as intermediaries between brands and consumers by offering advice, validating product claims, and reducing uncertainty in purchasing decisions (Casaló *et al.*, 2020) ^[15]. In agricultural contexts, especially among smallholder farmers, opinion leaders, such as senior farmers, cooperative heads, or extension agents, are frequently consulted for their recommendations on product quality and supplier credibility (Kuksov & Liao, 2019) ^[33]. Their endorsements can enhance the perceived service quality of a feed supplier by increasing trust and perceived reliability, as well as reducing the cognitive burden on consumers. Moreover, their influence is particularly critical in environments where formal advertising is limited and personal referrals carry more weight. Bamakan *et al.* (2019) ^[14] emphasised that the integration of opinion leaders into marketing strategies strengthens social capital and deepens customer engagement. Therefore, opinion leaders serve as informal service ambassadors who bridge information asymmetries and cultivate trust, thereby enhancing consumer loyalty. Therefore, this study proposed:

H1: Opinion leader has a significant positive influence on consumer loyalty.

2.3 Product Quality

Feed Certification

Feed certification plays a critical role in enhancing consumer trust and loyalty, particularly in industries where quality assurance is a key determinant of purchase decisions. In the poultry feed sector, feed certification, such as ISO 22000,

HACCP, and Halal, serves as a third-party validation of safety, quality, and compliance with industry standards. Third-party certifications provide objective assurance that the feed product adheres to established safety, environmental, and ethical guidelines, thereby reducing information asymmetry and perceived risk among buyers (Kaczorowska *et al.*, 2021) ^[31]. These certifications act as credible signals of product integrity, especially in markets where consumers may lack direct access to production processes or product ingredients (Wang *et al.*, 2020) ^[60]. According to Chkanikova and Sroufe (2021) ^[19], such certifications enhance competitiveness in the food retail sector by reinforcing dynamic capabilities and signalling commitment to responsible practices. Moreover, in the context of the agri-food value chain, certified products have been shown to positively influence consumers' quality perception, leading to stronger brand attachment and repurchase intentions (Guo *et al.*, 2019; Zhao *et al.*, 2019) ^[27, 64]. Chatterjee (2020) ^[16] further emphasises that certification contributes to a product's perceived value by reinforcing external service attributes such as safety and traceability. As a result, feed certification not only reduces consumer uncertainty but also elevates the psychological assurance of product quality, which is critical in shaping loyalty. Therefore, this study proposed:

H2a: Feed certification has a significant positive influence on consumer loyalty.

Company Image

Company image refers to the overall perception and evaluation held by consumers regarding a company, which significantly influences their purchasing decisions and brand loyalty (Yu *et al.*, 2021) ^[63]. Company image perception becomes critical among consumers who are highly sensitive to product quality and risk (Almeida & Coelho, 2018) ^[8]. In various industries, including aviation, education, and banking, corporate image plays a pivotal role in shaping consumer loyalty and institutional credibility. For instance, Pooventeran *et al.* (2025) ^[48] found that brand image emerges as the most influential predictor on customer behaviour, while Song *et al.* (2019) ^[55] demonstrated that airline passengers' trust is closely tied to the perceived corporate image. This highlights the essential role of trust and perceived brand value in driving consumer loyalty. Similarly, Al Mubarak *et al.* (2019) ^[6] highlighted that a well-managed corporate image, aligned with social responsibility efforts, contributes positively to the reputation and customer retention in the banking sector. Based on the literature, the following hypothesis is proposed:

H2b: Company image has a significant positive influence on consumer loyalty.

Perceived Product Quality

Perceived product quality refers to a customer's subjective evaluation of a product's excellence, often based on expectations, past experiences, and brand reputation (Stylidis *et al.*, 2019; Prell *et al.*, 2020) ^[56, 51]. It plays a central role in shaping consumer trust and satisfaction, ultimately influencing purchase decisions and brand loyalty. Numerous studies across sectors, including self-service (Pooya *et al.*, 2020) ^[49], academic libraries (Afthanorhan *et al.*, 2019) ^[1], and online retail (Lin *et al.*, 2021) ^[36], highlight that higher perceived quality enhances customer satisfaction and strengthens brand commitment. Additionally, perceived

product quality contributes indirectly to loyalty by reinforcing customer perceptions of value and organisational image (Özkan *et al.*, 2019) ^[46]. Wantara and Tambrin (2019) ^[61] further confirm that customer satisfaction serves as a key mediator between perceived quality and loyalty outcomes. In the context of the poultry feed industry, where feed effectiveness and consistency are critical, customer perceptions of product quality significantly determine repeat purchases and long-term trust. Accordingly, this study hypothesises:

H2c: Perceived product quality has a significant positive influence on consumer loyalty.

2.4 Satisfaction

Consumer Satisfaction

Consumer satisfaction is a fundamental objective for businesses seeking long-term success and competitiveness, as it reflects the degree to which a product or service meets or exceeds customer expectations (Otto *et al.*, 2019) ^[45]. Satisfied consumers are more likely to engage in repeat purchases, spread positive word-of-mouth, and remain loyal to the brand. Ahrholdt *et al.* (2019) ^[4] assert that satisfaction can be observed through consumer behaviours such as continued patronage, trust, and advocacy, which together serve as indicators of loyalty. Moreover, satisfaction is closely tied to trust, forming a crucial component of the relationship between consumers and brands (Aslam *et al.*, 2019) ^[11]. High levels of satisfaction often enhance emotional commitment, reduce the likelihood of switching to competitors, and increase overall brand equity (Alqasa & Piaralal, 2022) ^[10]. In essence, the strategic prioritisation of consumer satisfaction serves not only as a performance metric but also as a driver of loyalty in increasingly competitive markets (Lau *et al.*, 2025) ^[34]. Therefore, this study posits:

H3a: Consumer satisfaction has a significant positive influence on consumer loyalty.

Consumer Trust

Consumer trust is a foundational element in fostering long-term relationships between businesses and their customers, defined as the willingness of a consumer to rely on a product, service, or provider based on the expectation of reliability and integrity (Gefen *et al.*, 2003) ^[26]. In the food industry, where safety and transparency are paramount, Meijer *et al.* (2020) ^[43] emphasise that clear labelling and disclosure of ingredients are essential for cultivating consumer trust. Similarly, Macready *et al.* (2020) ^[40] highlight that trust in food products strengthens consumer confidence in daily purchasing decisions. Beyond traditional retail, trust plays a critical role in digital commerce, where physical interactions are absent. Alotaibi *et al.* (2019) ^[9] demonstrate that trust significantly influences purchase decisions on social commerce platforms, while Lou and Yuan (2019) ^[38] note its role in shaping consumers' perceptions of branded content on social media. In e-commerce, Jing and Cai (2019) ^[30] identify consumer trust as a pivotal determinant of platform success and customer retention. Moreover, trust mitigates perceived risk, enhances satisfaction, and encourages repeat purchases, contributing to stronger brand loyalty across sectors (Aslam *et al.*, 2019; Lie *et al.*, 2019) ^[11, 35]. Therefore, this study proposes:

H3b: Consumer trust has a significant positive influence on consumer loyalty.

Conceptual Framework

The conceptual framework of this study explores the key determinants of consumer loyalty in the Malaysian poultry feed industry by organising them under three main constructs: service quality, product quality, and satisfaction. Service quality is operationalised through the influence of opinion leaders. Product quality encompasses feed certification, company image, and perceived product quality. Meanwhile, satisfaction is reflected through both consumer satisfaction and consumer trust. Figure 1 illustrates the relationships among these variables, aligning with the study's objectives to assess the drivers of loyalty among smallholder farmers in the agri-feed sector.

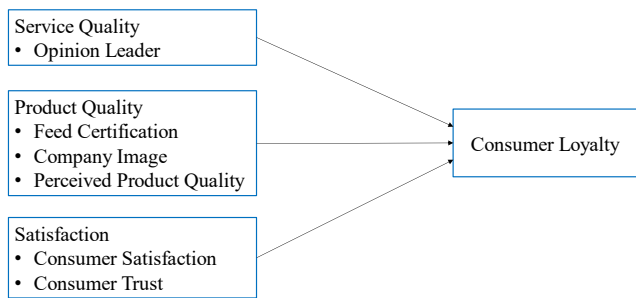


Fig 1: Conceptual Framework

3. Methodology

The population for this study comprised poultry feed consumers, specifically farmers, traders, and employees involved in broiler farm operations, located in the northern Malaysian states of Perlis, Kedah, Penang, and Perak. These states were purposively selected due to their strategic importance in Malaysia's poultry industry, reflected by a high concentration of broiler farms. As of 2023, a total of 144 livestock farms, comprising broiler farms and other poultry operations, were certified under the Malaysia Good Agricultural Practices (MyGAP) scheme, while numerous non-certified farms continued to contribute significantly to national poultry production (Khazanah Research Institute, 2023) [32]. To ensure the relevance and accuracy of the findings, a purposive sampling technique was employed, targeting respondents directly engaged in poultry feed usage and farm operations. The study utilised a quantitative research design, with data collected through a structured questionnaire distributed via Google Forms, enabling efficient and wide-reaching data collection.

The questionnaire used in this study was carefully constructed to measure the key constructs influencing consumer loyalty in the poultry feed industry. It comprised two main sections: the first focused on respondent demographics and feed purchasing behaviour, while the second employed a 5-point Likert scale to assess seven core constructs through 38 targeted items. The instrument was adapted from validated sources, particularly Pandanwangi *et al.* (2023) [47], and refined through expert input from senior sales representatives, veterinarians, and academic advisors to ensure content validity and clarity. Ethical considerations were strictly observed; respondents were informed of the study's purpose, participation was voluntary, and all

responses were kept confidential following institutional research ethics guidelines.

Respondent Demographic Profile

The study analysed responses from 152 individuals involved in Malaysia's poultry feed industry. The sample was predominantly male (88%), with the majority aged between 41 and 50 years (46%). Educational backgrounds varied, with 41% holding diploma-level qualifications and 28% having completed secondary school. Most respondents (76%) were poultry farmers managing medium-scale operations (52%), either as sole proprietors (41%) or in partnerships (35%). Notably, 72% were not affiliated with any formal agricultural association. In terms of experience, 38% of respondents had been involved in poultry farming for 5 to 10 years, while 33% had more than 10 years of experience. Farm sizes were largely in the range of 11, 501 to 50, 000 birds (47%). Regionally, the highest number of respondents were from Perak (39%), followed by Kedah (26%), Penang (20%), and Perlis (15%). Regarding purchasing behaviour, 59% prioritised feed suitability to livestock needs, while 54% emphasised brand reputation and feed quality. These demographic characteristics provide essential context for understanding the factors influencing consumer loyalty in the poultry feed industry.

4. Data Analysis

This study utilised the Statistical Package for the Social Sciences (SPSS) to perform comprehensive data analysis in order to evaluate the hypothesised relationships influencing consumer loyalty in the Malaysian poultry feed industry. Reliability testing was conducted using Cronbach's alpha to assess the internal consistency of the constructs. Pearson correlation analysis was then applied to examine the strength and direction of linear associations among the variables. Finally, multiple regression analysis was performed to test the structural model, focusing on path coefficients (β), t -values, and p -values to determine the significance of each hypothesised relationship. These analytical procedures provided robust empirical evidence supporting the study's objectives.

Reliability Analysis

Reliability analysis was conducted to assess the internal consistency of the constructs using Cronbach's alpha (α). As shown in Table 1, all constructs recorded alpha values above the recommended threshold of 0.70, indicating satisfactory to excellent internal reliability (Hair *et al.*, 2021; Taber, 2018) [28, 59]. The construct measuring consumer loyalty achieved the highest alpha ($\alpha = 0.917$), followed by feed certification ($\alpha = 0.905$) and perceived product quality ($\alpha = 0.900$), all of which reflect excellent reliability. Company image ($\alpha = 0.873$), consumer satisfaction ($\alpha = 0.860$), and opinion leader ($\alpha = 0.857$) also demonstrated strong internal consistency. While consumer trust had the lowest alpha value ($\alpha = 0.803$), it still exceeded the minimum benchmark, suggesting acceptable reliability. Overall, the reliability results confirm that all constructs are internally consistent and suitable for further statistical analysis.

Table 1: Cronbach's alpha for construct reliability (N = 152)

Construct	Number of Items	Cronbach's Alpha (α)
Consumer Loyalty (CL)	6	0.917
Opinion leader (OP)	5	0.857
Feed certification (FC)	6	0.905
Company image (CI)	5	0.873
Perceived product quality (PQ)	4	0.900
Consumer Satisfaction (CS)	6	0.860
Consumer Trust (CT)	5	0.803

Correlation Analysis

Pearson correlation analysis was conducted to examine the linear relationships among the study variables, with results summarised in Table 2. All independent variables demonstrated statistically significant and positive correlations with consumer loyalty (CL) at the 0.01 level (2-tailed), providing initial empirical support for the proposed model. Among the variables, perceived product quality (PQ) showed the strongest correlation with consumer loyalty ($r = 0.595$), followed by consumer satisfaction (CS) ($r = 0.582$), company image (CI) ($r = 0.580$), opinion leader (OL) ($r = 0.562$), and consumer trust (CT) ($r = 0.548$). Feed certification (FC) recorded the lowest, yet still significant, correlation ($r = 0.439$). According to Cohen (1988) [20], correlation coefficients between 0.50 and 0.69 indicate

0.042), supporting H1. Feed certification (FC) also significantly influenced consumer loyalty ($\beta = 0.143$, $t = 2.146$, $p = 0.034$), supporting H2a. Perceived product quality (PQ) emerged as the strongest predictor ($\beta = 0.213$, $t = 2.572$, $p = 0.011$), supporting H2c, while consumer satisfaction (CS) showed a significant effect as well ($\beta = 0.172$, $t = 2.027$, $p = 0.045$), supporting H3a. In contrast, company image (CI) and consumer trust (CT) did not significantly influence consumer loyalty (CI: $\beta = 0.121$, $t = 1.396$, $p = 0.165$; CT: $\beta = 0.127$, $t = 1.591$, $p = 0.114$), leading to the rejection of H2b and H3b. Although some coefficients were below the conventional $\beta > 0.20$ threshold (Hair *et al.*, 2021) [28], their statistical significance at $p < 0.05$ warrants their inclusion in the interpretation.

Table 2: Pearson Correlations

Variables	CL	OL	FC	CI	PQ	CS	CT
CL	—						
OL	0.562**	—					
FC	0.439**	0.406**	—				
CI	0.580**	0.545**	0.442**	—			
PQ	0.595**	0.559**	0.328**	0.638**	—		
CS	0.582**	0.499**	0.337**	0.636**	0.603**	—	
CT	0.548**	0.575**	0.393**	0.502**	0.510**	0.601**	—

**Correlation is significant at the 0.01 level (2-tailed)

Table 3: Path Coefficient and Hypothesis

Hypothesis	Structural Path	Path Coefficient (β)	t-value	p-value	Decision
H1	OL \rightarrow CL	0.161	2.048	0.042	Supported
H2a	FC \rightarrow CL	0.143	2.146	0.034	Supported
H2b	CI \rightarrow CL	0.121	1.396	0.165	Not supported
H2c	PQ \rightarrow CL	0.213	2.572	0.011	Supported
H3a	CS \rightarrow CL	0.172	2.027	0.045	Supported
H3b	CT \rightarrow CL	0.127	1.591	0.114	Not Supported

moderate relationships, while values of 0.70 and above reflect strong associations. The findings underscore the relevance of service, product quality dimensions and satisfaction in influencing loyalty within the poultry feed industry.

Regression Analysis and Hypothesis Testing

Multiple regression analysis was conducted to assess the influence of service quality, product quality, and satisfaction on consumer loyalty. The overall model was statistically significant, $F(6, 145) = 26.103$, $p < .001$, explaining 51.9% of the variance in consumer loyalty ($R^2 = 0.519$). As shown in Table 3, four hypotheses were supported at the 0.05 significance level. Opinion leader (OL) had a significant positive effect on consumer loyalty ($\beta = 0.161$, $t = 2.048$, $p =$

5. Discussion

The results affirmed that feed certification, perceived product quality, opinion leader and consumer satisfaction significantly influence consumer loyalty. Feed certification was shown to play a critical role, supporting earlier studies that emphasise the importance of third-party verification in building consumer confidence and competitive positioning (Chkanikova & Sroufe, 2021; Guo *et al.*, 2019; Zhao *et al.*, 2019) [19, 27, 64]. Certification provides consumers with assurance regarding safety and compliance, serving as a proxy for feed quality and regulatory trust (Chatterjee, 2020) [16]. Similarly, perceived product quality had a robust positive effect on loyalty, echoing findings by Lin *et al.* (2021) [36] and Pooya *et al.* (2020) [49], who demonstrated the pivotal role of product quality in shaping satisfaction and retention. The influence of opinion leaders was also significant, reinforcing the social dimension of agricultural decision-making. Studies by Casaló *et al.* (2020) [15] and Kuksov and Liao (2019) [33] highlighted the credibility and persuasive power of opinion leaders, especially in technical or peer-influenced domains. Finally, consistent with prior literature, consumer satisfaction emerged as a key predictor of loyalty, supporting the strategic focus on customer-centric approaches (Otto *et al.*, 2019; Ahrholdt *et al.*, 2019) [45, 4]. These findings underscore that in the poultry feed sector, loyalty is primarily driven by performance, peer influence, and user satisfaction rather than by abstract brand cues.

Conversely, the findings of this study revealed that company image and consumer trust did not significantly influence consumer loyalty in the context of poultry feed purchases. One possible explanation is that in agricultural settings, especially among poultry farmers, pragmatic factors such as feed certification and quality outweigh corporate branding. Similar findings were observed in Chaudhry's (2020) [17] study on Indian cosmetic products, where company image did not significantly affect brand loyalty. Likewise, Chen *et al.* (2018) [18] demonstrated that corporate greenwashing practices negatively impacted green brand image and loyalty, highlighting how consumer scepticism can undermine image-

driven loyalty. In the present study, respondents seemed more concerned with tangible performance indicators such as certified feed quality than with abstract perceptions of the company. Additionally, the insignificant relationship between consumer trust and loyalty aligns with the work of Maulana *et al.* (2021) ^[42], who found that while trust positively influenced satisfaction, it did not significantly affect repurchase intention. These findings suggest that in the poultry feed industry, loyalty is more strongly shaped by direct experience and satisfaction than by institutional trust or image.

Theoretical and Practical Implications

This study offers both theoretical and practical contributions to the field of consumer behaviour and agribusiness management. Theoretically, it reinforces the applicability of relationship marketing theory in the context of agricultural supply chains, specifically by demonstrating how service quality (opinion leaders), product quality (feed certification and perceived product quality), and consumer satisfaction significantly influence consumer loyalty in the poultry feed industry. These findings extend existing literature by validating the role of non-traditional service factors, such as opinion leadership and certification, in enhancing consumer retention. Practically, the results highlight actionable strategies for feed mills operating in Malaysia. Feed manufacturers should prioritise strengthening product quality through standardised feed certification and leveraging knowledgeable sales personnel as opinion leaders. Investments in digital CRM systems and automation can improve both operational efficiency and customer satisfaction. By consistently delivering high-quality feed and reliable customer service, feed mills can build stronger trust, elevate their market reputation, and drive long-term consumer loyalty, thus ensuring sustained competitiveness in the poultry supply chain.

Limitations and Suggestions for Future Research

Despite providing valuable insights, this study has several limitations that should be acknowledged. First, the data collection was geographically confined to select states in northern Malaysia, which may limit the generalisability of the findings to other regions of the country. Future research should broaden the geographical scope to include central, southern and eastern Malaysian states to capture a more representative view of consumer loyalty dynamics across the poultry feed sector. Second, the reliance on online surveys posed challenges for some respondents, particularly farmers and traders in rural areas with limited internet access or low digital literacy. This approach may have affected the quality and completeness of the responses. Future studies are encouraged to incorporate mixed-method approaches, such as face-to-face interviews or assisted survey administration, to ensure more inclusive participation and deeper contextual understanding. Expanding the demographic and regional coverage can enhance the robustness and applicability of future findings in Malaysia's agricultural supply chain.

6. Conclusion

This study investigated the key determinants of consumer loyalty within Malaysia's poultry feed industry, focusing on service quality (opinion leader), product quality (feed certification, company image, perceived product quality), and satisfaction factors (consumer satisfaction and trust). The

findings revealed that feed certification, perceived product quality, opinion leadership, and consumer satisfaction significantly influenced consumer loyalty, while company image and consumer trust showed no significant effects. These results highlight the critical role of certified, high-quality products and knowledgeable service support in fostering loyalty among poultry feed consumers. The study offers practical implications for feed mill companies to enhance their strategic focus on certification and advisory services. Importantly, this research introduces a novel empirical model tailored to the agricultural supply chain, contributing fresh insights to the limited body of literature on consumer loyalty in agribusiness contexts.

7. References

1. Afthanorhan A, Awang Z, Rashid N, Foziah H, Ghazali PL. Assessing the effects of service quality on customer satisfaction. *Manag Sci Lett.* 2019;9(1):13-24.
2. Ahmad N, Scholz M, Ullah Z, Arshad MZ, Sabir RI, Khan WA. The nexus of CSR and co-creation: a roadmap towards consumer loyalty. *Sustainability.* 2021;13(2):523.
3. Ahmer A, Hamza M, Muazzam A, Samad A, Tariq S, Ahmad S, et al. Effects of COVID-19 on environmental conditions and poultry production. *Brilliance Res Artif Intell.* 2022;2(3):97-101.
4. Ahrholdt DC, Gudergan SP, Ringle CM. Enhancing loyalty: when improving consumer satisfaction and delight matters. *J Bus Res.* 2019;94:18-27.
5. Akroush MN, Mahadin BK. An intervariable approach to customer satisfaction and loyalty in the internet service market. *Internet Res.* 2019;29(4):772-98.
6. Al Mubarak Z, Ben Hamed A, Al Mubarak M. Impact of corporate social responsibility on bank's corporate image. *Soc Responsib J.* 2019;15(5):710-22.
7. Ali BJ, Saleh PF, Akoi S, Abdulrahman AA, Muhamed AS, Noori HN, et al. Impact of service quality on the customer satisfaction: case study at online meeting platforms. *Int J Eng Bus Manag.* 2021;5(2):65-77.
8. Almeida MDGMC, Coelho AFM. The antecedents of corporate reputation and image and their impacts on employee commitment and performance: the moderating role of CSR. *Corp Reput Rev.* 2019;22(1):10-25.
9. Alotaibi TS, Abdulrahman AA, Saad S. Instagram shopping in Saudi Arabia: what influences consumer trust and purchase decisions? *Int J Adv Comput Sci Appl.* 2019;10(11):605-13.
10. Alqasa KMA, Piaralal SKA. Influence of service quality dimensions on customer satisfaction and loyalty: a case of specialty coffee shops in Saudi Arabia. *J Manag Res.* 2022;28(3):62-76.
11. Aslam W, Hussain A, Farhat K, Arif I. Underlying factors influencing consumers' trust and loyalty in e-commerce. *Bus Perspect Res.* 2020;8(2):186-204.
12. Aung MM, Chang YS. Traceability in a food supply chain: safety and quality perspectives. *Food Control.* 2014;39:172-84.
13. Bahadur W, Khan AN, Ali A, Usman M. Investigating the effect of employee empathy on service loyalty: the mediating role of trust in and satisfaction with a service employee. *J Relatsh Mark.* 2020;19(3):229-52.
14. Bamakan SM, Nurgaliev I, Qu Q. Opinion leader detection: a methodological review. *Expert Syst Appl.* 2019;115:200-22.

15. Casaló LV, Flavián C, Ibáñez-Sánchez S. Influencers on Instagram: antecedents and consequences of opinion leadership. *J Bus Res.* 2020;117:510-9.
16. Chatterjee S. Signalling service quality through price and certifications. *Glob Bus Rev.* 2020;21(1):279-93.
17. Chaudhry NI. Impact of consumer ethnocentrism and animosity on brand image and brand loyalty through product judgment. *J Islam Mark.* 2021;12(8):1477-91.
18. Chen Y, Huang A, Wang T, Chen Y. Greenwash and green purchase behaviour: the mediation of green brand image and green brand loyalty. *Total Qual Manag Bus Excell.* 2020;31(1-2):194-209.
19. Chkanikova O, Sroufe R. Third-party sustainability certifications in food retailing: certification design from a sustainable supply chain management perspective. *J Clean Prod.* 2021;282:124344.
20. Cohen J. Statistical power analysis for the behavioral sciences. 2nd ed. Hillsdale, NJ: Lawrence Erlbaum Associates; 1988.
21. Department of Statistics Malaysia. Report of special study on production cost of chicken and egg, 2022 [Internet]. Putrajaya: Department of Statistics Malaysia; 2022 Dec 30 [cited 2025 Sep 3]. Available from: [URL not provided in original reference].
22. Ebrahim RS. The role of trust in understanding the impact of social media marketing on brand equity and brand loyalty. *J Relatsh Mark.* 2020;19(4):287-308.
23. Ferlito C. The poultry industry and its supply chain in Malaysia: challenges from the COVID-19 emergency [Internet]. Center for Market Education; 2020 Apr [cited 2025 Sep 3]. Available from: [URL not provided in original reference].
24. Food and Agriculture Organization of the United Nations, International Fund for Agricultural Development, UNICEF, World Food Programme, World Health Organization. The state of food security and nutrition in the world 2020: transforming food systems for affordable healthy diets. Rome: FAO; 2020.
25. Garber B, Alwang J, Norton GW, Bovay J. Beef and the bottom line: the effect of value-added certification on feeder cattle profitability. *J Agric Appl Econ.* 2022;54(1):157-74.
26. Gefen D, Karahanna E, Straub DW. Trust and TAM in online shopping: an integrated model. *MIS Q.* 2003;27(1):51-90.
27. Guo Z, Bai L, Gong S. Government regulations and voluntary certifications in food safety in China: a review. *Trends Food Sci Technol.* 2019;90:160-5.
28. Hair JF, Hult GTM, Ringle CM, Sarstedt M. A primer on partial least squares structural equation modeling (PLS-SEM). 3rd ed. Thousand Oaks, CA: SAGE Publications; 2021.
29. Hosain MZ, Kabir SML, Kamal MM. Antimicrobial uses for livestock production in developing countries. *Vet World.* 2021;14(1):210-21.
30. Jing Y, Cai S. Research on influencing factors of consumer trust in B2C e-commerce. In: *Proceedings of the 2019 International Conference on Contemporary Education and Society Development (ICCESD 2019)*; 2019; Atlantis Press. p. 106-11.
31. Kaczorowska J, Prandota A, Rejman K, Halicka E, Tul-Krzyszczuk A. Certification labels in shaping perception of food quality—insights from Polish and Belgian urban consumers. *Sustainability.* 2021;13(2):702.
32. Khazanah Research Institute. Understanding the landscape of smallholders in Malaysia. Kuala Lumpur: Khazanah Research Institute; 2023.
33. Kuksov D, Liao C. Opinion leaders and product variety. *Mark Sci.* 2019;38(5):812-34.
34. Lau PCM, Piaralal SK, Zulkefli NA, Raghavan S. Determinants of member retention in Malaysian fitness organisations: the moderating role of attendance frequency. *Int J Acad Res Bus Soc Sci.* 2025;15(3):1312-30.
35. Lie D, Sudirman A, Efendi E, Butarbutar M. Analysis of mediation effect of consumer satisfaction on the effect of service quality, price and consumer trust on consumer loyalty. *Int J Sci Technol Res.* 2019;8(8):421-8.
36. Lin J, Li T, Guo J. Factors influencing consumers' continuous purchase intention on fresh food e-commerce platforms: an organic foods-centric empirical investigation. *Electron Commer Res Appl.* 2021;50:101103.
37. Liu F, Rhim H, Park K, Xu J, Lo CKY. HACCP certification in food industry: trade-offs in product safety and firm performance. *Int J Prod Econ.* 2021;231:107838.
38. Lou C, Yuan S. Influencer marketing: how message value and credibility affect consumer trust of branded content on social media. *J Interact Advert.* 2019;19(1):58-73.
39. Lu CC, Wu L, Hsiao WH. Developing customer product loyalty through mobile advertising: affective and cognitive perspectives. *Int J Inf Manag.* 2019;47:101-11.
40. Macready AL, Hieke S, Klimczuk-Kochańska M, Szumiał S, Vranken L, Grunert KG. Consumer trust in the food value chain and its impact on consumer confidence: a model for assessing consumer trust and evidence from a 5-country study in Europe. *Food Policy.* 2020;92:101880.
41. Malaysian Feedmillers Association. Corn & animal feed & corn industry in Malaysia [Internet]. [place unknown]: Malaysian Feedmillers Association; 2015 [cited 2025 Sep 3]. Available from: [URL not provided in original reference].
42. Maulana S, Najib M, Sarma M. Analysis of the effect of marketing mix on consumer trust and satisfaction on online purchasing of organic food during the outbreak of the COVID-19. *J Aplikasi Manaj.* 2021;19(2):257-71.
43. Meijer GW, Lähteenmäki L, Stadler RH, Weiss J. Issues surrounding consumer trust and acceptance of existing and emerging food processing technologies. *Crit Rev Food Sci Nutr.* 2021;61(1):97-115.
44. Nurshuhada S, Nurul Aini MY, Mohd Hishammfariz MA, Ahmad Daud R, Shamizah OH. Economic production of broiler industry in Malaysia. *Malays J Vet Res.* 2021;12(2):52-60.
45. Otto AS, Szymanski DM, Varadarajan R. Customer satisfaction and firm performance: insights from over a quarter century of empirical research. *J Acad Mark Sci.* 2020;48(3):543-64.
46. Özkan P, Süer S, Keser İK, Kocakoç İD. The effect of service quality and customer satisfaction on customer loyalty: the mediation of perceived value of services, corporate image, and corporate reputation. *Int J Bank Mark.* 2020;38(2):384-405.
47. Pandanwangi K, Putra ARS, Haryadi FT, Astuti A, Syahlani SP. Does product certification matter? A

- review of mechanisms to influence customer loyalty in the poultry feed industry. *Open Agric.* 2023;8(1):20220170.
48. Pooventeran A, Piaralal SK, Zulkefli NA, Raghavan S, Koval GY. Social media content, brand image and customer behaviour: evidence from Malaysia's container food courts. *PLATFORM J Manag Humanit.* 2025;8(1):40-50.
 49. Pooya A, Abed Khorasani M, Gholamian Ghouszdi S. Investigating the effect of perceived quality of self-service banking on customer satisfaction. *Int J Islam Middle East Finance Manag.* 2020;13(2):263-80.
 50. Malaysia Productivity Corporation, Department of Veterinary Services Malaysia. Potential application of circular economy concept in livestock production [Internet]. Putrajaya: Department of Veterinary Services Malaysia; 2020 [cited 2025 Sep 3]. Available from: [URL not provided in original reference].
 51. Prell M, Zanini MT, Caldieraro F, Migueles C. Sustainability certifications and product preference. *Mark Intell Plan.* 2020;38(7):893-906.
 52. Saidin N, Abd Rahman F, Abdullah N. A critical analysis of the legal framework on animal feed in Malaysia: with special reference to the Feed Act 2009. *Int J Eng Technol.* 2018;7(2.10):21-5.
 53. Saidon NA, Piaralal SK, Rethina VS, Mahmood NM, Othman WN. Factors affecting customer loyalty of automotive lubricant products e-commerce platform in Malaysia. In: Daryono, Widiyanto, editors. *Proceedings of the 5th Open Society Conference (OSC 2023). Advances in Economics, Business and Management Research*; 2023; Atlantis Press. p. 152-65.
 54. Soliha E, Aquinia A, Hauningtias KA, Ramadhan KR. The influence of experiential marketing and location on customer loyalty. *J Asian Finance Econ Bus.* 2021;8(3):1327-38.
 55. Song H, Ruan W, Park Y. Effects of service quality, corporate image, and customer trust on the corporate reputation of airlines. *Sustainability.* 2019;11(12):3302.
 56. Stylidis K, Wickman C, Söderberg R. Perceived quality of products: a framework and attributes ranking method. *J Eng Des.* 2020;31(1):37-67.
 57. Suhartanto D, Helmi Ali M, Tan KH, Sjahroeddin F, Kusdibyo L. Loyalty toward online food delivery service: the role of e-service quality and food quality. *J Foodserv Bus Res.* 2019;22(1):81-97.
 58. Tobon S, García-Madariaga J. The influence of opinion leaders' eWOM on online consumer decisions: a study on social influence. *J Theor Appl Electron Commer Res.* 2021;16(4):748-67.
 59. Taber KS. The use of Cronbach's alpha when developing and reporting research instruments in science education. *Res Sci Educ.* 2018;48(6):1273-96.
 60. Wang J, Tao J, Chu M. Behind the label: Chinese consumers' trust in food certification and the effect of perceived quality on purchase intention. *Food Control.* 2020;108:106825.
 61. Wantara P, Tambrin M. The effect of price and product quality towards customer satisfaction and customer loyalty on Madura batik. *Int Tour Hosp J.* 2019;2(1):1-9.
 62. World Federation of Exchanges. FY 2021 market highlights report [Internet]. [place unknown]: World Federation of Exchanges; 2022 Feb 14 [cited 2025 Sep 3]. Available from: [URL not provided in original reference].
 63. Yu W, Han X, Ding L, He M. Organic food corporate image and customer co-developing behavior: the mediating role of consumer trust and purchase intention. *J Retail Consum Serv.* 2021;59:102377.
 64. Zhao J, Gerasimova K, Peng Y, Sheng J. Information asymmetry, third-party certification and the integration of organic food value chain in China. *China Agric Econ Rev.* 2020;12(1):20-38.
 - 65.