

Consumer-Driven Attributes and Production System Trade-offs for Local Chicken (Kampung) in West Java: A Systematic Review

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Abstract | Consumer food choices differ and change depending on many attributes offered by livestock producers and traders. Local chicken is a preferred commodity in West Java due to its cultural value and nutritional contribution. This research was conducted in West Java in August 2025 to identify attributes influencing the purchasing decisions of local chicken meat and their implication for production orientation. The research design was a systematic literature review (n=143) conducted in accordance with PRISMA guidelines that investigates the critical drivers of consumer behavior toward local chicken in West Java and evaluates how these preferences dictate production strategies. The review identifies a fundamental trade-off between the consumer's rigid demand for "authentic" sensory attributes (driven by traditional, slow growth systems) and economic necessity for large-scale intensive efficiency through improved genetic strains like KUB. While intensive systems offer competitive pricing, they risk breaching the "authenticity threshold" regarding the texture and taste, the very traits that sustain consumer loyalty. Analysis reveals that while product quality and halal certification drive initial purchasing decisions, long-term loyalty is mediated primarily by satisfaction with distinctive sensory profiles rather than price alone. To resolve between scale and authenticity, this study proposes a semi-intensive maturity model. Instead of impractical traditional feeding, institutions should adopt improved genetic strains managed under a slow-growth nutritional protocol using local high-fiber ingredients. This operational compromise ensures the physiological development of authentic muscle fiber and taste while maintaining the economic scalability required for modern livestock development.

Keywords: Preference, Attitude, Purchasing Decision, Satisfaction, Loyalty, Local Chicken

Received | January 25, 2026; **Accepted** | June 02, 2026; **Published** | June 13, 2026

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Citation | Fitriani A, Kuswaryan S, Daud AR, Firmansyah C, Arief H, Firman A, Ng'ang'a TW (2026) Consumer-Driven Attributes and Production System Trade-offs for Local Chicken (Kampung) in West Java: A Systematic Review. *Adv. Anim. Vet. Sci.*, 14(6):1215-1230.

DOI | <https://dx.doi.org/10.17582/journal.aavs/2026/12.6.1215.1230>

ISSN (Online) | 2307-8316



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INTRODUCTION

People's food consumption patterns differ according to habits, availability, cultural practices, and purchasing power. Certain moments such as New Year, Eid al-Fitr, Eid al-Adha, Christmas, and feasts will cause changes in consumption patterns. The food commodities chosen also depend on the tastes and prices offered by livestock

producers and traders. Local chicken is one of the commodities that people choose to consume to fulfill their nutritional needs. Growing consumer awareness of organic, sustainable, and traditional farming practices has created a growing market demand for locally grown chicken. This phenomenon reflects a consistently high level of public appreciation, with cultural values and the product's intrinsic quality being key drivers of industry growth.

There are many types of local chickens in Indonesia, each with its own distinct characteristics. The most commonly found and consumed local chicken is the free-range chickens. They are unique not only in the taste of their meat but also in their physical characteristics and behavior. Free-range chickens are familiar to the public because they are widely distributed; populations can be found in both urban and rural areas. Free-range chickens are a genetic resource that must be continuously developed to increase productivity and ensure sustainability. The genetic resources of local (indigenous) chickens are highly valuable due to their genetic diversity. This includes adaptive traits often lost in commercial breeds. These chickens are reservoirs of genes related to disease resistance, hardiness, and adaptation to harsh local environment. Free-range chickens are worthy of development to meet the community's nutritional and animal protein needs and can also increase the income of farmers and families who raise them (Fitra *et al.*, 2021). In this research 'local', term is substituted by local as what Indonesian people used to call it with. The development of *Kampung Chicken* as local chicken in Indonesia is somewhat linked to the country's animal husbandry history. It also has been a traditional part of Indonesian people's life. This is the largest group, often interbreeding freely, and possesses the highest overall genetic diversity. The plumage color is highly variable, often black, red, brown, white, or mixed/mottled. The productivity is low to moderate egg production in late maturity (40-60 eggs per hen per year). The body weight is medium to small, reaching maturity at a lighter weight than commercial birds (1-1.3 kg mature weight). Maturity in the semi intensive maturity model is the optimal point of connective tissue accumulation and muscle fiber density, not just body weight. 3 measurable parameters that can be used are: chronological age (days to harvest); muscle fiber diameter and connective tissue (mature local chickens have smaller but denser muscle fibers than broilers); and lipid profile and inosinic acid (flavor).

Local chicken breeds play an important role in the rural economy (Kathiravan, Chitrambigai, 2023). Consumption of meat, milk, and eggs rapidly increasing globally particularly in low and middle income countries (LMICs) is driven by factors like population growth, urbanization, rising incomes (Komarek *et al.*, 2021). High consumer demand presents a strategic opportunity for the livestock sector to scale up production and enhance meat quality. Consequently, this expansion can improve public nutrition by providing high-quality protein at competitive and affordable price (Tenza *et al.*, 2024). This review highlights a central tension: the inherent beneficial traits of local chickens (particularly in low-input systems) and the need for improvement to meet commercial production demands. Integrating an intensive production system with

local chickens has the potential to increase the poultry sector's contribution to West Java's gross domestic product by increasing production volume. However, the economic sustainability of this model depends heavily on partnership schemes that protect smallholder farmers from feed price volatility and marginalization due to competition from large capital (Zulkarnain *et al.*, 2023; Tenza *et al.*, 2024).

The regional government is developing *Kampung Unggul Balitbangtan* (KUB) chickens in five regencies in West Java. KUB chickens are a superior native chicken variety with almost 80 percent similarity to local chickens in both meat and egg quality. Therefore, the majority of the community has responded positively to the program (BPTP West Java, 2018 in Prawiranegara *et al.*, 2019), which means that KUB Program significantly influence the farmers to participate and affect sustainability of the program (Luku *et al.*, 2024). This is in line with the efforts of the Faculty of Animal Husbandry, Padjadjaran University, in developing the population of local chicken to increase consumption and community welfare.

Individual studies always have boundaries in their own right, whether its in production, nutrition, or socioeconomic. Each science explains its respective role but does not explain it completely starting from the market side in social and economic sciences and then drawn to the production and nutrition aspects that support local chicken cultivation. The primary issue examined in this review is how the Faculty of Animal Husbandry can engineer an economically efficient, large-scale local chicken production system without exceeding the threshold of sensory changes that could undermine consumer loyalty to "authentic taste." While the accelerated program using the KUB chicken strain offers a solution to the low productivity of traditional systems, there is a critical gap between biological efficiency and the sensory expectations of the West Java market. Therefore, this review aims to synthesize the literature on consumer preferences and technical management to answer one fundamental question: how can the faculty implement large-scale intensive production without compromising product quality which has long been a competitive advantage for local chicken. By mapping this trade-offs, this study is expected to provide a operational framework for institutions in determining sustainable production pathways. This study was conducted in West Java in August 2025 to find out the attributes and reasons that motivate consumer to choose local chicken meat for their nutritional needs and also production system trade-offs for local chicken (Kampung) in West Java.

In this review, the term 'local chicken' is used as an umbrella category encompassing all indigenous Indonesian chicken breeds. This term is often used interchangeably with

'Kampung Chicken' to refer to the traditional phenotype common in the community. Operationally, the term 'free-range' refers to the extensive husbandry management system that is the main characteristic of local chicken production at the smallholder level.

MATERIALS AND METHODS

This study employed a Systematic Literature Review (SLR) design (Lawani and Ilegbedion, 2024), conducted in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. The protocol focused on synthesizing research concerning local chicken commercialization and consumer in West Java, Indonesia.

The literature search was performed across two primary platforms: Google Scholar and the Universitas Padjadjaran Internal Repository. The search utilized a Boolean string: (local chicken OR indigenous chicken OR kampung chicken) AND (consumer preference OR purchasing decision OR loyalty) AND (West Java OR Indonesia). The search time frame included all available records up to August 2025. To maintain regional relevance, studies in both English and Indonesian were included, with cross-

validated technical terms used to ensure synthesis accuracy (comprising approximately 60% of the retrieved sources).

Studies were screened based on the following PRISMA flow (Figure 1):

1. Identification: Initial search yielded 272 records (267 from Google Scholar, 5 from departmental reports).
2. Screening: After reviewing titles and abstracts and removing studies focused on medical/biological aspects irrelevant to commercialization, 158 records remained
3. Eligibility: Records were assessed for statistical significance and methodological depth; 146 studies met the criteria.
4. Inclusion: A final total of 143 studies (both qualitative and quantitative) were included in the Synthesis.

Internal reports were subjected to a Quality Component Assessment, evaluating research design, quality component assessment, evaluating research design, questionnaire reliability/validity, and expert departmental review to ensure parity with peer-reviewed sources. The synthesis utilized a Weight of Evidence (WoE) framework, evaluating studies based on three pillars: methodological robustness, thematic relevance, and statistical/practical significance. To ensure a comprehensive data set and mitigate publication bias, first,

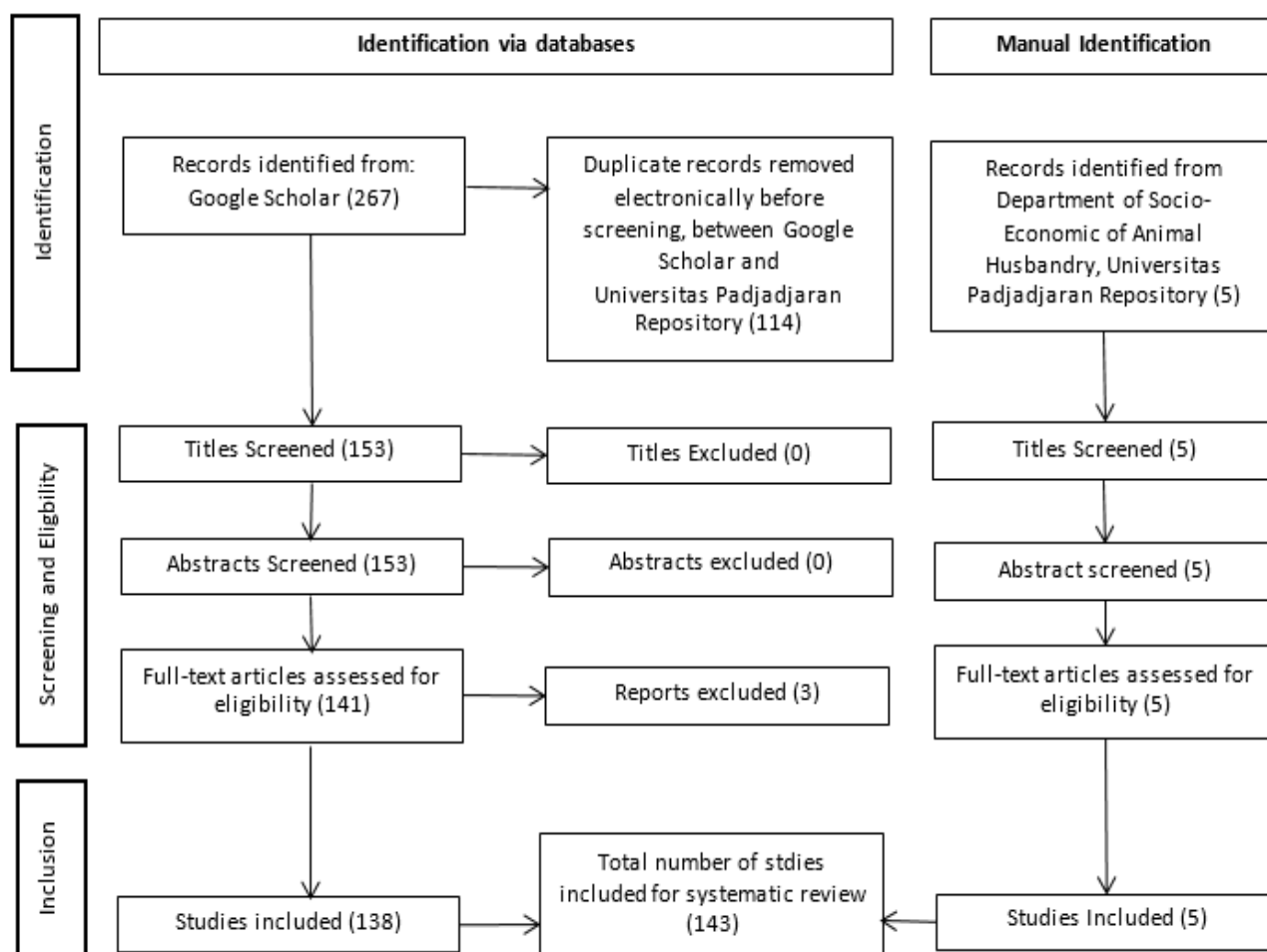


Figure1: PRISMA flow diagram.

“gray literature” was included via research reports from the Department of Socio-Economic Development of Animal Husbandry, Padjadjaran University. These reports provided essential field data that are often underrepresented in global journals. Second, the synthesis utilized a narrative integration of non-significant findings. By including studies that reported “no effect” or “non-significant” results, the review avoids the common bias of only reporting successful outcomes, providing a more balanced view of the West Java livestock market. To move beyond simple “vote-counting,” the analysis prioritized effect size and identified moderator variables to resolve conflicting findings across different contexts. The integration involved:

- Tabulation: Mapping: 143 sources into a comprehensive matrix
- Categorization: Grouping findings by strength (strong, moderate, weak)
- Theoretical Synthesis: Developing a unified model to explain divergent results within the literature

Data were extracted from the final 143 sources using a standardized extraction matrix. This systematic tabulation captured key variables from each study, including author(s), year, geographic location with West Java/Indonesia, sample size, methodology (qualitative, quantitative, or mixed), and core findings related to consumer behavior and commercialization. This matrix served as the primary tool for identifying patterns and ensuring that no data points were overlooked during the integration phase.

A comparative analysis was performed to identify areas of consensus and divergence between authors. Particular attention was paid to conflicting results, which were analyzed against moderator variables—such as urban versus rural settings—to explain why different conclusions were reached. The final stage involved integrating the categorized data to build a new conceptual model. This model explains the complex interplay between local chicken attributes and consumer loyalty, providing a framework that accounts for the nuances found in the literature rather than simply presenting an average of the results.

RESULTS

The strong consumer preference for the authentic taste of free-range chicken creates a significant market opportunity, which in turn emphasizes the economic significance of local chicken production for farmers. However, to transform this opportunity into a sustainable industry, genetic intervention and feed optimization are needed to overcome productivity constraints without sacrificing the quality attributes that underpin consumer loyalty.

CONSUMER PREFERENCES AND THE MARKET OPPORTUNITY

Livestock revolution is fueled by increasing meat consumption in the last 30 years (Global Forum for Food and Agriculture, 2018). This demand is projected to continue increasing substantially. The livestock sector is a major part of the global economy, contributing about one-third of agricultural GDP in low medium income countries, and is a source of income and financial assets for millions, especially smallholders. The market provides the incentive for investment and growth.

Consumer preference for local chicken products is a consumer’s choice of whether or not they like or dislike the local chicken products they will consume (Table 1). Some consumers choose a high price because they fear that if they choose local chicken at a lower price, the quality will be questionable. Consumers expect and consider the price to be commensurate with the quality provided, but the price offered must also be reasonable. Some consumers, based on price, choose cheaper local chicken because they feel that local chicken is not the only source of household needs, so they need to consider other needs. Consumers prefer feather-free local chicken meat because it indicates proper processing, as feathers can harbor disease. Consumers also feel uncomfortable if feathers are still attached to local chicken meat. Furthermore, feather-free meat simplifies subsequent processing. The majority of consumers are Muslim, so they prioritize halal certification in the local chicken products they consume, ensuring that the chickens are slaughtered and processed in a halal manner. Consumers will feel at ease and have no doubts if they know that the local chicken they consume has been processed in a halal manner, thus eliminating suspicions about the seller. Fresh local chicken meat is generally pink to reddish in color. It shows that the meat has minimal bacterial contamination and meat aroma has to be fresh and doesn’t have fishy odor. Furthermore, packaging should be clear and clean to assure customers of its hygiene.

Table 1: Attributes Preference.

Attributes	Score	Category
Meat Aroma	130	Like
Cleanliness	131	Like
Meat Color	129	Like
Texture	133	Like
Price	107	Quite Like

Source: Research report in Department of Socioeconomic Development of Animal Husbandry, 2025

Some consumer attitudes are subjective, they are emotional responses toward local chicken meat. The cleanliness of the feathers, certification, freshness, and quality of local chicken meat which includes feelings of liking or disliking

halal are varying from one consumer to another. They believe that local chicken has better nutritional value than broiler chicken. Frequency of purchasing decision determines their preference. Purchase time and amount are also measurement to be counted for no matter where they buy it, whether in traditional market or any other outlets.

Price, cleanliness, halal certification, meat aroma, and the packaging are valid and reliable attributes that confirmed by the consumers (Table 2). High and fluctuate price of local chicken is not satisfying (Table 3) and some consumers find feathers are still attached to the carcass. The halal certification is still not clear in processing phase and some carcasses smell fishy odor which required more cleaning. The last one is that, the packaging is still using coloured plastic bag and not package properly.

Table 2: Validity test of Price, Cleanliness, Halal certification, Meat aroma, and the Packaging.

Attributes	r_{count}	r_{table}	Interpretation
Price	0.683		Valid
Cleanliness	0.742		Valid
Halal certification	0.530	0.279	Valid
Meat aroma	0.729		Valid
Packaging	0.517		Valid

Source: Research report in Department of Socioeconomic Development of Animal Husbandry, 2025; This test uses Pearson Product Moment Correlation, to measure the extent to which each attribute item consistently measures the consumer purchasing decision variable. Determination of r_{count} is the correlation coefficient calculated for each attribute. A higher value indicates that the attributes has a stronger and more valid contribution in influencing the overall purchasing decision. Determination r_{table} is determined based on Product Moment Value Distribution Table. Sample of 55 in this research report used to calculated degrees of freedom at a significance level of 0.05.

Based on the data in Tables 1 and 2, this analysis distinguishes between attributes that are absolute requirements (non-negotiable) and attributes that can be compromised for cost efficiency. Strategic analysis of attributes: identifying consumer trade-offs preference data should not be viewed as a list of equivalent wishes, but

rather as a decision hierarchy. The following is a mapping of attributes based on their negotiation level:

Non-negotiable attributes: foundations of trust and quality. This attribute has high validity and a peak preference score, indicating that failure at this point will lead to instant rejection of the product.

- Halal certification: despite having an correlation coefficient(r) of 0.530, this attributes is validated as an absolute requirement in the West Java market. Consumers will not trade halal status for lower prices; this is a barrier to entry for large-scale production at the faculty.
- Texture, cleanliness and meat aroma: this is the attribute with the top three highest score (133, 131, and 130) in the “Like” category. The characteristics of chewy/tough, clean and tasty meat is a key indicator of the authenticity of local chicken. If faculty’s intensive production results in mushy meat, and/or not clean and/or tasteless as a normal local chicken, consumer loyalty will be lost because the product loses its distinctive identity from broiler chicken. Cleanliness has a strongest validity that indicates minimum food safety standards that consumers cannot negotiate.
- Halal priority is a normative-cultural priority, while cleanliness is a practical-physical priority that more strongly influences choice behavior at the point of sale.

Negotiable attributes: this is where faculty’s efficiency engineering opportunities lie. Consumers show flexibility on this attribute if there are price incentives or quality assurance.

- Price: significantly has the lowest preference score (107) and is categorized only as “Quite Like.” This confirms that free-range chicken consumers tend to be less price-sensitive as long as intrinsic quality is met. There is room for faculty to set a premium price as long as texture and aroma attributes are maintained.
- Packaging: has the lowest validity (0.517) compared to other attributes. This represents an efficiency opportunity; faculty can use functional and simple packaging without having to invest in expensive visual branding, because consumers prioritize the quality of the meat inside.

Table 3: Estimated price based on strain type.

Strain Type	Estimated Carcass Price (per Kg)	Price Characteristics
Kampung Asli	Rp 85,000 – Rp 110,000	Most Expensive, fluctuates significantly during holidays
KUB (Unggul)	Rp 65,000 – Rp 85,000	More stable, often used for restaurant supply
Joper (Jawa Super)	Rp 45,000 – Rp 65,000	Cheapest, closely competes with broiler prices
Male Kampung Breed	Rp 40,000 – Rp 55,000	Often considered a replacement for the village food stall

Source: primary data from market survey in West Java (August 2024);*Footnote: Male Kampung Breed refers to male local chickens; This price data is integrated to define the consumer price tolerance threshold, where the premium price of Kampung Asli is validated by high preference score on the texture attribute compared to price.

Table 4: Simple linear regression test results.

Model	Unstandardized coefficients	Standardized coefficients	Beta	t	Sig.
	B	Std. Error			
(Constant)	1.395	0.570		2.446	0.016
1 Consumer Preference	0.723	0.037	0.891	19.43	0.000

a. Dependent Variable: Local Chicken Purchasing Decisions

Source: Research report in Department of Socioeconomic Development of Animal Husbandry, 2025; Sample size: 100 repondents.

Strategic alternative solution is that authenticity threshold the market opportunity for faculty lies not in providing the cheapest chicken, but in guaranteeing authenticity at scale. Consumers are willing to compromise on packaging and even pay a slightly higher price (score 107), as long as they are assured of texture (133) and cleanliness (131). Operational recommendation is production strategy should focus on raising chicken long enough to reach textural maturity, rather than forcing feed efficiency that can reduce the sensory quality of the chicken.

The final aspect of consumer behavior is loyalty, which is commitment for routinely buying the same product at least with the same frequency and amount. Consumers disagree that they choose local chicken for its cheaper price of local chicken, they tend to pay more for its superior quality, differently than broiler. Consumers in this category agree that local chicken tastes better than domestic chicken. Respondents were categorized as very loyal to the attributes of local chicken in this study. Consumers in this very loyal category disagreed that they preferred local chicken for its price, but rather for its quality, including differences in texture and fat content. Consumers in this category strongly agreed with the taste attribute, stating that local chicken tastes better than imported chicken because it has a firmer texture, despite being smaller. Regarding the need for chicken products, consumers strongly agree that they will choose local chicken when they need it because they prefer it and the quality is excellent. Consumers strongly agree that they will recommend local chicken to others because they want to try good quality local chicken.

The results shows that the community really likes and is satisfied with the color, taste, cleanliness, aroma, price, meat cleanliness from feathers, halal certification, meat packaging. In addition, the community is loyal to the more affordable price compared to other chicken meat products, the taste is better compared to other chicken meat products, and consumers perceive the flavor of local chicken meat as delicious and distinctive, continuing to purchase local chicken meat products in the future, meeting the need for processed meat products, they will continue to buy local chicken meat products, recommend local chicken meat products to others.

The relationship between these variables varied by region. For instance, Pamungkas *et al.* (2024) found that preferences did not significantly affect loyalty (Figure 2). However, in other regions, Fauziah *et al.* (2024) showed that consumer preferences had a positive and significant impact on purchasing decisions (Table 4). In Table 4, the consumer preference regression coefficient (b) is 0.723 and positive. It indicates a positive effect that for every 1% increase in preference value, the purchase decision value increases by 0.723. The high value R (0.891) occurs because the consumer preferences variable in this model is most likely treated as aggregate variable that already includes various attributes such as product quality (taste, color, aroma) and price. The limitation is that this model is unable to distinguish which attribute is the most dominant in triggering purchasing decisions because everything is wrapped in one independent variable. Attitude variables do not have a significant effect on consumer loyalty, while satisfaction has a significant effect on consumer loyalty in all regions. Preferences and satisfaction simultaneously influence consumer loyalty of local chicken meat. Consumer attitudes and satisfaction together have a significant effect on consumer loyalty (Figure 3). Product quality and product price directly influence local chicken purchasing decisions in Traditional Markets. People like and are aware of their needs, so they buy local chicken (Figure 4, Malik *et al.*, 2024). These phenomenon does not have a strong, universal causal relationship. Structural model of the consumer behavior connects variables from the pre-purchase to post-purchase stages in a logical flow:

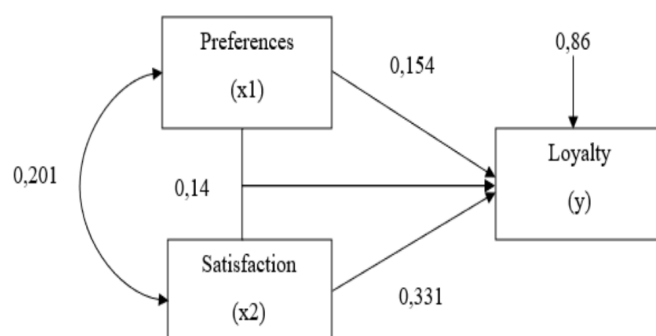


Figure 2: The Influence of Preferences and Satisfaction towards Loyalty

Source: Research report

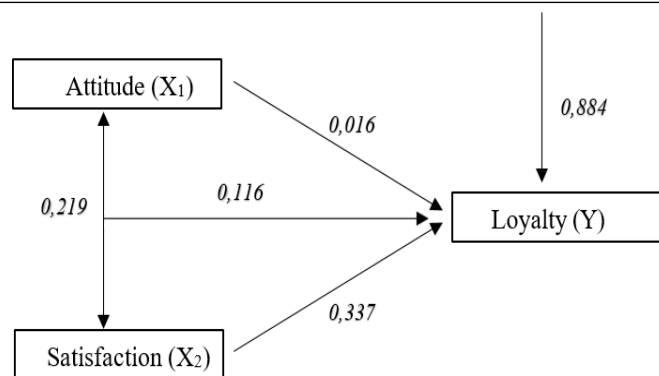


Figure 3: The Effect of attitude and satisfaction on loyalty.

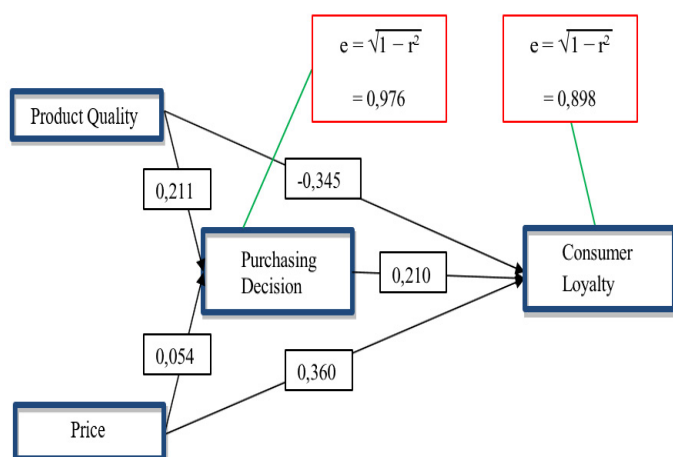


Figure 4: The influence of product quality and price on consumer purchasing decisions and loyalty.

- Trigger factors:
- Product quality
- Product Price
- Psychological Processes:
- Consumer Preferences
- Attitude
- Outcomes
- Consumer satisfaction
- Loyalty

Consumer loyalty to local chicken is rooted in its “authentic taste” which is difficult to replace. Economically, this creates a premium market niche. Therefore, genetic breeding strategies (such as KUB) and feed management should not focus solely on accelerating growth (efficiency), but should be guided by consumer sensory parameters to ensure that his technological innovation does not diminish the product’s primary appeal in the market.

Consumer loyalty to local chicken in West Java is rooted in a complex sensory profile scientifically distinguished by four key biochemical mechanisms. First, genetically, native free range chickens have metabolic rate that results in a much higher concentration of nucleotides, particularly

inosine monophosphate (IMP), than commercially bred chickens, resulting in a more intense savory flavor sensation. Second, the distinctive texture mechanism is influenced by physiological maturity, older slaughter age results in the formation of more stable collagen cross-links resulting in firmer meat that resists breakdown during lengthy traditional processing. Third, natural scavenging allows the accumulation of volatile compounds from a diverse diet, including insects and terpene-rich forage, which are then transferred into adipose tissue to form a richer and more complex meat aroma. Finally, the intensity of physical activity in free range systems increases muscle fiber density and myoglobin levels, which contribute to darker meat color and better water-holding capacity after slaughter. This integration of genetic factors, maturity, and natural nutritional intake creates an authenticity threshold that is difficult to replicate in intensive production systems, and explains consumers’ willingness to pay a premium for these quality attributes.

ECONOMIC SIGNIFICANCE OF LOCAL CHICKEN PRODUCTION SYSTEMS

The production of local chicken known as Kampung chicken in Indonesia, holds significant economic value, particularly for the rural economy and national food security (Hadrawi *et al.*, 2019; Setiadi *et al.*, 2020; Siburian *et al.*, 2021; Mardiana *et al.*, 2022; Zulkarnain *et al.*, 2023; Komang *et al.*, 2024; Prafitri *et al.*, 2025). Keys of economic significance are significant market share, essential protein source, and growing demand. 10 - 15% of the poultry production in Indonesia which accounted for billions of rupiahs are contributed by local chicken production. With a highly flavoured taste compared to broiler, local meat are still affordable and increasing in demand. Income generation broadly made by local chicken farmers which often using traditional, free-range, or semi intensive system. Many small farmers are making subsidiary income out of it. Savings, liquid assets, and easy cash are stored in the form of livestock especially for emergency family cases such as children education and family health problem. Many of the family labor who practice this smallholders are woman and so it alleviates poverty in rural areas. The local chicken, as known by people in any part of the world, are having high adaptability to any environmental condition, high resistance to disease, and ability to thrive minimal care and irregular feed supply and this turns to minimum production cost, but this also has impact on slower growth.

Nowadays, some are using intensive housing system but it generates different taste that the free-range caring system as the farmer fed them with broiler feed. An intensive husbandry system can improve the performance of local chicken production compared to traditional husbandry. The local chicken development model needs to be built with

the support of various parties, including research activities and policy makers. Good and targeted collaboration is expected to improve the performance of local chicken farming business as an agribusiness opportunity with the goal of increasing farmer income. The performance of local chicken varies but intensive rearing systems are superior to traditional and semi intensive systems (Tutubun *et al.*, 2023).

In cultural and traditional value, Kampung chickens have a deep-rooted role in Indonesian society, often serving as complements in religious ceremonies, traditional rituals, and customs, giving them a unique cultural and economic value beyond mere consumption. Kampung chicken eggs are also used in traditional herbal drinks known as Jamu, which further boosts their market price and demand compared to commercial eggs. Small-scale rural farmer with traditional or extensive raising uses very low capital investment. The farmers use simple, existing structures (backyard/coop), and minimal equipment. Breeding stock used is unselected, native Kampung chicken which grow slowly but are hardy. Rearing system, off course, extensive or semi-intensive with free-range scavenging in the yard/village, supplemented by kitchen scraps, rice bran, and minimal commercial feed. Due to the scavenging and low nutrition diet, it takes 4-6 months or more to reach market weight. All is for the goal of food security, cultural use, and subsidiary income. Kampung chicken production is economically significant because it is resilient, low-cost enterprise that secures food and protein supply while providing a vital safety net and primary income supplement for millions of rural farmers across Indonesia, simultaneously preserving an important local genetic and cultural resource. This also happens in Eastern Africa (Mujyambere *et al.*, 2022), woman contributes to the farming and the local chicken kept under scavenging systems. Farmer primarily used traditional methods to control the diseases, medications, and vaccines. The parallel between West Java and East African Countries lies in the structure of dual production system. In both regions, local chickens survive not because of biological efficiency but because of their role as a 'living bank' for rural households with limited access to formal capital. The high economic value of local chickens for smallholder farmers is not measured by how fast they grow, but by how reliable they are as a family's social and sconomic safety net. Similarly, consumers in both regions demonstrate a higherwillingness to pay for local chickens due to the perceived organic quality and firmer meat texture compared to commercial breeds. However, there are significant contrasts in the supply chain mechanisms. In East Africa, the main challenges are extreme market fragmentation and the lack of cold chain infrastructure, which forces the live chicken trade exclusively. In contrast, in West Java, the challenges

have shifted to certification barriers (halal certification) where government regulations are much stricter than in East Africa. Thus, the specific lesson to be learned is that although consumer preference for authenticity id universal in developing countries, the sustainability of smallholder farmers in West Java is more dependent on administrative formalization (certification) while in East Africa it is more dependent on physical market accessibility.

On the contrary, poultry industry in China has given knowledge about its challenges (Zhang, *et al.*, 2025). In 2020, there were 114 local chicken breed. In order to optimizing high productivity, precision nutrition program, smart poultry farming, and poultry-crop interacting system are used to sustain the development of the poultry industry. The transformation of the local chicken industry in West Java can be achieved by adopting two successful global models that offer concrete production parameters. In China, the implementation of the stage harvest system on yellow chicken has been proven to balance industrial efficiency with sensory quality. This system uses high densities during the brooding phase to reduce mortality, followed by a controlled free range phase for inosine monophosphate deposition. Consequently, this system can reduce the feed conversion ratio by 0.3 to 0.5 points compared to traditional methods, with premium consumer acceptancereaching 85% due to the meat's firm texture. Meanwhile, a model from East Africa (Kenya and Uganda) offers a solution to Indonesia's high feed costs, which are dominated by imported components. The integration of Black Soldier Fly (BSF) larvae as a protein substitute has been shown not to reduce the growth rate of local chickens, but to reduce feed costs by 20-35%. consumer studies in the region also showed that 90% of respondents did not find any degradation in taste and even preferredthe organic label derived from insect feed. By combining the efficiency of the phased harvest phase from China and the independence of BSF protein from Africa, farmers in West Java have a technical roadmap to lower selling prices without compromising the authenticity threshold that underpins their consumer loyalty.

When Kampung chicken is raised intensively by a large, capital-intensive company, the entire dynamic of the business changes dramatically as it is addresses the key trade-off between tradition, taste, and large-scale commercial viability in local sector.

Capital investment in large scale intensive production is very high, requires significant capital for large, modern housing, automated feeding/watering systems, climate control, and advances veterinary facilities. Breeding stock has to use improved strains (KUB, Sentul, Joper, Gaok) which are selected for faster growth and higher egg production while retaining some local traits.

Table 5: Attributes towards intensification scale.

Attribute	Small-Scale (Backyard/Extensive)	Large-Scale (Intensive/Commercial)	Reference
Primary Input	Kitchen waste, fallen grains, insects, and "free" labor.	Commercial pellets, vitamins, hired labor, and electricity.	Vanany <i>et al.</i> (2019)
Capital (CAPEX)	Very Low (simple bamboo cages or no cage).	High (closed-house systems, automated feeders).	Zulkarnain <i>et al.</i> (2023)
Growth Output	Slow; 800g – 1kg in 120–150 days.	Fast; 1kg in 60–75 days (using improved breeds).	Fitra <i>et al.</i> (2021)
FCR (Feed Conversion)	High/Inefficient (often >3.5 if measured).	Low/Efficient (typically 2.2–2.6).	Tutubun <i>et al.</i> (2023)
Production Cost	Low cash outlay, but high "opportunity cost" of time.	High cash outlay; highly sensitive to global grain prices.	Zulkarnain <i>et al.</i> (2023)
Taste & Texture	Strong "umami" flavor, lean, and firm/tough meat.	Milder flavor, higher fat content, and softer texture.	Jayasena <i>et al.</i> (2013)
Quality of Meat	Higher levels of yellow pigment (carotenoids) and Omega-3.	Standardized color; consistent fat-to-protein ratio.	Leke <i>et al.</i> (2017)
Risk of Disease	High exposure to wild birds; low biosecurity.	Controlled environment; high risk of "mass" loss if biosecurity fails.	Zulkarnain <i>et al.</i> (2023) Zhang <i>et al.</i> (2025)

Source: Journals and other references.

Table 6: R/C Ratio of small and large production scale.

System	Typical R/C Range	Economic Characteristic
Small-Scale (Extensive)	1.5 – 3.0	High R/C because Costs (C) are near zero (scavenging). Revenue is lower, but the ratio is high.
Large-Scale (Intensive)	1.1 – 1.4	Lower R/C because Costs (C) are very high (commercial feed). Profit depends on high volume, not a high ratio.

Source: Journals and other references.

Rearing systems would be intensive, confined housing (often closed house or battery cages) with high density and complete feed is provided consistently. Time to market is fast. Improved genetics plus optimal nutrition means chickens reach market weight (0.8-1.2 kg) in 60-90 days (2-3 months). These feature would achieve the goal of mass production, cost reduction, and consistency to supply large markets (restaurants and modern retail).

The large scale intensive system is overwhelmingly more efficient in terms of output metrics (Table 5). Intensive systems can raise a massive number of birds per cycle, leading to greater total output volume. By using high quality commercial feed and improved chicken strains, the FCR (the ratio of feed input to weight gain) is significantly lower (better) than traditional scavenging. This means less feed is wasted, and the chicken grows faster. The ability to harvest chickens in 2-3 months instead of 4-6 months allows the company to execute 3-4 production cycles per year, dramatically increasing the return on investment. While the small-scale traditional system is efficient in a non-monetary sense because the primary feed cost is near zero (chicken scavenge), and labor is often unpaid family labor. If we only count cash expenses like R/C ratio (Table 6), it might appear highly profitable for smallholders, but

the productivity (output per bird/area) is very low. So large scale intensive production is much more commercially efficient due to high volume, faster growth, and controlled input, allowing it to meet high market demand. Small farmers never count anything but feed, no land cost, no labor, and they also use replacement stock from their farm, so the return would be very high compared to intensive scale that has to account everything. Even in marketing, small farmers are usually wait for people to come to farm to buy the output while the commercial one has to transfer with expedition with risk.

The data in Table 6 demonstrates the economic paradox in local chicken production. Although the small-scale system has a seemingly superior cost efficiency with an R/C ratio of 3.0, this figure is illusory when viewed from an industrial-scale perspective. The illusion of costs on small scale is that the high R/C ratio in an extensive system is due to minimal cash costs, where feed is obtained from scavenging. However, this model ignores the opportunity cost of family labor and the high risk of livestock mortality. For the faculty, this model cannot be applied to pursue mass production targets due to its dependence on uncontrolled natural inputs. The reality of a large scale, in contrast, has a much tighter ratio (1.1 - 1.4). This is due

to the dominance of commercial feed costs, which reach 70-80% of the total production costs. However, this system offers the volume certainty and product standardization necessary to penetrate the modern retail market. The opportunity for the faculty lies in increasing the R/C ratio on a large scale to approach 1.5 through the local feed ingredient substitution discussed previously. By lowering the cash cost of feed without excessively extending the life cycle, the faculty can achieve a balance between industrial efficiency and higher profitability.

Compared to small-scale traditional systems, the taste of intensive, large scale farms often use improved strains (e.g. KUB) which are crosses designed to have the rapid growth of a broiler but with characteristics color and some of the texture/flavor of a native chicken (Table 7). While better than pure commercial broiler, the meat tends to be less firm and the flavor less intense/savory than a traditionally raised, truly free range Kampung chicken because they grow faster and have a controlled, commercial feed diet, offer a middle ground: *fast growth with Kampung-like traits*. Therefore, the traditional system is generally considered to produce meat with the superior and authentic Kampung chicken taste as the meat is firmer, chewier texture (due to chickens roaming and exercising) and a distinct, savory, richer flavor that is highly prized in traditional Indonesia cuisine. The most valuable part of it is when it comes to market perception. Consumers who seek out Original Kampung chicken are looking for this specific, traditional quality and are willing to pay a premium for it. On taste attribute, the intensive product is a palatable compromise that balances taste with cost and speed.

The tension between authenticity and efficiency reaches a point of equilibrium when genetic innovation (such as KUB chicken) are exploited not for maximum growth rates, but rather for standardized quality. The consumer

compromise point lies at the texture threshold and the taste. Consumers will lose loyalty if the use of pure concentrate feed and shortened harvest periods results in a soft meat texture resembling that of broiler chickens. Therefore, economic efficiency must give way to sufficient rearing duration to ensure muscle fiber maturity, which remains a key determinant of loyalty despite lower prices.

To strengthen economic significance, global case studies should be integrated as benchmark for the model to be applied in West Java. Based on the synthesis 143 sources, lessons from Africa and China provide operational answers to the tension between large scale and traditional quality. Here are specific insights that can be integrated:

China has a very advanced local chicken production model (yellow chickens) on an industrial scale but still maintains authenticity. The use of a stage harvest system is efficient by separating market into fast growing chickens (intensive) and authentic flavor chickens (semi-intensive with a harvest age of >100 days).

Inclusive economy and precision feeding have been practically developed in many African countries. Local chickens are the backbone of collectively managed rural economies. Research in Africa shows that the use of Black Soldier Fly (BSF) larvae or processed agricultural waste can reduce feed cost by up to 30% without compromising the nutritional profile of the meat.

The economic significance of local chicken production in West Java can be optimized by adopting successful market mechanisms in China and Africa. Lessons from China shows that large-scale production does not have to sacrifice quality if institutions implement harvest age differentiation strategy to maintain consumer-desired texture parameters. Meanwhile, the African model

Table 7: Key characteristics of major strains.

Strain	Origin/Type	Key Characteristics	Best production scale	Reference
Common Kampung	Pure Native	High disease resistance, superior meat taste, slow growth, high broodiness (likes to hatch eggs).	Small-scale (Backyard)	Sartika (2012)
KUB (Kampung Unggul Balitnak)	Improved Native	Selected for high egg production (up to 160–180 eggs/year) and lower broodiness.	Semi-Intensive to Large-Scale	Suryana (2017)
Joper (Jawa Super)	Crossbred	Cross between a Kampung male and a Layer female. Very fast growth but lacks the "pure" kampung texture.	Large-Scale (Intensive)	Pratiwi <i>et al.</i> (2023)
Sentul	Purebred Native	Gray plumage, originated from Ciamis. Good dual-purpose (meat and eggs) with high local cultural value.	Small to Semi-Intensive	Suciati <i>et al.</i> (2025)
Gaok	Local Breed	Known for its long, rhythmic crowing and large body size; primarily found in Madura.	Small-scale/Heritage	Henuk and Bakti (2018)

Source: Journals and other references.

provides operational solutions through precision nutrition based on local ingredients that enable cost efficiency without relying on expensive manufactured feed. Integrating these two approaches allows the Faculty of Animal Husbandry to build a production system that is economically competitive while maintaining the cultural and sensory values that are the core identity of free range chicken in West Java. To combine superior breed efficiency with local nutrient management, extension of harvest age (90-110 days) ensuring a "Like" texture score (133) met, and Africa substitution of local ingredients and social inclusiveness will reduce price to be more competitive (score 107).

GENETIC IMPROVEMENT AND FEEDING STRATEGIES

The genetic improvement of Kampung chicken is a critical strategy to bridge the gap between the high consumer demand for its meat/eggs and the low productivity of traditional native strains. This improvement is specifically geared toward making the chicken viable for large scale, intensive rearing systems, where high output and efficiency are paramount. The core goal of these programs is to create a chicken that retains the desirable Kampung taste and hardiness but possesses the fast growth and high egg laying traits of commercial breeds.

Indonesian native chickens are a rich source of animal genetic resources. The most prominent example of successful genetic improvement for intensive Kampung chicken farming in Indonesia is the KUB chicken. Breeds like the improved KUB chicken are research innovations aiming to combine the hardiness and taste of local chickens with higher productivity (faster growth, with more eggs), promising further economic development for the sector. With the specific target traits, Egg production from the traditional 40-60 eggs per hen per year to 160-180 eggs per hen per year in intensive systems. Broodiness is significantly reduced (to around 10% of the population), meaning hens spend less time brooding and more time laying eggs. It is also faster in growth, achieving market weight (0.8-1.2 kg) in 2-3 months, compared to unselected Kampung chicken. The more profitable is when it comes to disease resistance, it retains the high disease resistance characteristics of native breeds, performing better than pure commercial breeds under local environmental stress. Joper strain is a popular commercial type of local chicken, typically the result of crossing an improved Kampung male (like KUB) or an unselected native male with a female commercial layer (like ISA Brown, Lohmann Brown, or RIR). This strain has come up with even faster growth while retaining some of the desirable yellow skin and taste attributes. This is often the preferred choice for commercial meat producers focusing solely on speed and volume.

The entire selection program for strains like KUB centers on improving trait that are traditionally weak in the native chicken but essential for profitability in confinement. Genetic improvement is executed through systematic, data-driven breeding programs, which are: mass selection, pedigree recording, crossbreeding and molecular genetics. Mass selection is the identification and selection of the best-performing individuals from a large native population to serve as the next generation's breeding stock. Pedigree recording is tracking the performance of individual animals and their offspring to accurately estimate their breeding value and select only the genetically superior birds. Crossbreeding (hybrid vigor) is seen in Joper, crossing improved native males with high-production commercial females, leveraging heterosis to create a fast-growing terminal product. Molecular genetics research is on going to identify and utilize marker-assisted selection (MAS) for genes like Myostatin (MSTN), which regulates muscle growth, to accelerate the selection of meat-type birds. In an intensive system, these genetically improved strains allow large companies to achieve competitive efficiency while supplying a product that the consumer perceives as a better-tasting, healthier alternative to the standard broiler chicken. None of it indicates a rejection of the consumption of local chicken, even if it's genetically enhanced.

Utilizing local ingredients that can be combined into feed is very useful for free range chicken farming, as deficiencies in feed and nutrient can be supplemented with excess feed ingredients. Sago flour, cassava leaf flour, earthworm flour, moringa leaves, castor bean leaves, papaya leaves, ginger and red coconut oil are local. Combining feed ingredients that do not compete with human needs is also important because it can reduce ration costs (Anas *et al.*, 2020). The use of local plants as alternative raw materials must be appropriate because most plants contain high levels of crude fiber, and poultry have limited ability to digest crude fiber (Sultana *et al.*, 2016). Certain levels of crude fiber are also required by poultry for toxicological effects, prebiotic effects, and feed efficiency. Conversely, excessive amounts can reduce feed digestibility. In general, local plants, used appropriately can increase poultry productivity and increase consumption due to their bio active content. The local ingredients in feed given to local chickens generally dominate in the form of flour, so that it is easy to make, easier to apply when mixed into feed, and all the bioactive content of local plants can be utilized and is more stable. The use of local ingredients as alternative feed ingredients for free range chickens has a positive impact on their growth and weight gain. The supplemental dosage plays a crucial role in influencing free range chicken productivity, both in terms of weight gain and egg production (Ramadani and Haryuni, 2023).

The paradox of efficiency comes out when large scale farming depend on traditional feed, there will be a clash between biological potential and nutritional intake. The relationship between local chickens and local ingredients is not simply about cost savings, but about quality control. Local ingredients are used as functional supplements, not simply replacements for the main ration. Local chickens have the genetic potential to grow rapidly, but excessively rapid growth often results in meat with a mushy texture. The use of ingredients such as papaya leaves or organic waste flour serves as a source that can improve the health profile of livestock and meat texture. The use of local ingredients does have the potential to slow growth rates compared to pure concentrate feed. However, this delay is intentionally used to achieve physiological maturity that supports the “Like” texture score (133) in Table 1.

Instead of forcing harvest on day 60 (the industry efficiency standard), the faculty can use a more nuanced plan. Starter phase (1-4 weeks) use a high protein concentrate feed to maximize the genetic potential of local chickens in skeletal and organ development. Finisher phase (5-11 weeks) incorporate local ingredients (such as rice bran, papaya leaf meal, or other organic materials) to partially replace manufactures feed. Although the harvest period is increased from 60 to 75-80 days, economic efficiency is maintained through significant reductions in feed costs (price score 107) and increased selling value due to more authentic meat quality.

Genetic improvement in local chickens should not be viewed in isolation from local feed management strategies. The use of alternative feed ingredients, such as papaya leaves or agricultural waste, is not intended to replace biological efficiency of local chickens, but rather as a tool to modulate growth rates. Although integration of local ingredients can extend the rearing period from 60 to 75-80 days, this deliberate ‘slowing down’ is a technical investment to ensure muscle fiber maturity that meets consumer preferences. Thus, the faculty can achieve an economically efficient large-scale production model through lower feed input costs, while still producing products with sensory characteristics that satisfy the market’s authenticity threshold.

DISCUSSIONS

THE CENTRAL TRADE-OFF AUTHENTICITY VERSUS EFFICIENCY

In the development of the local chicken industry, there is a fundamental tension between maintaining authenticity (which consumers desire) and increasing efficiency (which producers need). the balanced between the two will determine the sustainability of this sector. Authenticity is not just a label, but a specific sensory experience. Consumers

in West Java have a strong loyalty rooted in the physical characteristics of the product. For texture and taste, higher iosine monophosphate (IMP) content and a firmer meat texture (resulting from longer rearing periods) are key differentiators from broiler chickens. For safety and trust, attributes such as halal certification and carcass cleanliness are non-negotiable. If production efficiency lowers these standards, consumer loyalty will be lost immediately.

Somehow there is economic paradox in this case, small-scale versus large scale intensive scale efficiency often clashes with traditional economic models. Pseudo-efficiency of smallholder farmers with free range systems appear highly efficient in terms of cash costs (high R/C ratio) because feed is sourced from kitchen scraps and labor is unpaid. However, this system is inefficient in terms of productivity due to very slow growth.

Industry cost pressures in intensive systems (such as the use of KUB or Joper strains) offer quick harvest but are heavily burdened by manufactured feed costs, which account for 70-80% of total costs. Strategic solution for industry in authenticity is to bridge this gap. Strategies needed are the ones which can adopt technological efficiency without sacrificing the identity of local chickens: (1) harvest age differentiation, adopting a “stage harvest” model (as in China), where chickens are intensively raised in the early stages to reduce mortality, but are released into semi-free-range areas in the later stages to reach muscle maturity; (2) local feed substitution, using alternative ingredients such as Black Soldier Fly (BSF) larvae or local plant materials (Moringa, Sago) to reduce feed costs without compromising the nutritional profile and flavor of the meat, (3) scalable genetic innovation, the development of lines such as KUB must remain focused in maintaining the original characteristics of native chickens. The goal is not simply rapid growth (like broilers) but rather standardizing quality on a large scale.

The primary consideration for research institutions or business is not to compete as low-cost producers, but rather as guarantees of authenticity on an industrial scale. Economic efficiency must yield to sufficient rearing duration to ensure muscle fiber maturity, as texture and flavor remain key determinants of market loyalty over price.

TOWARDS A SUSTAINABLE PRODUCTION MODEL: A PROPOSED FRAMEWORK

Sustainable production model goes beyond simply pursuing financial profit, but rather creates a balance between economic profitability, socio-cultural acceptance and technical quality. This model rests on three interlocking main pillars.

Genetic optimization and local nutrition aim to increase productivity without exceeding the threshold of authenticity. The use of superior strains such as KUB or Joper is used to standardize output (body weight and egg count). However, selection is not only focused on maintaining muscle fiber density to maintain a chewy texture according to consumer preferences. For the circular economy, reducing dependence on imported manufactured feed by substituting local ingredients. The integration of Black Soldier Fly (BSF) larvae and local plant flour reduces costs by 20-35% while maintaining the “organic” meat flavor profile.

OPERATIONAL PILLARS

Adopting successful model from China to balance industrial efficiency with sensory quality to use intensive phase reared in closed cages to minimized mortality and ensure optimal initial nutritional intake. Later on, finishing in semi free-range phase can be managed by giving space to exercise. This physical activity is crucial for the formation of collagen and inosine monophosphate (IMP), which produce a savory flavor and firm mix texture.

STRATEGIC PILLARS

Certification and standardization of values addressing market needs for trust and quality assurance are priority. Given the West Java market’s high religious sensitivity, Halal certification and hygiene assurance (NKV) must be an integral part of the production process, not just an add-on. Price differentiation model proposes premium pricing. Research shows that loyal free-range chicken consumers are less price sensitive as long as the quality of taste and texture is guaranteed. By integrating management efficiency from China and raw material independence from the African model, farmers in West Java (including the production unit at the Faculty) can produce chickens at a more competitive cost while maintaining high sales value by maintaining the original characteristics of native chickens.

LIMITATIONS OF THE REVIEW

Although this systematic literature review (SLR) was prepared with a rigorous methodology, there are several limitations that should be considered in interpreting the results. (1) Reliance in aggregate models; Many of the studies analyzed (as shown in Table 4) used consumer preference variables as a single (aggregate) variable. This limits the model’s ability to distinguish precisely which attribute-whether taste, color, or aroma- is most dominant in triggering purchase decisions. As a result, the causal relationship between specific attributes and loyalty is often indirect. (2) Geographic and language bias; This review is consciously focuses on Indonesian-language literature (approximately 60%) to maintain relevance to the West

Java context. However, this creates limited accessibility for a global audience and may miss comparative studies from other tropical regions not published in Indonesian or English. (3) Use of gray literature; The inclusion of internal departmental reports was done to mitigate publication bias (the tendency for journals to only publish positive results). However, because these reports did not undergo the standard blind peer review process of international journals, there is a risk of variation in technical writing standards, despite internal quality checks. (4) Real-time data dynamics; This study covers data up to August 2025. Given the rapid development of the agribusiness and feed technology sectors (such as BSF), changes in global raw material prices or the emergence of new livestock disease outbreaks after that period may not be fully accommodated in this synthesis. (5) Subjectivity in Weight of Evidence (WoE); Although the pillars of quality, relevance, and significance have been established, assessing studies as “strong,” “moderate,” or “weak” still involves researcher subjectivity in determining the weight of qualitative findings. Suggestions for the future research are: (1) Experimental research using conjoint analysis is needed to more specifically examine the trade-offs between attributes, and (2) large scale data integration using machine learning to map consumer sentiment on social media to complement traditional survey data.

IMPLICATIONS FOR POLICY AND FUTURE RESEARCH

Government and institutional policies must shift from simply increasing livestock populations to strengthening a value-based agribusiness ecosystem. Authenticity standardization and certification must be facilitated by local government so that the farmers could afford halal and hygiene certification (NKV), this policy is crucial to protect brand of free range chicken from counterfeiting or mixing with broiler chickens in traditional markets. Subsidy or technical assistance policies should not focus solely on manufactured feed. Regulations are needed to support the development of independent, community-based feed industries, such as Black Soldier Fly (BSF) cultivation and the utilization of agricultural waste to reduce dependence on imports. Encourage partnership policies between large companies (or universities) and smallholder farmers. In this model, the company provides superior seeds (KUB/Joper) and initial management, while smallholder farmers carry out the semi free range finishing phase to ensure authentic meat quality. Policies for the conservation and refinement of native breeds (such as Sentul chicken) must be tightened to prevent genetic innovation from eliminating the unique characteristics that are key consumers’ attractions.

This review paves the way for further scientific exploration to fill existing knowledge gaps. Future research should move from aggregate variables to more specific analysis.

Experimental studies are needed to determine the trade-off point, for example, at what price consumers are willing to sacrifice a little chewy texture for ease of product availability. Future research in nutritional optimization for sensory profile is also needed on the effect of specific local feed ingredients on the fatty acid profile and nucleotide content (IMP) of meat. The goal is to find a low-cost feed formula that actually enhances the savory flavor of local chicken. Research on the use of block chain technology or QR codes to trace the origin of chickens (from which farm and what they were fed) can increase consumer confidence in product authenticity among high-end consumers. Given the resilience of local chickens, future research needs to map the resistance of superior strains (such as KUB) to extreme heat stress caused by global climate change to ensure future production stability. Evaluating the economic and environment impact of integrated poultry-crop systems, where chicken manure is processed into fertilizer for feed crops, creating a zero-waste production system. Overall, the implication is modernization without westernization meaning that adopting modern technologies (genetics, BSF, data management) while maintaining the product identity (taste, texture, culture) that is the unique economic strength of local chicken in West Java.

CONCLUSIONS

The results show that the consumer really likes and is satisfied with the color, taste, cleanliness, aroma, price, meat cleanliness from feathers, halal certification, meat packaging. In addition, the community is loyal to the more affordable price and the taste compared to other chicken meat products, the taste of local chicken meat is delicious and distinctive. Attitude variables do not have a significant effect on consumer loyalty, while satisfaction has a significant effect on consumer loyalty in all regions. Preferences and satisfaction simultaneously influence consumer loyalty. Product quality and product price directly influence local chicken purchasing decisions in Traditional Markets. Consumers like and are aware of their needs for local chicken, and tend to continue to purchase local chicken meat products in the future, which will create opportunities for production. Large scale intensive Kampung chicken farming wins on economic efficiency and speed, while small-scale traditional farming wins on authentic taste and cultural value. Large companies can also improve chicken strain genetically to achieve competitive efficiency while supplying a product that the consumer perceives as a better-tasting, healthier alternative to the standard broiler chicken. The Faculty of Animal Husbandry, Padjadjaran University, should consider large scale production with feeding management as it is in traditional farming, as an example of local chicken farming in Africa and China.

The faculty should implement a slow growth feeding system. Instead of aiming for a 60-day harvest weight with a high-protein concentrate feed (like broilers), the faculty uses local breeds but limits the feed's energy density so that harvest occurs on the 75th to 80th day. Incorporate Warner-Bratzler Shear Force (WBSF) arguments, which suggest that by 75 days, local chicken muscle tissue has reached sufficient collagen maturity to provide an authentic 'chewy' texture, while maintaining FCR efficiency to prevent farmers from experiencing losses due to diminishing returns after day 100. This recommendation aligns the market's need for quality with producers' need for profitability. The focus should not be on waste feed but on amino acid profiles and duration of physical activity of the livestock. Traditional elements included substitution 20-30% of the corn/concentrate with local, high fiber ingredients (such as quality rice bran or palm kernel meal). This high fiber content mimics the diet of free-range chickens, which physiologically enhances the muscle fiber texture (toughness) and taste sought by consumers. It should be focus on superior breed efficiency but with a nutritional profile designed for meat quality, not growth rate. Thus, the faculty does not have to choose between price and taste, but rather optimizes the cost per flavor unit that is competitive in the middle-high market. The data show that substitution at 20-30% levels increases the crude fiber content of the diet by 7-8%, which physiologically promotes firmer meat texture through increased shear strength. This effectively mimics the sensory outcomes of traditional free range systems. It has been clarified that these recommendations are a synthesis of the literature that optimizes the balance between production cost savings (15-20%) and maintaining the sensory quality expected by consumers (Putri *et al.*, 2022).

ACKNOWLEDGEMENTS

The authors express sincere gratitude to the Faculty of Animal Husbandry, Padjadjaran University, for supporting this research, which serves as a foundational study for the establishment of the faculty's intensive local chicken production unit. Special thanks are extended to Dr. Teresia W. Ng'ang'a, a local livestock expert and collaborator from Jolly's Footprints Limited, Nairobi, Kenya, for her invaluable insights and editorial support. Furthermore, we are grateful to the students within the Department of Socio-Economic Development of Animal Husbandry whose field research provided the essential data used in this systematic literature review.

NOVELTY STATEMENT

The research provides scientific novelty by directly aligning consumer-driven attributes and production system trade-

offs for local chicken in West Java through the introduction of the “Semi-Intensive Maturation Model”: an operational blueprint in Indonesia that resolves the tension between the market demands for authentic taste and industrial-scale efficiency needs using a slow-growth nutritional protocol based on local high-fiber feed and superior KUB strains to mature muscle fibers and meat collagen, resulting in an economically efficient livestock management strategy while maintaining the traditional sensory quality thresholds that are the main competitive advantages of local chickens.

AUTHOR'S CONTRIBUTIONS

All authors contributed collectively to the conceptualization, data synthesis, and final of this manuscript. While specific tasks-such as primary field data collection and the subsequent literature screening-were distributed among the team, the final analysis and development of the writing were reviewed and approved by all members in collaboration effort.

GENERATIVE AI AND AI ASSISTED TECHNOLOGY STATEMENT

The authors declare that no generative AI and AI assisted technology was used in the creation of this manuscript.

CONFLICT OF INTEREST

There is no conflict of interest in this research, from the data used, the research process, to the research results. This entire research is intended for the benefit of the Faculty of Animal Husbandry, Padjadjaran University, which is currently in the first phase of commercializing its products.

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