

VALUE CHAIN ANALYSIS OF BROILER TO INCREASE COMPETITIVENESS (CASE STUDY AT PT. CHAROEN POKPHAND INDONESIA, TBK)

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ABSTRACT

The objectives of this research are to (1) map the value chain in broiler at PT. Charoen Pokphand Indonesia, Tbk (CPI); (2) analyze the value chain governance in broiler at CPI; (3) analyze the margin of marketing at broiler industry both on farm or off farm; (3) analyze the gap between the expectation and the performance of consumers (farmers) upon using products of CPI and (4) recognize factors influencing competitiveness in broiler industry; and (5) to formulate strategy for value chain upgrading at CPI in order to increase competitiveness of broiler. As revealed by the value chain analysis, the role of CPI in this value chain is highly significant. All poultry inputs (DOC, feed, veterinary medicine, and poultry equipments) are supplied by CPI. As for downstream sector, CPI processes broiler into its derivatives. The type of value chain governance between feed supplier, DOC, and veterinary medicine, poultry equipment, and poultry derivatives belongs to market value chain. Whereas the type of value chain governance between carcass supplier and restaurant belongs to captive value chain. Based on the margin of marketing analysis, the party that gains the lowest margin is farmer and the party that receives the highest margin is the processor. In gap analysis, the lowest attribute of competitiveness is the feed spending and the highest attribute is the spending on veterinary medicine for two months. Factors that influence the competitiveness in poultry industry are condition, demand, industry competition, main industries and supporting industries, and government's role.

Keywords: Value Chain, Competitiveness, Broiler, PT. Charoen Pokphand Indonesia, Tbk, Margin of Marketing Analysis, Gap Analysis, SWOT Analysis

ABSTRAK

Tujuan dari penelitian ini adalah untuk (1) rantai nilai peta pada broiler di PT. Charoen Pokphand Indonesia, Tbk, (CPI); (2) menganalisis pengelolaan rantai nilai dalam broiler di CPI; (3) menganalisis margin pemasaran pada industri ayam pedaging baik di pertanian atau dari pertanian, (3) menganalisis kesenjangan antara harapan dan kinerja konsumen (petani) setelah menggunakan produk dari CPI dan (4) mengenali faktor yang mempengaruhi daya saing dalam industri ayam pedaging, dan (5) merumuskan strategi untuk meningkatkan rantai nilai di CPI dalam rangka meningkatkan daya saing ayam broiler. Sebagaimana diungkapkan oleh analisis rantai nilai, peran CPI dalam rantai nilai sangat signifikan. Semua masukan unggas (DOC, pakan, obat hewan, dan peralatan unggas) dipasok oleh PT. Charoen Pokphand Indonesia, Tbk. Adapun sektor hilir, PT. Charoen Pokphand Indonesia, Tbk proses broiler ke turunannya. Jenis pengelolaan rantai nilai antara pemasok pakan, DOC, dan kedokteran hewan, peralatan peternakan, dan turunan unggas milik rantai nilai pasar. Sedangkan jenis pengelolaan rantai nilai antara pemasok karkas dan restoran milik rantai nilai tawanan. Berdasarkan analisis margin pemasaran, partai yang memperoleh margin terendah petani dan pihak yang menerima margin tertinggi adalah prosesor. Dalam analisis kesenjangan, atribut terendah daya saing adalah pengeluaran pakan dan atribut tertinggi adalah pengeluaran untuk kedokteran hewan selama dua bulan. Faktor-faktor yang mempengaruhi daya saing di industri unggas adalah kondisi permintaan, industri persaingan, industri utama dan industri pendukung, dan peran pemerintah.

Kata Kunci: Rantai Nilai, Daya Saing, Ayam Pedaging, PT Charoen Pokphand Indonesia, Tbk, Margin Pemasaran Analisis, Analisis Gap, Analisis SWOT

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INTRODUCTION

Background

Since global market is applied, the barriers of tariff and non-tariff elements from various countries are no longer problems. Products from other countries can freely enter Indonesian market. As for Indonesia's products, they can also enter the global market. Consequently, competitiveness will be very tight.

Indonesia with a population of 220 million is certainly a big market. It is therefore not surprising that big countries producing broiler (such as the United States and Brazil) make Indonesia as a good market target. Until 2008, Indonesia has imported approximately 217.056.000 broilers. This product is spread in the domestic market, both in the supermarket and even in the wet market. This is a challenge for local farmers in order to produce broiler that can compete with big countries' products. If they want to survive, then they have to increase the competitiveness of their broiler.

Up till now, the most effective tool to analyze competitiveness is a value chain governance (VCG) analysis. Value chain is a whole set of activities required to bring products or services from the stage of conception, production, and marketing, until the product or the service come to end users. The series of activities involve many actors, such as farmers as suppliers, manufacturers, distributors, wholesalers, retailers, and consumers.

PT. Charoen Pokphand Indonesia, Tbk is an integrated company in the field of poultry in Indonesia and has been operating since 40 years ago. Table 1 shows that until 2008 PT Charoen Pokphand Indonesia, Tbk has always remained the market leader of feed and Day Old Chick (DOC). In addition to producing feed and DOC, PT. Charoen Pokphand Indonesia, Tbk also produces poultry equipments and distributes veterinary medicine for chickens. As for downstream sector, PT. Charoen Pokphand Indonesia, Tbk processes broiler into refined products, such as chicken nuggets, chicken sticks, sausage, and meatballs.

Problem formulation

Problem formulation in this study is as follows:

1. How is the map of the value chain applied by PT. Charoen Pokphand Indonesia Tbk?
2. How is value chain governance carried out by PT. Charoen Pokphand Indonesia Tbk?

3. How much is the margin of marketing received by actors involved both on farm and off farm?
4. What attributes possess the widest gap based on farmers' preferences upon consuming the products of PT. Charoen Pokphand Indonesia, Tbk?
5. What are the factors affecting the competitiveness of broiler at PT. Charoen Pokphand Indonesia Tbk?
6. How do internal and external environmental conditions affect the increase of value chain in PT. Charoen Pokphand Indonesia Tbk?
7. What is the alternative strategy to improve the value chain so that the competitiveness of broiler increases?

Table 1. DOC and Feed Market Share in Indonesia

No	Company	Feed's Market Share (%)	DOC's Market Share (%)
1.	PT. Charoen Pokphand Indonesia, Tbk	33.60	30.00
2.	PT. Japfa Comfeed Indonesia, Tbk	28.70	26.00
3.	PT. Sierad Produce, Tbk	7.00	7.00
4.	PT. Malindo Feedmill, Tbk	3.65	4.40
5.	Others	27.05	32.60

Source : web.bisnis.com; antara.co.id (2009)

Research objectives

Referring to the problem formulation above, this study aims at:

1. Mapping the value chain of broiler in PT. Charoen Pokphand Indonesia, Tbk.
2. Analyzing the value chain governance performed in PT. Charoen Pokphand Indonesia, Tbk.
3. Identifying the marketing margin on every party both on farm and off farm.
4. Analyzing the gap found in PT. Charoen Pokphand Indonesia, Tbk's products.
5. Identifying factors that affect the competitiveness of broiler in PT. Charoen Pokphand Indonesia, Tbk.
6. Analyzing the internal and external factors affecting the increase of value chain in PT. Charoen Pokphand Indonesia, Tbk.
7. Formulating the alternative strategy to increase the value chain of broiler as well as to improve its competitiveness.

Benefits of Research

The benefits of this research are:

- Providing alternative strategies of broiler value chain governance that can be made into recommendations to the company on competitiveness increase.
- Providing information, especially for researchers who will conduct similar research, in order to generate further development in the future.
- As for the researchers, this study is expected to improve the competition in line with the field of this research.

Framework of Conceptual Thinking

The framework of conceptual thinking used in this study is presented in Figure 1.

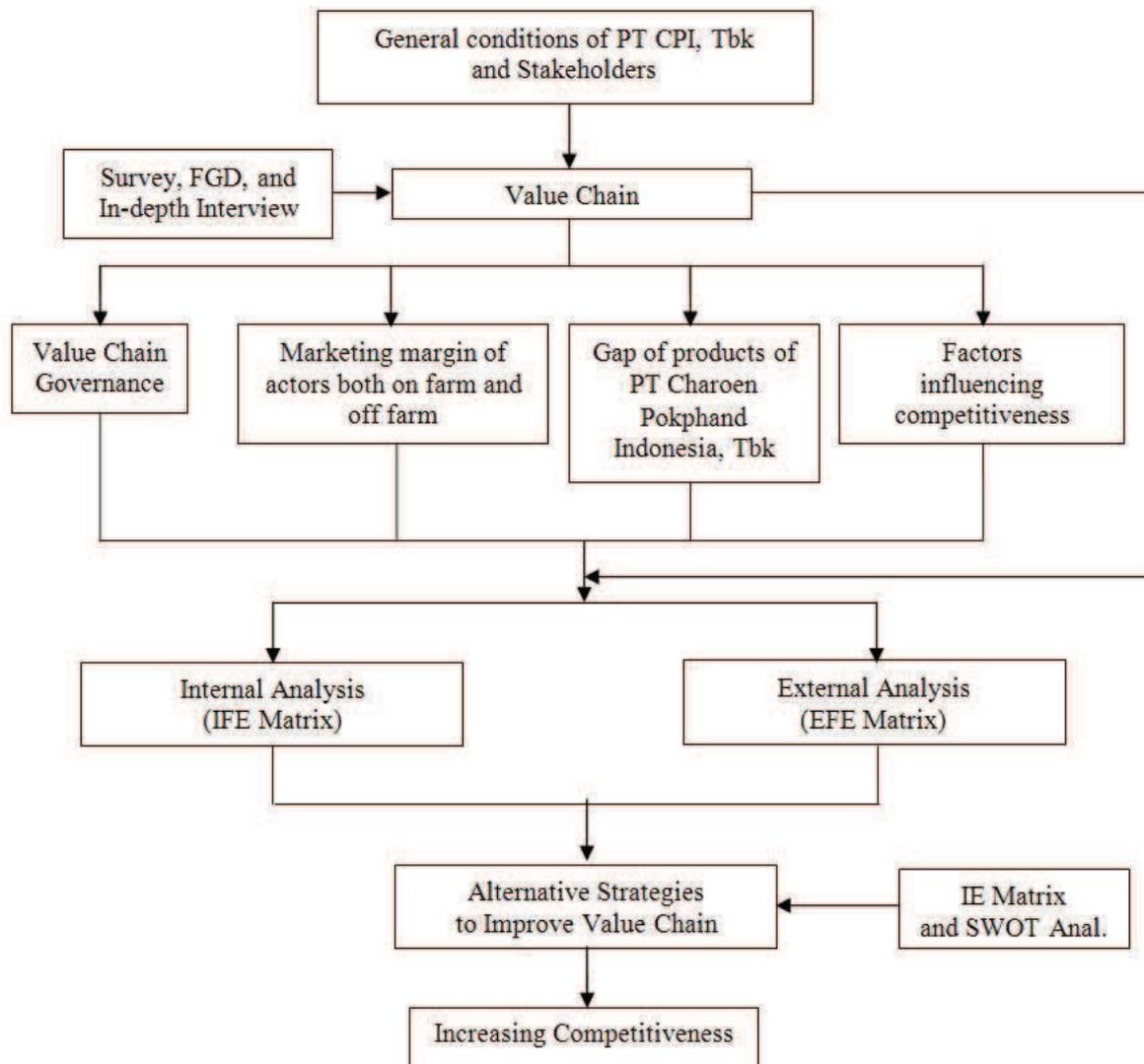


Figure 1. Framework of Conceptual Thinking of the Research

RESEARCH METHODOLOGY

Research design

The design of this research is a descriptive research that describes a condition existing when this research is carried out. The data is taken using observation methods, surveys, questionnaires, focus group discussion (FGD), and in-depth interview.

Types and Sources of Data

The type of data and the sources used are shown in Table 2.

Table 2. Data Types and Sources

Data	Type of Data	Character of Data	Source
General conditions of actors in value chain	Secondary	Qualitative	Company
Broiler production in the world and broiler consumption in Indonesia	Secondary	Quantitative	Deptan, BPS, and Journal
Production of DOC, feed, vaccines and medicine, and broiler equipment in Indonesia	Secondary	Quantitative	Deptan, BPS, and Journal
Value chain of broiler	Primary	Qualitative	FGD, Interview
Actors involved in value chain and their roles	Primary	Qualitative	FGD, Interview, observation, survey
Condition of the value chain governance	Primary	Qualitative	Interview
Marketing margins	Primary	Quantitative	Company
The gap of PT. Charoen Pokphand Indonesia, Tbk's products and future expectations by breeders	Primary	Qualitative	Farmer questionnaire (gap analysis)
Factors that affect competitiveness of broiler in PT. Charoen Pokphand Indonesia, Tbk	Primary	Qualitative	FGD, In-depth interview
Internal and external conditions of value chain	Primary	Qualitative	In-depth interview

Sampling Techniques

Sampling is made by using purposive sampling, that is by choosing one of broiler value chain governance systems established by PT. Charoen Pokphand Indonesia, Tbk.

There 14 expert respondents involved in this research, namely 9 executives from the board of directors and management of PT. Charoen Pokphand Indonesia, Tbk, 3 persons of the expert, and 2 expert farmers. Whereas the respondents involved in the questionnaire are 72 farmers who are users of PT. Charoen Pokphand Indonesia, Tbk's products.

Data Processing and Analysis Techniques

The sequence of processing techniques and data analysis of this research is as follows.

1. Mapping the value chain using descriptive analysis.
2. Analyzing the value chain governance, in which the questionnaires are tabulated.
3. Analyzing the cost structure and marketing margins.
4. Analyzing the gap, in which researchers are counting the average expectancy, the average performance, and the gap between the two expectancies.
5. Identifying the competitiveness factors, in which researchers are making the average of all identified factors of competitiveness.
6. An External Factor Evaluation is performed in relation to possible opportunities and existing threats.

7. An Internal Factor Evaluation is then performed in relation to strengths and weaknesses that are considered important.
8. Increasing the competitiveness of broiler value chain using SWOT analysis.

RESULTS AND DISCUSSION

Value Chain Analysis

The value chain analysis of broiler in PT. Charoen Pokphand Indonesia, Tbk is presented in Figure 2.

PT. Charoen Pokphand Indonesia, Tbk plays an important role in value chain of broiler. The company supplies feed, DOC, vaccines and medicine, and poultry equipment. In downstream sector, PT. Charoen Pokphand Indonesia, Tbk also produces refined chicken. PT. CPI, Tbk is also in a strong bargaining position in the market. Whereas the actors being in the weakest bargaining position are the farmers. This is due to their total compliance with the price of DOC, feed, and medicine set by the supplier. The price of broiler in the market also subject to the supplier's setting. Farmers do not have the power to increase the price of their broiler.

Analysis of Value Chain Governance

The analysis of value chain governance is shown in Table 3.

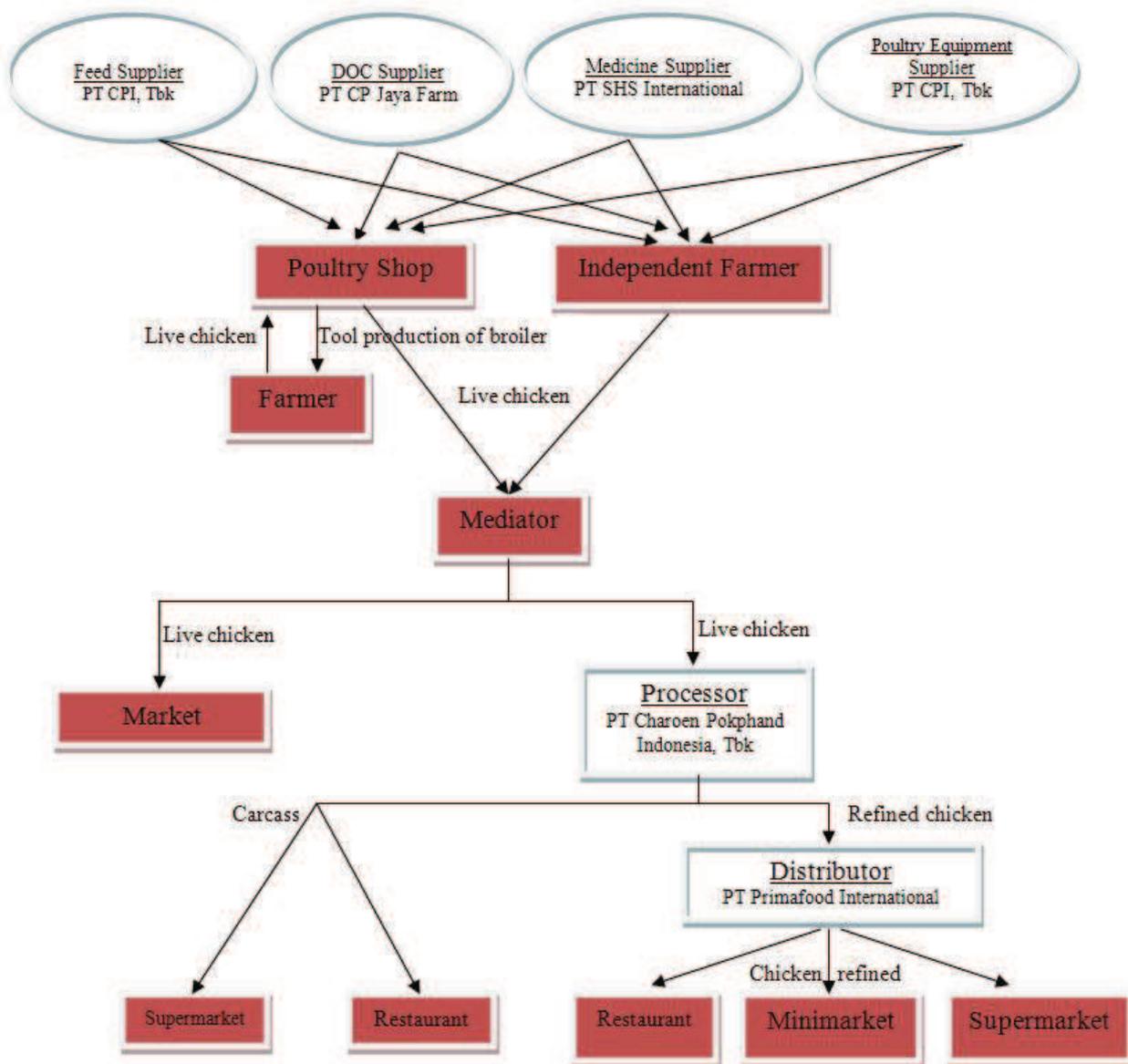


Figure 2. Pattern of Value Chain in PT. Charoen Pokphand Indonesia, Tbk

Based on the main determinants of value chain governance (Gereffi, *et al.*, 2005), the value chain governance between feed, DOC, vaccine and medicine, and broiler equipment supplier belongs to market value chain. The type of governance between refined broiler supplier and retailer is also market value chain. This is due to the low complexity of transactions whereas the codification of transaction capability and the capability based remain high. In a market value chain, the price of products is determined by market mechanism, in which there is a relation between supplier's offer and consumers' demand.

As for the type of value chain governance between carcass suppliers and restaurants, it belongs to captive value chain. This type is based on the main determinants

of value chain governance, in which the complexity of the transaction and the codification of transaction capability is both high, whereas the capability based on offering is low. In this value chain governance, PT. Charoen Pokphand Indonesia, Tbk supplies carcass to fast-food restaurants, such as Pizza Hut, KFC, and McDonald. PT. Charoen Pokphand Indonesia, Tbk periodically and continually provides those restaurants with chicken meat. In this case, PT. Charoen Pokphand Indonesia, Tbk is a lead firm. Although there are carcass requirements, but the price of carcass is dominantly determined by PT. Charoen Pokphand Indonesia, Tbk.

Table 3. The Value Chain Governance in PT Charoen Pokphand Indonesia, Tbk

No	Attribute	Relationship Value
The governance between Feed Supplier and Farmers		
1.	Complexity of transaction	2,97 (low)
2.	Codification of transaction capability	3,52 (high)
3.	Capability based on offering	3,07 (high)
Type of Governance		Market
The governance between DOC Supplier and Farmers		
1.	Complexity of transaction	2,94 (low)
2.	Codification of transaction capability	3,67 (high)
3.	Capability based on offering	3,14 (high)
Type of Governance		Market
The governance between Vaccine and Medicine Supplier and Farmers		
1.	Complexity of transaction	2,91 (low)
2.	Codification of transaction capability	3,52 (high)
3.	Capability based on offering	3,11 (high)
Type of Governance		Market
The governance between Poultry Equipment Supplier and Farmers		
1.	Complexity of transaction	2,85 (low)
2.	Codification of transaction capability	3,05 (high)
3.	Capability based on offering	3,07 (high)
Type of Governance		Market
The governance between Broiler Refined Supplier and Retailer		
1.	Complexity of transaction	2,80 (low)
2.	Codification of transaction capability	3,52 (high)
3.	Capability based on offering	3,50 (high)
Type of Governance		Market
The governance between Carcass Supplier and Restaurant		
1.	Complexity of transaction	3,26 (high)
2.	Codification of transaction capability	3,47 (high)
3.	Capability based on offering	2,36 (low)
Type of Governance		Captive

Note : Number < 3 = low; > 3 = high

Analysis of the Marketing Cost Structure and Margin

The result of the analysis of marketing cost structure and margin both on farm and off farm is presented in Table 4.

On one hand, farmer is the actor who has the lowest margin, as much as IDR 642,44/kg of live broiler with high risk. The risk includes the possibility of losses owing to the spread of disease as well as fluctuating price of broiler and DOC. On the other hand, the broiler processor is the actor who gains the highest margin, as much as IDR 3.741/kg of refined broiler with high risk of investment in plants.

In the farming sector, the high cost component is feed, around 57,99%, whereas the low cost is medicine and

vaccine (2,66%). In the processing, the highest cost component is purchasing of broiler (57,97%), whereas labor costs the lowest (3,53%).

Gap Analysis

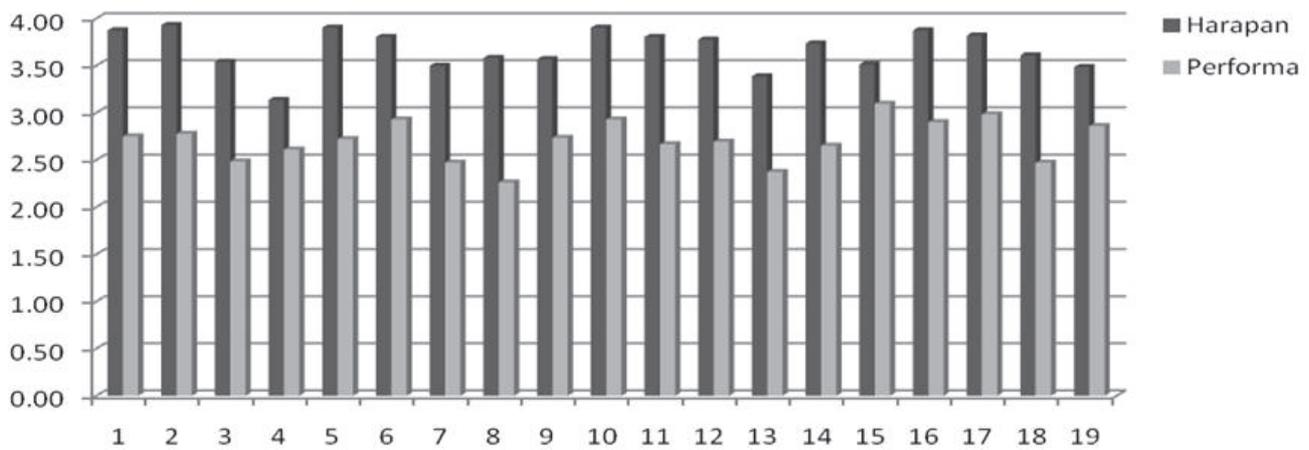
The result of gap analysis of expectations and performance of PT. Charoen Pokphand Indonesia, Tbk's products is presented in Figure 3.

The average expectation is 3,57, the average performance is 3,67, and the average gap in expectations and performance of PT. Charoen Pokphand Indonesia, Tbk's products is 73,77%. The highest gap between expectations and performance (88,14%) is the payment of medicine and credit vaccine in 2 months, whereas the lowest gap (63,18%) is the competitive feed price.

Table 4. Cost Structure of Broiler

Description	Total	Cost (%)
Farmer		
Total of DOC (bird)	5.000	
Mortality (7.93%) (bird)	397	
Total of harvested chicken (bird)	4.604	
Age of broiler (day)	27,3	
Average of broiler weight (kg/bird)	1,04	
Total of broiler weight (kg)	4.788	
FCR (feed conversion ratio)	1,62	
I. Fixed cost		
Fee of renting house	1.750.000	2,64
Total of fixed cost	1.750.000	
II. Variable cost		
Price of DOC; 5,000 broilers @ IDR 3,700/bird	18.500.000	27,88
Price of feed; 1.62 kg x 5,000 broilers @ IDR 4,750/kg	38.475.000	57,99
Medicine and vaccine; 5,000 broilers @ IDR 300/bird	1.500.000	2,26
Overhead; 5.000 broilers @ IDR 1,225/bird	6.125.000	9,23
Total of variable cost	64.600.000	97,36
Total of fixed cost and variable cost	66.350.000	100
III. Income		
Broiler; 4,788 kg @ IDR 14,500	69.426.000	
Revenue	3.076.000	
Revenue per kg	642,44	
Wholesaler		
I. Purchasing		
Broiler; 4,788 kg @ IDR 14,500	69.426.000	
II. Income		
Broiler; 4,788 kg @ IDR 15,350		
Total of income	73.495.800	
Revenue	4.069.800	
Revenue per kg	850	
Retailer		
I. Purchasing		
Purchasing of broiler	73.495.800	
II. Income		
Broiler; 4,788 kg @ IDR 18,500	88.578.000	
Total of income		
Revenue	15.082.200	
Revenue per kg	3.150	
Processor		
Sausage, nugget, meatball, etc.		
Refined broiler in 2009 (kg)	18.000.000	
Average of broiler weight used (kg/bird)	1,7	
Rendement (total of refined broiler compared to live broiler)	60%	
Price of refined broiler (IDR)	27.265	
I. Costing (IDR, million)		
Purchasing of live broiler	61.366.176	14,49
Additional ingredients (flour, seasoning, cooking oil, etc)	14.967.360	3,53
Labor	52.385.760	12,37
Overhead	49.248.000	11,63
Price of marketing (promotion, discount, transportation)	423.432.000	100
Total cost		
II. Income (IDR, million)		
Income from refined broiler 18,000,000 kg @ IDR 27,265	490.770.000	
Revenue (IDR, million)	67.338.000	
Revenue per kg (IDR)	3.741	

Source: Primary data of the Research (2010)



Note:

- a. : DOC resistant to disease and adverse weather conditions
- b. : Good rate of DOC growth
- c. : Competitive price of DOC
- d. : Loan of DOC to be repaid in a week
- e. : Punctual delivery of DOC
- f. : Feed keeps the appropriate nutrient needed by chicken
- g. : Feed could last 1 month
- h. : Competitive price of feed
- i. : Feed to be repaid in 2 monthly installments
- j. : Punctual delivery of feed

- k. : Effective medicine and vaccine
- l. : Type of medicine and vaccine facilitates their application
- m. : Competitive price of vaccine and medicine
- n. : Punctual delivery of medicine and vaccine
- o. : Medicine and vaccine to be repaid in 2 monthly installments
- p. : Durable and quality farm equipments
- q. : Farm equipments facilitate the work in enclosure
- r. : Competitive price of farm equipment
- s. : Loan of equipment to be repaid in a month

Figure 3. The Average Expectation and Performance of PT. Charoen Pokphand Indonesia, Tbk's Product

Analysis of Competitiveness Factor

The factors that influence the competitiveness are presented in Table 5. The highest attributes are human resources and capital resources (4,00), while the lowest attribute is consumers' preference (2,57).

Analysis of Internal Environment

Analysis of internal environment can be divided into strength and weakness. The strength factors of PT. Charoen Pokphand Indonesia, Tbk are that CP Group Indonesia has been a market leader of DOC and feed, its brand is strong, its after-sale service is good, its human resources are reliable as well as experienced, and its finance is good.

In addition, CP Group Indonesia has a complete production facility, and it produces products of good quality, with modern processing for feed and refined chicken, and makes high revenue of chicken processing.

Whereas the weakness factors of PT. Charoen Pokphand Indonesia, Tbk are that the products price of CP Group Indonesia is relatively high, in which

some feed ingredients are imported, DOC and broiler price is fluctuating, most of farmers are still using open housing, vaccines and medicine are still imported by CP Group Indonesia, and the bargaining position of farmers is weak.

Internal Factor Evaluation (IFE)

Internal factor evaluation (IFE) is performed by using IFE matrix. The result of this research is as follows. Based on Table 6, the strength factor which has the highest weight of 0,083 is the good after-sale service of CP Group Indonesia and is ranked number 3 (minor strength). The main weakness factor of value chain is weighted 0,079, i.e. the weak bargaining position of farmers and is ranked number 2. While the minor weakness factor of the value chain is that most farmers still use open housing and use vaccines and medicine distributed by CP Group Indonesia which it imported from abroad; and this is weighted is 0,041. The weighted score of value chain in PT. Charoen Pokphand Indonesia, Tbk is 2.739. According to David (2006), this point is middle, ranging between 2,5 to 3,00. Nevertheless, the value chain should employ strengths while overcoming weaknesses so that value chain will continue to develop.

Table 5. Factors Influencing Broiler's Competitiveness

No	Attributes	Average Value
I Condition Factor		
I.1	Infrastructure	3,71
I.2	Human resources	4,00
I.3	Capital resources	4,00
I.4	Natural resources	3,14
I.5	Technology	3,71
II Condition of Demand		
II.1	Total of buyer	3,86
II.2	Level of demand growth	3,71
II.3	Customers' preference	2,57
III Related Industry and Supporting Industry		
III.1	Supplier industry	3,71
III.2	Farmers	3,57
III.3	Wholesalers/distributor	3,00
III.4	Refined industry	2,71
IV Industry Competition		
IV.1	Competition rate in broiler industry	3,14
IV.2	Competitors' strategy	2,86
V Role of Government		
V.1	Access to capital loan	3,29
V.2	Regulation	3,14
V.3	Business climate	3,43
V.4	Education	3,86
V.5	Eradiation of zoonosis	3,71

External Environment Analysis

External environmental factors consist of opportunity factors that will be developed and utilized and also comprise threat factors that should be avoided by actors in the value chain.

Opportunity factors include the growing poultry industry, the low consumption of chicken per capita, the high population of broiler in Borneo Island, the government's support for poultry industry, and the increasing lifestyle of consumers. Whereas threat factors to the business growth of PT. Charoen Pokphand Indonesia, Tbk are the increasing number of competitors, an outbreak of particular disease, and the emergence of products substituting chicken.

External Factor Evaluation (EFE)

Evaluation of external strategic factors is performed by using EFE (External Factor Evaluation) as shown in Table 7.

Table 6. Internal Factor Evaluation (IFE)

No	Strength	Weight	Ranking	Weighted Score
1.	CP Group Indonesia is a market leader in DOC and feed	0,079	4	0,303
2.	Brand of CP Group Indonesia is strong enough	0,074	4	0,258
3.	After-sale service of CP Group Indonesia is good	0,083	3	0,267
4.	Human resources of CP Group Indonesia are reliable and well experienced	0,076	3	0,233
5.	Finance of CP Group Indonesia is good	0,081	3	0,256
6.	CP Group Indonesia has a complete production facility	0,078	3	0,258
7.	Product quality of CP Group Indonesia is good	0,081	4	0,287
8.	Modern processing of feed and refined chicken	0,076	3	0,238
9.	High revenue of chicken processing	0,064	3	0,106
No Weakness				
10.	Product price of CP Group Indonesia is relatively high	0,062	2	0,096
11.	Some of feed ingredients are imported	0,055	2	0,088
12.	DOC and broiler price is fluctuating	0,051	2	0,082
13.	Most of farmers still use open housing	0,041	2	0,060
14.	Vaccines and medicine of CP Group Indonesia are imported	0,041	2	0,119
15.	Weak bargaining position of farmers	0,079	2	0,303
Total Point of Internal Factor		1		2,739

Based on Table 7, the growing poultry industry is the opportunity factor which gains the highest weight, i.e. 0,168 and is ranked number 4. Whereas the opportunity factor which has the lowest weight (0,108) is the low consumption of chicken per capita and in ranked number 4.

The threat factor that receives the highest weight (0,124) with a rank of 3 is an outbreak of particular disease. Whereas the threat factor that has the lowest weight (0,092) with a rank of 3 is the emergence of products substituting chicken. The total point at EFE

Table 5. Factors Influencing Broiler's Competitiveness

No	Opportunities	Weight	Ranking	Weighted Score
1.	Growing poultry industry	0,168	4	0,585
2.	Low consumption of chicken per capita	0,108	4	0,354
3.	High population of broiler in Borneo Island	0,113	3	0,341
4.	Government's support for poultry industry	0,136	3	0,432
5.	Increasing lifestyle of Consumers	0,143	4	0,470
Treats				
6.	Increasing number of competitors	0,115	3	0,323
7.	An outbreak of particular disease	0,124	3	0,335
8.	Emergence of products substituting chicken	0,092	3	0,268
Total of External Factor Evaluation		1	3,108	

matrix (3,108) indicates that all of actors in the value chain can take opportunities and then effectively make use of those opportunities.

Internal External Matrix

Analysis result of IFE and EFE reveals that score of IFE matrix is 2.739 and EFE matrix is 3.108. Therefore, the strategy to increase the value chain of broiler in PT. Charoen Pokphand Indonesia, Tbk is in quadrant II within IE matrix (Figure 4).

According to David (2006), the appropriate strategy to increase the value chain in quadrant II is to grow and to develop. The emphasis on strategy to increase the value chain is the concentration with horizontal integration.

The internal position of value chain which is in the middle performance indicate s that strengths and weaknesses are responded by actors involved in value chain with high degree of intensity towards the

condition of the value chain. The external position of the value chain which is in good condition signifies that the opportunities and threats factors are well responded by PT. Charoen Pokphand Indonesia, Tbk.

Improvement Strategy for Value Chain Governance

The strategy to increase the value chain governance is based both on internal factors (strengths and weaknesses) and external factors (opportunities and threats). They are presented in Table 8.

Managerial implications

Increasing the value chain can be done through four things: product upgrading, process upgrading, functional upgrading, and channel upgrading. Product upgrading is performed by optimizing the production of DOC and feed, developing feed production in Borneo Island, improving the quality of chicken, increasing the production of refined chicken, and strengthening the stockpiles of vaccines and medicines management. Process upgrading is carried out by converting the use of open housing into close housing and by improving the biosecurity of the housing and of the environment. Functional upgrading is carried out by forming cluster by farmers. As for channel upgrading, it is done by improving the education in the community about the consumption of chicken meat.

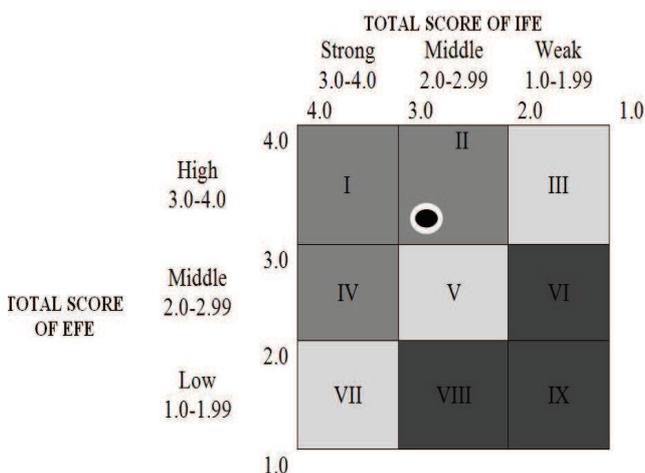


Figure 4. Internal External Matrix

Table 8. TOWS Matrix of Value Chain Governance

		Strengths-S	Weaknesses-W	
SW	OT	<ol style="list-style-type: none"> 1. CP Group Indonesia is a market leader in DOC and feed 2. Brand of CP Group Indonesia is strong enough 3. After-sale service of CP Group Indonesia is good 4. Human resources of CP Group Indonesia are reliable and experienced 5. Finance of CP Group Indonesia is good 6. CP Group Indonesia has a complete production facility 7. Product quality of CP Group Indonesia is good 8. The processing of feed and refined chicken is done in modern way 9. Revenue of chicken-processing is high 	<ol style="list-style-type: none"> 1. Product price of CP Group Indonesia is relatively high 2. Some feed ingredients are still imported 3. Price of DOC and broiler is fluctuating 4. Most of farmers still use open housing 5. Vaccines and medicine distributed by CP Group Indonesia are still imported 6. Bargaining position of farmers is weak 	
		<p>Opportunities-O</p> <ol style="list-style-type: none"> 1. Poultry industry is growing 2. Chicken consumption per capita is low 3. Broiler population in Borneo Island is high 4. Government's support for poultry industry 5. Consumers' lifestyle is increasing 	<p>S-O Strategy</p> <ol style="list-style-type: none"> 1. Optimizing the production of DOC and feed (S1, S2, S3, S4, S5, S6, S7, S8, O1, O2, O3, O4, O6) 2. Developing feed production in Borneo Island (S1, S2, S3, S4, S5, S6, S10, O3) 3. Increasing the production of refined chicken (S1, S2, S3, S4, S5, S9, O5) 4. Improving education in the community about the consumption of chicken meat (S1, S5, O1, O4) 	<p>W-O Strategy</p> <ol style="list-style-type: none"> 1. Farmers create cluster/organization (W2, W4, W6, S1, S4) 2. Converting the use of open housing into close housing (W5, S1, S2, S4, S6) 3. Strengthening the stockpiles of vaccines and medicines management (W6, S1, S2, S4)
		<p>Threats-T</p> <ol style="list-style-type: none"> 1. More competitors 2. Outbreak of particular disease 3. Chicken products substitution 	<p>S-T Strategy</p> <ol style="list-style-type: none"> 1. Strengthening the competitive strategy of refined chicken (S4, S5, S9, T1) 	<p>W-T Strategy</p> <ol style="list-style-type: none"> 1. Improving the biosecurity of the housing and of the environment (W5, T2) 2. Improving the quality of broiler (W5, T1, T3, T4)

CONCLUSIONS AND RECOMMENDATIONS

Conclusion

Based on the results and discussion aforementioned, we can draw several conclusions.

1. PT. Charoen Pokphand Indonesia, Tbk plays a very vital role in value chain of broiler. In the upstream sector, PT. Charoen Pokphand Indonesia, Tbk supplies feed, DOC, vaccines and medicines, and poultry equipment. Whereas in the downstream sector, it processes broiler into refined chicken, such as meatball, sausage, and nugget. The actor who has the highest bargaining power (lead firm) in value

chain of broiler is PT. Charoen Pokphand Indonesia, Tbk. The actor who has the lowest bargaining power is farmer, especially independent farmers with small population.

2. The type of value chain governance between suppliers of feed, DOC, vaccines and medicines, poultry equipment, and refined chicken and consumers is a market value chain. Whereas the type of value chain governance established between suppliers of chicken meat and restaurants is a captive value chain.
3. On farming sector, the highest cost lies in feed (57,99%) and the lowest cost is in medicines and vaccines (2,26%). As on processing, the highest

- cost is in the purchasing of broiler (57,97%) and the lowest cost is in labor (3,35%). The actor who gets the lowest revenue is farmer (IDR 642,44/kg of broiler) with a high risk, whereas the actor who gains highest income is the processor (IDR 3.741/kg of refined chicken) with high risk of investment cost.
4. In the gap analysis, the average expectation is 3,57, the average performance is 3,67, and the average gap between expectations and performance of PT Charoen Pokphand Indonesia, Tbk' products is 73,77%. The attributes that have the highest gap is payment for medicines and vaccines by 2 month credit (88,14%), whereas the lowest is the competitive price of feed scoring 63,18%.
 5. Factors that affect the competitiveness of broiler is condition factor: infrastructure (3,71), human resources (4,00), capital resources (4,00), natural resources (3,14), and technology (3,71); demand factors: the number of buyers (3,86), the growth of demand (3,71), and demand preference (2,57); industry competition: competition level in broiler industry (3,14) and competitors' strategy (2,86), related industries and supporting industries: industrial suppliers of broiler production tool (3,71), partnering/independent farmer (3,57), wholesaler/distributor (3,00), and the processing industry (2,71); and the role of government: access to capital loan (3,29), regulation (3,14), the business climate (3,43), education (3,86), and eradication of zoonosis (3,71).
 6. In IFE analysis (Internal Factor Evaluation), the strength factor which gains the highest weight value (0,083) is the good after-sale service of CP Group Indonesia, while the lowest weight is high revenue of chicken-processing (0,064). The weakness factor that has the highest weight is the weak bargaining position of farmers (0,079), whereas the lowest weight is that most farmers are still using open housing as well as vaccines and drugs of PT. Charoen Pokphand Indonesia which are imported (having the same score of 0,041). In EFE analysis (External Factor Evaluation), the opportunity factor that gains the highest weight score is increasing growth of poultry industry (0,168), while the factor that receives the lowest weight score is the low consumption of chicken per capita (0,108). The threat factor that has the highest weight score is plague attack (0,124) and the lowest weight score is the substitution of chicken meat (0,092).
 7. IFE matrix score is 2,739 and EFE matrix is 3,108, so the position of the value chain is in quadrant II, which grows and develops. In quadrant II, the most appropriate strategy is horizontal integration.
 8. From the TOWS matrix, the alternative strategies to improve the value chain are SO strategies: optimizing the production of DOC and feed, developing feed production in Borneo Island, increasing the production of refined chicken, and improving the education in the community about the consumption of chicken meat; WO strategies: forming cluster by the farmers, converting the use of open housing into the use of close housing, and strengthening the stock of vaccines and medicines management; ST strategy is by sharpening the strategy to be competitive in refined chicken products; and WT strategy is by enhancing the biosecurity of the housing and of the environment while improving the quality of chicken.
 9. Managerial implications of alternative strategies are conducted by increasing the value chain, as follows.
 - a. Product upgrading is done through process upgrading, functional upgrading, and channel upgrading. Product upgrading is done by optimizing the production of DOC and feed, developing feed production in Borneo Island, improving the quality of chicken, increasing the production of refined chicken, and strengthening the stockpiles of vaccines and medicines management.
 - b. Process upgrading is done by converting the use of open housing into the use of close housing and by improving the biosecurity of the housing and of the environment.
 - c. Functional upgrading is carried out by forming cluster by farmers.
 - d. Channel upgrading is done by improving education in the community about the consumption of chicken meat.

Recommendation

In order to be able to increase the value chain governance, the actor of value chain should improve their value chain through product upgrading, process upgrading, functional upgrading, and upgrading channel. This way the competitiveness of chicken in Charoen Pokphand Group Indonesia could be improved. All actors involved in broiler value chain should build a close cooperation to improve the broiler value chain.

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