

# Priority Strategy for Goat and Sheep Farming Development using IPA

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## ABSTRACT

Designing a business model for sustainable goat and sheep farming is one of the keys to increasing productivity and competitiveness of the livestock sector in Indonesia. This article examines the formulation of a business model based on upstream-downstream integration using the Importance Performance Analysis (IPA) tool to identify priorities that need more attention in the development of goat and sheep farming. The IPA matrix is used to evaluate important components based on the Grand Design for National Goat and Sheep Development 2045 and the Guidelines for the Implementation of the Goat and Sheep Corporation Development Program of the Directorate General of PKH, Ministry of Agriculture. The results of the analysis show that aspects of providing quality feed, strengthening cultivation management, and developing market communication and education are priority areas that need to be optimized. In addition, market demand analysis and logistics systems also need to be improved to support efficient and timely product distribution. Formulating a business model that integrates the entire agribusiness chain can increase efficiency, strengthen competitiveness, and support national food security..

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## 1. Introduction

Indonesia, which is located along the equator, has a tropical climate type that is suitable for the development of goat and sheep, extensive land and forage production that is estimated to be able to breed and accommodate up to 100 million goats and sheeps (Rusdiana & Praharani, 2015). Based on BPS data (2022), the sheep population in Indonesia reached 15.61 million. This number decreased by 0.13% compared to the previous year. The goat population was recorded at 19.4 million (Directorate General of PKH, 2022a). Meanwhile, according to BPS (2023), Indonesia still imports 50 thousand goats. This import is carried out to meet needs during the peak period of religious holidays and to maintain price stability in the domestic market. The amount of goat imports itself reaches 37 trillion rupiah per year. This condition shows that the potential and need for goat and sheep meat in Indonesia is still large. In addition, the export potential for other countries such as the Middle East is able to absorb up to 1 million sheep per year with a nominal value of approximately 92 million US dollars which is met by the Australian market (Wanyoike et al., 2023).

Goat and sheep is a type of small ruminant livestock that is widely raised by the community both traditionally and traditionally. In addition to producing meat, goat and sheep livestock can also be used as a producer of skin and milk. Goat and sheep livestock has several advantages when compared to other livestock such as being easy to adapt to the environment, reproducing quickly within two years can give birth three times, being prolific (giving birth more than one) and seasonal polyestrus, so they can mate throughout the year, relatively requiring small capital and can be used as savings (Najmuddin & Nasich, 2019).



The level of consumption of goat and sheep meat has increased from year to year. In addition, the domestic market demand for daily consumption, aqiqah and qurban also continues to increase. Based on information provided by the Secretariat of the Directorate General of Animal Husbandry and Animal Health, Ministry of Agriculture of the Republic of Indonesia, the number of qurban animal needs has increased by 3 to 5 percent per year. Regional and international markets are also very open but have not been fulfilled (Noor & Hidayat 2017). So far, the ones who have gained the most profit from the gift farming activities are livestock dealers and traders. In addition, the slow growth of the gift commodity processing industry is also one of the causes of the weak growth of the gift farming agribusiness (Firman et al., 2018).

In facing this, the Indonesian Government through the Directorate General of Animal Husbandry and Animal Health (Ditjen PKH), Ministry of Agriculture has issued a Grand Design for the Development of National Goats and Sheep 2045 as a reference for stakeholders in developing the gift farming business to increase population and production to meet domestic consumption and fill export opportunities (Ditjen PKH, 2022b). In addition, the Directorate General of PKH issued a Guideline for the Implementation of the Goat and/or Sheep Corporate Development Program as a reference for the Development of Goat and/or Sheep Corporations for livestock breeders, companies, government and livestock stakeholders to make the corporate area an integrated activity from upstream to downstream handled by the livestock breeders themselves (Kepdirjen PKH, 2022).

Mitra Tani Farm (MT Farm) is a company engaged in the livestock industry with an integration model from upstream to downstream. Not only focusing on the number of livestock needs but also the processing process to shorten the chain of processes from producer to consumer (farm-to-table). One of MT Farm's main products is ready-to-eat goat and sheep meat. The goat and sheep meat produced is processed hygienically through a sterilization method and packaged using cans, making MT Farm's canned meat products last up to 3 years without preservatives and monosodium glutamate (MSG). The nutritional content of MT Farm's canned meat products has also been laboratory tested and is suitable for distribution because it has been equipped with legality from several related parties. In the world of agribusiness, the implementation of an optimal business model is very important to ensure business development and sustainability (Osterwalder & Pigneur, 2013).

MT Farm has demonstrated optimal performance through the implementation of innovative and effective business strategies. The success of MT Farm in developing a structured and efficient business model is the main basis for research with the aim of duplicating and implementing it as a pilot in a gift farming program with an integrated model. According to the Business Model Canvas concept from Osterwalder and Pigneur (2013), a good business model must consider nine key elements. The optimal MT Farm business model is based on several of these elements, especially on efficiency in the use of resources and the involvement of key partners who can support increasing business scale and competitiveness. In addition, Porter (1985) stated that competitive advantage can be obtained through two main strategies, namely cost efficiency and differentiation. MT Farm has developed a low cost efficiency advantage by integrating key activities such as feed management, livestock health monitoring, and product distribution. In addition, MT Farm is able to create added value through product differentiation, such as innovation in maintenance methods that can improve meat quality and livestock endurance.

Reflecting on the Grand Design for the Development of National Goats and Sheep 2045, this program aims to create an integrated livestock system that can improve the welfare of farmers, optimize productivity, and maintain environmental sustainability (Directorate General of PKH, 2022b). By adopting the business model that has been implemented by MT Farm, this study can obtain practical guidance on the implementation of livestock activities that are oriented towards sustainability and profitability, while providing opportunities for local farmers to implement best practices. The success of MT Farm makes it the right candidate to be used as a model in government programs aimed at improving the quality and quantity of national livestock production.

### **Sheep and Goat Farming Integration Model**

Sheep and goat farming, or often called kado, is an important sector in the livestock industry that plays a role as a producer of food, industrial raw materials, and other derivative products that are valuable to the community (Kepdirjen PKH, 2022). In Indonesia, goat and sheep farming includes the cultivation of sheep and goats for specific purposes, such as milk production or fattening to

achieve optimal weight, which allows the livestock to be marketed with high quality. The goat and sheep farming business model in Indonesia continues to develop, one of which is through the implementation of an upstream to downstream integration model that covers all aspects of the agribusiness chain, from seed maintenance to distribution of final products. According to Paturochman (2006), this integration model allows farms not only to manage the cultivation process, but also to control various aspects related to feed production and maintaining the quality of superior seeds in the upstream section, as well as the utilization of derivative products such as meat, skin, and fur in the downstream section that are ready to be marketed both domestically and for export.

The goat and sheep integrative farming model provides high efficiency by eliminating the multi-layered distribution chain that often reduces farmers' profit margins. Siregar and Ilham (2003) stated that eliminating double profits in the supply chain is the key to increasing efficiency and strengthening the competitiveness of goat and sheep farms in the market. By managing the entire chain from production to distribution, integrated farms have better control over the quality and stability of supply, which is very important in meeting food needs in the domestic market. This integration approach also allows farmers to minimize dependence on third parties, so they are more flexible in dealing with fluctuations in seed and feed prices in the market.

### **Importance-Performance Analysis**

Importance-Performance Analysis (IPA) is a method that can be applied to measure the analysis of the gap between importance and attribute performance in advancing the development of effective company programs (Martilla and James 1977). IPA has been applied in various agribusiness contexts, including in assessing the performance of plasma farmers in partnership with companies (Febrianto et al., 2023), knowledge-based companies in the agricultural sector (Arkavazi, Hejazi, & Alambeigi, 2023), and scientific collaboration in virtual teams in Iranian agriculture (Fereidoonian, Yazdani, & Jafari, 2021). In addition, IPA is also used to measure the economic performance of small ruminant farms in Europe through the Balanced Scorecard approach (Gambelli et al., 2021). IPA combines two factors, namely the level of importance and company performance attributes in a two-dimensional graph that facilitates data explanation (Santoso et al., 2015). The results of the analysis can be seen the gap between importance and performance (Anggraeni et al 2015). In the context of sheep and goat farming, the IPA method can be used to analyze the gap between factors considered important by farmers and their actual performance in the field.

IPA involves several main procedures, namely: (1) Determining the attributes to be measured - this step identifies aspects that are relevant to the service or product to be evaluated; (2) Separating the measurement of importance and performance - where the importance and performance of each attribute are analyzed separately to see the difference in perception between what is considered important and how the attribute functions; (3) Positioning the vertical and horizontal axes on the matrix - the vertical axis represents importance, while the horizontal axis represents performance, which are then mapped in the matrix for further evaluation; and (4) Analyzing the matrix - the results of this matrix indicate areas that need more attention or can be ignored based on the relationship between the importance and performance of the attributes.

In various studies, IPA has been used to evaluate customer satisfaction in various sectors, such as tourism (Gallarza & Gill, 2006), education (O'Neill & Palmer, 2004), and public services (Girma et al., 2022). IPA is very useful in simplifying the decision-making process for management by providing a clear picture of the priority of improvements that must be made to improve the performance of a service or product. In this context, IPA is a powerful evaluation tool to direct resources to the most important areas that need improvement, based on user or customer perceptions of the importance and performance of the attributes being measured.

## **2. Method**

Gap analysis uses Importance and Performance Analysis (IPA) to determine the gap in MT Farm's performance against the importance attributes of the Grand Design for Goat and Sheep Farming Development 2045 and the Decree of the Director General of PHK concerning Guidelines for Goat and/or Sheep Farming Development.

Gap analysis offers a number of advantages to evaluate how consumers, in this case, livestock business actors, can accept a policy. Gap analysis is a method that can produce important insights

into which policy components should be given more attention; sufficient to be maintained; low priority to be ignored; and excessive to be avoided by business actors. Presenting the results in an importance-performance matrix can facilitate data interpretation by management and increase its usefulness in making strategic business decisions.

The development of an integrated livestock business model can be formulated comprehensively through several key aspects listed in the Grand Design for Goat and Sheep Farming and the Decree on Implementation Guidelines. First, optimizing birth and productivity is the main focus to ensure that the livestock produced has a high birth rate and good quality, which is certainly in line with market needs and supports business continuity, including:

1. High productivity is achieved through the selection of superior seeds, utilization of reproductive technology, and effective animal health management, which is also applied at MT Farm in an effort to maintain the quality and volume of production results;
2. Furthermore, increasing consumption is an important aspect in expanding the domestic market and increasing public awareness of the nutritional benefits of goat and sheep meat. Increasing consumption can be achieved through public education and the development of more diverse processed meat products, so that demand for this livestock product increases. In this case, MT Farm is also trying to develop product diversification that is more attractive to local consumers, in line with an effective marketing strategy;
3. Institutional and business development is also a strategic point that is no less important, by strengthening institutional networks such as livestock cooperatives, partnerships with the private sector, and synergy with the local government. Strong institutions enable the creation of an ecosystem that supports the livestock business and makes it easier for farmers to access markets, technology, and financing. MT Farm has built a network of partnerships that allows better access to resources and information, supporting their business development with a similar approach;
4. Increasing competitiveness and exports is a vital aspect to penetrate the international market, which requires high product quality standards and certification in accordance with the regulations of the export destination country. This is also a long-term goal at MT Farm, which aims to increase production capacity to meet export market demand;
5. Developing an efficient logistics system ensures that livestock product distribution can be carried out quickly, efficiently, and maintains quality. MT Farm also develops a logistics system to ensure a smooth supply chain and low distribution costs, similar to the logistics concept in the Grand Design for Goat and Sheep Farming;
6. The development and research aspect is the basis for innovation in the livestock industry, ensuring that the latest techniques and technologies can be applied to improve livestock efficiency and yields. MT Farm conducts internal research to continuously improve livestock techniques, following the path emphasized in the Grand Design for Goat and Sheep Farming to strengthen product competitiveness;
7. Strengthening regulations is important to create a supportive framework, which includes rules on product quality, animal welfare, and the environment. Clear regulations help farmers maintain product quality and meet established standards, as well as strengthen credibility in the eyes of consumers. MT Farm also adheres to strict regulations in their operations, demonstrating alignment with regulatory guidelines in the Grand Design of Goats and Sheep.

Based on the similarities of these aspects between the MT Farm business model and the Grand Design for Goat and Sheep Farming and the Guideline Decree, researchers can conduct IPA to measure the relevance and effectiveness of each aspect. Online data collection is applied to facilitate this analysis, considering that stakeholders are geographically dispersed. The points in this analysis are derived from the Grand Design of Goat and Sheep Development 2045 and the Decree of the Director General of Animal Husbandry and Animal Health Number: 1238/KPTS/HK.160/F/02/2022, considering that this development project plays a crucial role in future livestock development efforts, with a primary focus on fulfilling community nutrition and as an integral part of the people's livestock business (Directorate General of PKH, 2022b; Decree of the Director General of PKH, 2022). This analysis uses a five-point Likert scale to measure the level of

importance (1 = very unimportant to 5 = very important) and performance (1 = very dissatisfied to 5 = very satisfied) associated with each point of the development plan, with a total of 45 attributes.

### 3. Results and Discussion

The survey began with questions about the demographics of the respondents. Empirical data were collected electronically and in total, the majority of respondents were male and aged 34-42 years. Most of them had a bachelor's degree/diploma 4 and came from associations. Based on work experience, the largest number of respondents had 3-5 years of experience, followed by those with more than 5 years, and the fewest with 1-2 years of experience. Although the response rate to a survey can vary and be small in number, this survey is very specific and requires respondents who have sufficient knowledge of the national gift industry development map and especially MT Farm - as the subject of comparison (or representation) of the integrated gift farm model. The demographics of the respondents can be seen in the following table:

**Table 1.** Descriptive Statistics

Characteristics	%
Age	
25-33	21
34-42	55
43-51	15
52-60	9
Gender	
Male	82
Female	18
Education Level	
High School	34
Bachelor	53
Master	10
Doctorate	3
Institution	
Government	17
Private	29
Association	54
Length of Expertise	
1-2 years	12
3-5 years	48
>5 years	40

The survey continued by filling out the IPA matrix assessment. This matrix is intended to make it easier for researchers to measure performance values shown on the X axis and importance shown on the Y axis. An item will be assessed based on its location in the quadrant in the matrix. Validity testing is carried out using the Pearson's Product Moment method to compare the correlation between two variables. Meanwhile, reliability testing is carried out using the Cronbach's Alpha method, which shows a very reliable and consistent category with a value of more than 0.6. The results of the validity and reliability tests are presented in the following table:

**Table 2.** Validity and Reliability Test Results

Attribute	Validity Results		
	Correlation	P_Value	Validity
EKS1	0,553792	2,28E-09	Valid
EKS2	0,373166	0,000131	Valid
EKS3	0,590623	9,93E-11	Valid
EKS4	0,790569	1,36E-22	Valid
EKS5	0,265183	0,007667	Valid
EKS6	0,217696	0,029573	Valid
EKS7	0,536239	8,92E-09	Valid
EKS8	0,571073	5,5E-10	Valid
K1	0,340877	0,00052	Valid
K2	0,456287	1,83E-06	Valid
K3	0,193979	0,053137	Invalid
K4	0,651459	2,15E-13	Valid

K5	0,285977	0,003923	Valid
K6	0,733746	3,85E-18	Valid
LOG1	0,415418	1,72E-05	Valid
LOG2	0,538187	7,7E-09	Valid
LOG3	0,321387	0,001112	Valid
LOG4	0,602419	3,34E-11	Valid
LOG5	0,719182	3,53E-17	Valid
LOG6	0,825438	4,46E-26	Valid
LOG7	0,795518	4,78E-23	Valid
LOG8	0,54318	5,25E-09	Valid
PA1	0,470359	7,9E-07	Valid
PA2	0,185821	0,064169	Invalid
PA3	0,365365	0,000186	Valid
PA4	0,276787	0,005307	Valid
PA5	0,418939	1,44E-05	Valid
PROD1	0,711004	1,15E-16	Valid
PROD2	0,329871	0,000804	Valid
PROD3	0,537386	8,18E-09	Valid
PROD4	0,674858	1,37E-14	Valid
PROD5	0,10137	0,3156	Invalid
PROD6	0,45053	2,56E-06	Valid
PROD7	0,413816	1,87E-05	Valid
REG1	0,45554	1,91E-06	Valid
REG2	0,892188	1,34E-35	Valid
REG3	0,463586	1,19E-06	Valid
REG4	0,352	0,000329	Valid
REG5	0,428039	8,9E-06	Valid
TEK1	0,330916	0,000772	Valid
TEK2	0,307924	0,001829	Valid
TEK3	0,543716	5,04E-09	Valid
TEK4	0,325558	0,000949	Valid
TEK5	0,40554	2,84E-05	Valid
Reliability	0,953645	0,926739	Reliable

The test results show that there are three variables, namely K3, PA2, and PROD5, which do not meet the validity criteria, with correlation values (r-count) of 0.194, 0.186, and 0.101 respectively, below the r table value of 0.196 for n = 100.



## Quadrant II

In Quadrant 2, known as "keep up the good work," there are attributes that are considered important and perform well, indicating strengths that must be maintained. The attributes in this quadrant cover aspects such as productivity (PROD5), institutions and businesses (K1 to K5), export competitiveness (EKS1 and EKS2), and technology and research (TEK2, TEK4, TEK5). The importance of these attributes ranges from 3.5 to 4.1 and their performance ranges from 3.1 to 3.5, indicating that efforts made in these areas have yielded satisfactory results. The business has successfully developed strong productivity practices, good institutional support, and competitive export capabilities. In addition, the logistics (LOG3) and regulation (REG4, REG5) attributes that have a balance between importance and performance ensure that the business complies with regulatory requirements and manages logistics effectively to maintain smooth operations. Maintaining these attributes at the current level is critical to ensuring sustainable business growth and stability.

## Quadrant III

Attributes in Quadrant 3, or "possible overkill," have low importance but high performance. This suggests that there is a possibility of overallocation of resources in these areas. Some attributes in this quadrant include productivity (PROD3 and PROD7), market absorption (PA1), and some export competitiveness (EKS5, EKS6, EKS7) and logistics (LOG1, LOG4, LOG7, LOG8) attributes. These attributes have lower importance scores (3.1 to 3.5) but relatively high performance (3.1 to 3.7). This suggests that resources allocated to these areas may be in excess of what is actually needed for business success. Redirecting resources from these areas to Quadrant 1 may be more beneficial to achieve optimal balance and optimize resource allocation.

## Quadrant IV

Quadrant 4, or "low priority," includes attributes with low importance and performance, so they are not a high priority in the short term. Some attributes in this quadrant include productivity (PROD1 and PROD2), market absorption (PA2 and PA5), some export competitiveness attributes (EKS3, EKS4, EKS8), logistics (LOG5, LOG6), and some aspects of technology and regulation (TEK1, TEK3, REG1, REG2). These attributes have equally low importance and performance scores, meaning that improvements in these areas may not have a significant impact on business success. Therefore, even though performance in these areas is below average, they do not require immediate intervention.

In the Importance Performance Analysis (IPA) matrix analysis, components included in quadrant I or concentrate here describe priority areas that require immediate attention due to their high importance, but their performance is still low. In the context of Goat and sheep farming, as well as the MT Farm business model, this component provides an overview of the main gaps that need to be addressed to align farming operations with the Goat and Sheep Corporate Development Program.

Components such as the provision of quality land and feed indicate challenges in ensuring the availability of sustainable resources. The provision of quality feed is an important element in supporting the productivity and economic resilience of livestock farming. As stated in the 2020–2024 Ministry of Agriculture Strategic Plan; "increasing production and productivity is directed to support the achievement of national targets for both economic resilience and food security." The gap in this component indicates that the MT Farm business model still faces obstacles in ensuring stable access to affordable quality feed, which can impact the ability of farmers to maintain optimal productivity while supporting market competitiveness.

In addition, strengthening cultivation management that includes reproductive technology, livestock health maintenance, and efficient management are also aspects that need to be improved. These management constraints may limit MT Farm's ability to meet livestock productivity and quality targets in accordance with national standards, as set out by the PKKD. Strengthening management not only increases production efficiency but also ensures the long-term sustainability of livestock farming, in line with the vision to achieve "sustainable food availability with good quality" as stated in the Ministry of Agriculture's 2020–2024 Strategic Plan.

Other components, such as the development of communication, education, and information (KEI), as well as market demand analysis, reveal gaps in the management of market absorption capacity. KEI is a strategic tool to increase public awareness of the nutritional benefits of goat and

sheep products, which in turn can expand the domestic market and increase consumption. This is in line with the view expressed in GD Goat and sheep 2045 (Directorate General of PKH, 2022b), that “national food security must be oriented towards social and economic interests, ensuring availability and accessibility so that people can live healthy and productive lives.” Gaps in this component indicate that MT Farm has not fully utilized the potential of consumer education and product diversification to meet dynamic market needs. Similar things are also seen in the analysis of market demand, where the ability to respond to consumer preferences proactively and in a timely manner is key to creating strong competitiveness, both in local and international markets.

The logistics system, which includes demand forecasting and production planning, is the last component in this quadrant. MT Farm still faces challenges in developing an efficient logistics system to ensure product distribution with maintained quality, affordable prices, and on-time delivery. According to the Ministry of Agriculture's 2020–2024 Renstra (Ministry of Agriculture, 2020), the development of a food logistics system must “ensure the availability and sufficiency of food for people throughout Indonesia at all times with affordable and stable prices and good quality.” Inefficiencies in logistics can hinder the ability of farms to reach wider markets, which is one of the strategic objectives of PKKD in ensuring national food availability.

This gap shows that, although MT Farm has adopted a business model based on upstream-downstream integration, implementation in several key aspects has not been fully optimal. Therefore, strategic adjustments that include improvements in productivity, market absorption, and logistics need to be made so that the MT Farm business model can support the achievement of PKKD goals more effectively. This is also an important step in increasing the contribution of Goat and sheep farming to food security and farmer welfare in Indonesia

#### 4. Conclusion

The Goat and Sheep Corporate Development Program provides a great opportunity for sheep and goat farming in Indonesia to become a more competitive, productive, and sustainable sector. However, analysis of the priority components in the IPA matrix shows significant gaps that need to be addressed to achieve the program's objectives. These gaps include the provision of quality land and feed, strengthening cultivation management, developing communication and market education, demand analysis, and logistics management.

The provision of quality feed and strengthening cultivation management are the basis for increasing livestock productivity, while market communication and education are essential to increasing consumer awareness of goat and sheep processed products. On the other hand, accurate demand forecasting and an efficient logistics system are needed to ensure the availability of products in the market at affordable prices. All of these aspects require the formulation of a business model that not only adopts an upstream-downstream integration approach, but is also responsive to market dynamics and community needs.

The business model designed must be oriented towards sustainability and innovation, optimizing technology, and strengthening collaboration between farmers, the government, and the private sector. Thus, goat and sheep farming can make a significant contribution to supporting national food security while improving the welfare of farmers in various regions. The implementation of this integration-based business model will be an important foundation for realizing a more resilient and highly competitive livestock sector in the global economic era.

#### References

- [1] Badan Pusat Statistik. (2022). Ringkasan Eksekutif Pengeluaran dan Konsumsi Penduduk Indonesia. Jakarta, Indonesia: BPS.
- [2] Badan Pusat Statistik. (2023). Peternakan Dalam Angka 2023. Jakarta, Indonesia: BPS.
- [3] Direktorat Jenderal Peternakan dan Kesehatan Hewan, Kementerian Pertanian. (2022a). Statistik Peternakan dan Kesehatan Hewan 2022. Jakarta, Indonesia: Ditjen PKH.
- [4] Direktorat Jenderal Peternakan dan Kesehatan Hewan, Kementerian Pertanian. (2022b). Grand Desain Pengembangan Kambing dan Domba Nasional 2045. Jakarta, Indonesia: Ditjen PKH.

- [5] Kementerian Pertanian. (2020). Rencana Strategis Kementerian Pertanian 2020–2024. Jakarta, Indonesia: Kementan.
- [6] Keputusan Direktur Jenderal Peternakan dan Kesehatan Hewan. (2022). Keputusan Direktur Jenderal Peternakan dan Kesehatan Hewan No: 1239/KPTS/HK.160/F/02/2022 Tentang Pedoman Pelaksanaan Program Pengembangan Korporasi Kambing dan/atau Domba.
- [7] Anggraeni, L. D., Deoranto, P., & Ikasari, D. M. (2015). Analisis persepsi konsumen menggunakan metode importance performance analysis dan customer satisfaction index. *Industria: Jurnal Teknologi dan Manajemen Agroindustri*, 4(2), 74–81.
- [8] Firman, A., Herlina, L., Paturochman, M., & Sulaeman, M. M. (2018). Penentuan kawasan unggulan agribisnis ternak domba di Jawa Barat. *Mimbar Agribisnis: Jurnal Pemikiran Masyarakat Ilmiah Berwawasan Agribisnis*, 4(1), 111–125.
- [9] Gallarza, M. G., & Gil, I. (2006). Value dimensions, perceived value, satisfaction, and loyalty: An investigation of university students' travel behaviour. *Tourism Management*, 27(3), 437–452. <https://doi.org/10.1016/j.tourman.2004.12.002>
- [10] Girma, M., Woldetensae, B., Nuriye, G., & Lika, T. (2022). Importance-performance analysis for evaluating city bus service quality in Addis Ababa, Ethiopia. *Urban, Planning and Transport Research*, 10(1), 451–465.
- [11] Martilla, J. A., & James, J. C. (1977). Importance-performance analysis. *Journal of Marketing*, 41(1), 77–79. <https://doi.org/10.2307/1250495>
- [12] Najmuddin, M., & Nasich, M. (2019). Produktivitas induk domba ekor tipis di Desa Sedan Kecamatan Sedan Kabupaten Rembang. *Ternak Tropika: Journal of Tropical Animal Production*, 20(1), 76–83. <https://doi.org/10.21776/ub.jtapro.2019.020.01.10>
- [13] Noor, Y. G., & Hidayat, R. (2017). Menggerakkan produksi ternak kambing domba berorientasi ekspor. In W. Puastuti et al. (Eds.), *Teknologi Peternakan dan Veteriner Mendukung Diversifikasi Sumber Protein Asal Ternak. Seminar Nasional Teknologi Peternakan dan Veteriner 2017; August 8–9, Bogor, Indonesia*. Jakarta, Indonesia: IAARD Press, 37–47.
- [14] O'Neill, M. A., & Palmer, A. (2004). Importance-performance analysis: A useful tool for directing continuous quality improvement in higher education. *Quality Assurance in Education*, 12(1), 39–52.
- [15] Osterwalder, A., & Pigneur, Y. (2013). *Business Model Generation*. (N. R. Sihandri, Trans., 5th ed.). Jakarta, Indonesia: PT Elex Media Komputindo.
- [16] Paturochman, M. (2006). Pengembangan agribisnis melalui kelompok peternak domba di Kecamatan Kadugede Kabupaten Kuningan. *Sosiohumaniora*, 8(2), 158.
- [17] Porter, M. E. (1985). *Competitive Advantage: Creating and Sustaining Superior Performance*. New York, NY: The Free Press.
- [18] Rusdiana, S., & Praharani, L. (2015). Peningkatan usaha ternak domba melalui diversifikasi tanaman pangan: Ekonomi pendapatan petani. *Agriekonomika*, 4(1), 80–96. <https://doi.org/10.21107/agriekonomika.v4i1.676>
- [19] Santoso, B. S., Anwar, M. F., & Hermawati, S. (2015). Analisis kualitas website menggunakan metode Webqual dan Importance-Performance Analysis (IPA) pada situs Kaskus. In *National Conference on Information Technology and Technical Engineering (CITEE)*; Yogyakarta, Indonesia. Retrieved February 14, 2023, from <https://www.researchgate.net/publication/281497362>
- [20] Siregar, M., & Ilham, N. (2003). Upaya peningkatan efisiensi usaha ternak ditinjau dari aspek agribisnis yang berdaya saing. *Forum Penelitian Agro Ekonomi*, 21(1), 57–66.
- [21] Wanyoike, F., Rich, K. M., Mtimet, N., Bahta, S., & Godiah, L. (2023). An assessment of small ruminant production, marketing, and investment options in Somaliland: A system dynamics approach. *Small Ruminant Research*, 218, 106882