

Strategy and Development of the ePakan Business Model as a Marketplace for Livestock Feed and Livestock Products

A Hijriani ^{1,a}, MW Yusup ², A Ardiansyah¹, T Tristiyanto ¹, and D Refiasari ¹

¹ *Department of Computer Science, Faculty of Mathematic and Natural Science, University of Lampung*

²*Department of Aquaculture, Faculty of Agriculture, University of Lampung, Indonesia*

Email: astria.hijriani@fmipa.unila.ac.id

Abstract: The ePakan Marketplace brings together farmers, feed producers, farmers, or public society to do online buying and selling media for animal feed and livestock products. The ePakan marketplace opportunity can be broaden by business analysis. The purpose of this research is to implement business development strategies and to describe the way companies position themselves in the market through competitive strategies. To determine new features that are needed for the ePakan, Business analysis will be used to determine new features marketplace to be better than the previous version. data collection methods through literature studies interviews, industry analysis using Porter's five strength analysis are the methods in our preliminary research. In this research we implement analysis of business strategy development using Porter's competitive strategies and system design using OOAD (Object-Oriented Analysis and Design). Competitive strategies are carried out through cost leadership, differentiation, innovation and growth. The results obtained from the writing of this research are business models that have been validated according to user needs and the design of the ePakan marketplace system.

Keywords: business model, marketplace, competitive strategy, OOAD.

1 Introduction

The increasingly fierce business competition today makes company management have to think hard to find the right way to be able to survive and at the same time succeed in achieving the company's management goals (profit, market share, growth, etc.). The application of competitive strategy becomes an alternative and has a very important meaning for the company, because the application of the right strategy will direct the company to the effectiveness of the business so that it can direct the right decisions for the company. On the other hand, the strategy is used as a pattern of response or organizational response to the environment. Through the application of competitive advantage, companies can observe and follow any environmental changes that occur so that it can be used as a basis for determining policies.

ePakan provides an Android and web-based application that helps farmers to get feed products with good quality and easy to purchase and distribution. ePakan.id is a platform for ordering animal feed and breeder products developed in January 2019. Feed has a very important role in livestock life. The biggest proportion of expenditure for large livestock and small livestock companies is for feed, which is 68.20% [1]. Weaknesses in livestock production systems

generally lie in poor management of feed and health. Feed limitations cause the capacity of livestock in an area to decrease or can cause disruption to normal production and reproduction.

As a newly developing platform, ePakan requires strategic analysis for business development. Several previous studies in business analysis [2-11] analyzed the competitive force (Porter's five strengths and competitive strategy which he would do in running his business. Porter proposed the Porter's five strength model as a scheme for the business competition environment [12]. According to this model, to be able to survive in a competitive environment, a business needs the following things. Threat of new entrants, bargaining power of the customers, threat of substitutes, and bargaining power of suppliers.

If the company chooses the wrong type of strategy, then there is a big enough possibility that the company will experience a loss and be eliminated from competition in the market. In addition, if the company does not continue to develop and improve its ability in the chosen strategy, then there is a possibility that the company will not be able to compete with other companies and will be left far behind by its competitors. This error can lead to business failure of the company, with the worst consequence the need to close the company. Thus, determining the strategy that is the center of attention of the company is important for the business continuity of a company and be one of the important decisions that need to be done by the company at the initial formation of the company.

2 Methods

In previous studies it has been known that the ePakan marketplace is ready to compete with competitors in the same field [13]. ePakan has a weakness in dealing with substitute products with the same market share. While the power of ePakan is in bargaining power of the suppliers, where ePakan works with reliable suppliers, bargaining with customers with a wide and diverse market share and consumer systems that need each other. As well as the threat of newcomers who provide education in accordance with the needs of farmers and concepts to empower farmers who create an ecosystem of livestock businesses with a clear business model.

The objects of this research are the stakeholders involved with CV SigerDev Lampung, CV SigerDev Lampung which is a startup in the field of information technology, which was established in January 2019 in Bandar Lampung City, Lampung Province. One of the products of this company is ePakan with the concept of sustainability agriculture which is carried by combining the potential of agriculture and animal husbandry into a profitable foodchain. Information obtained from informants. Informant is a person who can provide information / information about the situation and conditions of the research background. To determine the available informants, a purposive sampling technique was used which was chosen based on certain considerations or intentions. Informants who have experienced the situation or events are most likely to obtain information related to livestock business. The informants consisted of animal feed producers, goat, sheep and cattle breeders, coffee and vegetable farmers, as well as the general public. The flowchart of this research shown in fig 1.

The strategy for developing a business is carried out by analysing five competitive strategies by Michael A. Porter, namely cost leadership, differentiation, innovation, growth and alliance. The draft questions to be discussed are as follows.

- a) What are the low-cost strategies (cost leadership) implemented to influence customers?
- b) What is the differentiation strategy of products and services to improve competitive advantage?
- c) What is the innovation strategy adopted to compete with other companies?
- d) What is the growth strategy in marketing products to expand globally?
- e) What is a profitable partnership strategy (alliance) with other suppliers or companies?

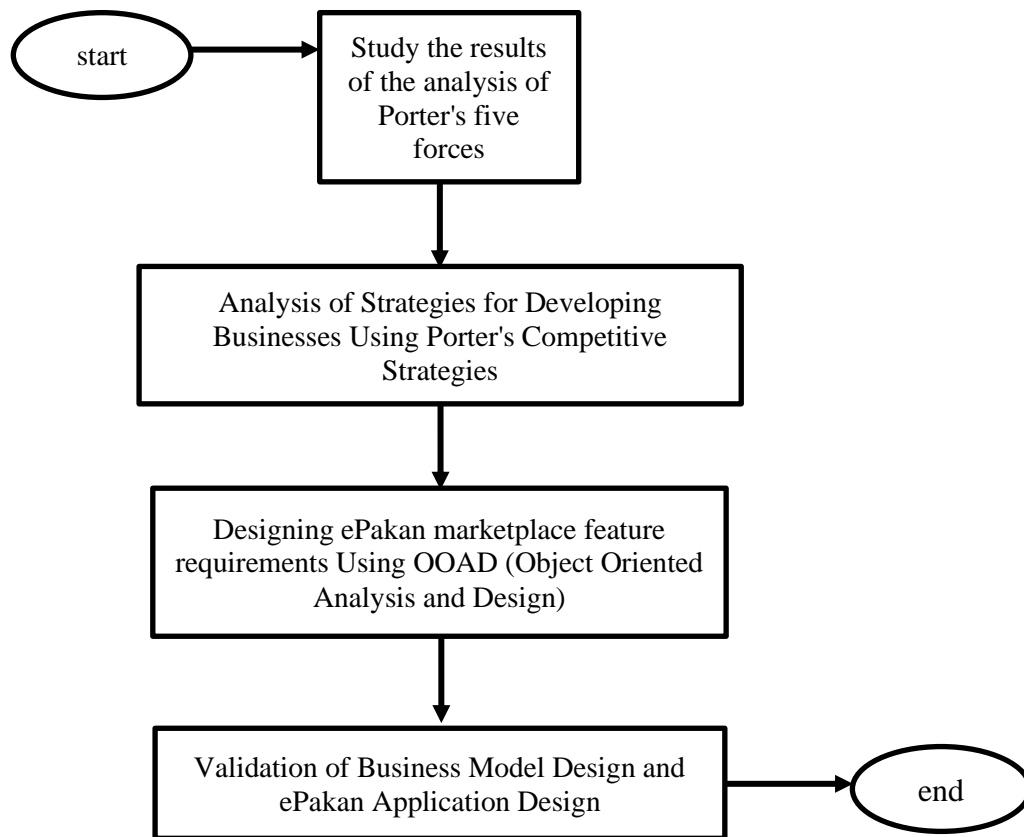


Figure 1 Research Steps

The ePakan design is carried out based on the stages of business analysis and questionnaire data analysis conducted previously. This stage uses the concept of OOAD (Object Oriented Analysis and Design). The concept of OOAD covers the analysis and design of systems with an object approach, namely object-oriented analysis (OOA) and object-oriented design (OOD). OOA is an analysis that examines the functional requirements that must be met by a system from the point of view of the objects encountered that are described using a use case diagram. Whereas OOD is more directed towards software architecture based on manipulation of system objects or subsystems. OOD is described using Unified Modeling Language (UML) diagrams such as activity diagrams, sequence diagrams, and class diagrams.

This study also compared the features of ePakan after business analysis and design using OOAD with ePakan in version 1. Analysis of the ePakan business model that has been made will be validated by conducting interviews with experts or start-up owners in the field of information technology in Lampung Province.

3 Result and Discussion

3.1 Competitive Strategy

The five strategies carried out by ePakan to survive and compete in the livestock product marketplace business are as follows.

- **Cost Leadership Strategy**

The main objective to be achieved in applying the marketing strategy at the market introduction stage is to gain consumer awareness of the product brand (brand awareness). The strategy taken is directed to ensure that the quality standards of products made are acceptable to consumers. The establishment of a strong distribution network will greatly support the creation of product awareness for consumers.

The pricing strategy used at the market introduction stage is a penetration strategy, which is a low-price strategy which means that it is below the competitor's price. This strategy is adopted if the company faces a situation of strong elasticity and competition. Under these conditions, the application of prices below competitor prices is expected to attract consumers at an early stage. Some of the low-cost strategies (cost leadership) that ePakan applies through its application are as follows.

- Having a livestock business starting from selling feed, livestock and livestock products requires marketing costs to attract customers, but by using the ePakan marketplace, everyone has their own shop and can be seen by various customers who need the products sold. Through ePakan marketing costs can be reduced so that the benefits can be maximized.
- 15% discount by using a promo code for new customers who download and shop on the ePakan application.
- Orders can be made easily and free shipping of all types of products in a certain range.
- Discounts 5000/50 Kg for animal feed products with shipping options taken by the buyer to the seller's location.

- **Differentiation**

Some of the strategies carried out by ePakan in terms of differentiation through its marketplaces are as follows.

- **Custom Nutrition Feed**
ePakan provides livestock nutrition custom features that are tailored to the needs of the farm animals. This feature is one of the distinguishing features of ePakan with its competitors that can attract many breeders who want to continue to use the same feed to increase the productivity of their livestock.
- **Pre Order System**
Not all products sold on ePakan are available and ready to be sent. Some sellers have to use a pre-order system to sell products that are tailored to the wishes of the customer. The time required in product procurement and delivery is a maximum of 7 days.
- **Consultation Services**
Livestock health, nutrition and animal feed consulting services are one of the value propositions provided by ePakan to farmers. This feature provides education to farmers in raising livestock so that productivity can increase.

- **Innovation**

Some of the strategies currently being implemented by ePakan in terms of innovation through their marketplaces are as follows.

- **Novelty**
ePakan made a radical change to business processes with information technology where ePakan was the first marketplace in Indonesia specializing in livestock

products such as animal feed, livestock, livestock products. This marketplace allows anyone to buy and sell livestock products through a mobile application. Previous similar applications that already exist are not using a marketplace system but using an e-commerce system. As a result, only e-commerce owners can make online sales. ePakan allows anyone to be a buyer or seller by meeting the requirements that ePakan has set.

- Provision of Transportation Services

Development will continue to be done by adjusting customer needs and providing added value (customer-value fit). Future innovation starts with segmenting the needs of potential customers, then focuses attention on the segments that really need solutions from ePakan. After validating the problem and the right solution for the problem faced by the customer, innovation in the form of feature development can be realized. As for some innovations for product scale up that will be applied ePakan going forward are as follows.

- Chatbot
- Livestock investment
- Pet products
- Manufacturer Business Application

- **Growth**

The company will be able to develop rapidly if it expands out of the region. In the future, ePakan will not only move in the regional area but will also move globally. This expansion is needed to market the product. ePakan Marketplace which is an application based on information technology will support strategies to develop markets. ePakan in expanding the ability to expand the market using several strategies, namely as follows.

- Omni channels can be interpreted as a process or customer experience that can use more than one sales channel such as physical stores, e-commerce / internet, mobile (m-commerce), and others to research, buy, obtain, and return or exchange goods that are bought. The omni channel process starts from offering product advertisements, the process of finding customer information on online and offline channels, and ultimately the customer's decision to buy. This strategy is carried out by providing services for buying and selling animal feed and livestock products through an Android-based marketplace and connecting ePakan with all well-known social media namely Facebook, Twitter, Instagram, and Google+ to facilitate global business marketing. This will make it easier for internet and social media users to join ePakan users.
- Recruiting livestock sector entrepreneurs to become ePakan partners with targets throughout Indonesia through the registration form using ePakan. At present ePakan is still focused on operating in Lampung Province. In the next few years, demand will continue to increase so that expansion is needed outside the region to be able to operate in all cities in Indonesia.

- **Alliance**

The cooperation strategy that will be applied by ePakan is as follows.

- ePakan is a marketplace service in collaboration with farmers, suppliers of vitamins and minerals of livestock animals, animal feed producers which are then referred to as ePakan partners to supply the needs for livestock products. Various needs of sellers and buyers are provided by ePakan, both in terms of marketing, customer search and management.
- Pakan also maintains cooperation with agricultural extension workers, animal health/insemination experts who can directly reach one of ePakan's customer segments, namely breeders. Through this collaboration, ePakan will also conduct

socialization to groups of farmers and ranchers, as well as participate in various livestock exhibitions or events to further introduce ePakan

- Cooperation is also carried out ePakan with the Bank. The use of the ePakan application allows users to be able to process payments with various types of banks.

3.2 Design New Features for OOAD (*Object Oriented Analysis and Design*)

The ePakan design is tailored to the Canvas business model and the functional needs of users. The following is shown in Table 1, results of the analysis of the Canvas business model in designing system features.

Table 1 Results of the Analysis of Canvas Business Model in Designing System Features.

Analysis Factor		Proposed System
Analysis	Finding	Features
Customer Segment	1. The general public	Marketplace application based on Android Register, Login, Profile, Update, Logout
	2. Business actors	Form pendaftaran sebagai penjual disertai juga dengan aplikasi admin untuk verifikasi produk penjual
	3. Breeder	
	4. Farmers	
	5. Feed maker	
Value Proposition	1. Newness	Marketplace application based on Android
	2. Product quality	Upload product certificater
	3. Customized feed nutrition	Custom product form
	4. Accessibility dan Convenience	<ul style="list-style-type: none"> • User friendly front end application display • Product and full description • Order history • Add to basket • Tutorial on using the application
	5. Cost Reduction	Free application installation Reducing transportation costs Cheaper products because of direct manufacturers
	6. Consultation	Chat
	7. Delivery Option	Delivery options when placing an order: 1. Take yourself to the location of the seller (free shipping) 2. Sent by the seller (pay shipping costs according to seller's input)
	8. Competitive Price	1. Price 2. Discount 3. Voucher
Channels	1. Direct sales	1. Shop icon 2. Sell and buy button
	2. Education	Education feature
Customer Relationships	1. Customer Service	1. Call center panel in help menu
	2. Point	Point in customer page
	3. Promotion and discount	When available
	4. Rating	After delivery
Revenue Stream	1. 5% from product transaction	Displayed on the product details when the seller receives the order
	2. Sales Features	panel Admin for supplier / partner

Analysis Factor		Proposed System
Analysis	Finding	Features
Key Activities	1. Partnership	1. Partner admin panel 2. Transaction history 3. Partner verification
	2. Sell and buy product	product added form, change product form, Add to basket, My basket, Buy a product, Contact the seller, Check order status, Pre Order, Custom animal feed, Product description, Admin payment confirmation panel, Bank transfer (payment), Upload proof of transfer, 14. Confirm the product until, The seller contacts the buyer, Cancellation
	3. Investor company	Website and social media
Key Partnerships	Raw material supplier	<ul style="list-style-type: none"> • Partner admin panel • Transaction history • Partner verification • disbursement of funds
	Supplier of vitamins and minerals of farm animals Local farmer	

After developing the features and user research, the following are the additional features that differentiate ePakan with the new system, namely the number of applications, product delivery, partner registration, check order status, order cancellation, buyer basket and consultation.

3.3 Expert Judgement

Expert judgment was made to the Business Incubator of Lampung University. Based on the results of the interview, some of the suggestions submitted were as follows.

- Detailed terms of product quality certificate.
- Detailing key partners is filled in more detail who is the partner of ePakan in developing business. Some of them are Director General of Belmawa Ristekdikti, Business Incubator, and Career for Center and Entrepreneurship Development (CCED) of Lampung University and Department of Animal Husbandry.
- Pay attention to operational cost factors.
- The business concept of ePakan in the future should not only prioritize social aspects but also pay attention to the turnover and achievement of ePakan.

4 Conclusion and Future Works

In this research, a competitive strategy analysis has been carried out on the ePakan business model. In the cost leadership strategy ePakan plans related to prices include the use of promo codes, free delivery services for certain regions and discounts on product prices for large purchases. In the ePakan differentiation strategy, it provides custom nutrition nutrition services, pre order systems and consulting services. For innovation, ePakan will develop chatbot services, livestock investment, pet products, and develop business applications that manufacturers may require. In its development ePakan also plans to expand to other regions and increase campaigns through social media.

The results of the analysis of competitive strategies and canvas business models are then arranged into features developed in the latest ePakan release, namely the number of applications, product delivery, partner registration, check order status, order cancellation, buyer basket and consultation. The results of expert judgment from the business model also show constructive suggestions for the ePakan business model.

REFERENCES

- [1] BPS 2017 Statistik perusahaan peternakan ternak besar dan ternak kecil. Jakarta: *Badan Pusat Statistik*
- [2] Wignyo S, Karina R, Brahmana MR 2017 Analisa strategi pengembangan bisnis melalui metode competitive positioning analysis pada PT Surya Polyplas Utama. *Agora* **5** 1
- [3] Pamungkas DP 2016 Analisis competitive force dan competitive strategy sistem informasi kuliner Indonesia (studi kasus : Kulina.id), *J Electronic, Inf, and Voc Ed (ELINVO)* **1** 2.
- [4] Haq H, Saori S, Miccael M, Febrian AF 2016 Analysis of Porter's generic strategies theory to improve Competitiveness for the company, *Critical Review Report*.
- [5] Wibowo S, Handayani Y, Lestari A 2017 Strategi Bersaing Perusahaan dan Kinerja Perusahaan, *Riset Akuntansi dan Keuangan Indonesia* **2** 2.
- [6] Widajanti E 2008 Peran keunggulan teknologi informasi untuk mencapai keunggulan kompetitif. *J. Akuntansi dan Sistem Teknologi Informasi* **6** 1
- [7] Rokhyadi A 2014 Peran produk hijau dalam hubungan strategi generik Porter dengan kinerja perusahaan, *J Perilaku dan Strategi Bisnis* **2** 2 16-26
- [8] Rinanduyana L, Kurniawati A, Kurniawan D 2016 Strategi untuk menciptakan keunggulan bersaing melalui pengembangan, desain, dan kualitas produk (kasus pada industri pakaian muslim di Kota Tasikmalaya), *J. Ekonomi Manajemen* **2** 2
- [9] Elias MC 2018 Analisis strategi bersaing pada perusahaan biro perjalanan di Malang, *Agora* **6** 2
- [10] Saraswati E, Hatneny AI, Dewi AN 2019 Implementasi model diamond Porter dalam membangun keunggulan bersaing pada kawasan agrowisata Kebun Belimbing Ngringinrejo Bojonegoro, *J. Ilmu Manajemen* **4** 2
- [11] Iqbal I 2016 Analisis The Five Forces Strategy pada Al Mumtaz Peduli Pontianak. *J. Penelitian Sosial Keagamaan* **24** 1
- [12] Porter ME 1985 Competitive advantage: creating and sustaining superior performance, Boston: *Macmillan Publishers*
- [13] Refiasari D, Tristiyanto T, Hijriani A 2019 Analisis lima kekuatan Porter pada marketplace pakan ternak dan produk hasil ternak (studi kasus :ePakan), Seminar nasional Sains, Matematika, Informatika dan Aplikasinya.