

## COMPETITIVENESS OF INDONESIAN POULTRY INDUSTRY IN THE GLOBAL MARKET

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### ABSTRACT

In order to promote poultry export opportunity, a study on quality, efficiency and marketing had been conducted in three provinces in Indonesia i.e. North Sumatera, Riau and West Java from August to November 1995. A survey to some poultry companies in these three provinces provided data to describe the situation. Results indicated that it was still difficult to expect that these three provinces can compete with other poultry producing countries for Singapore market. Indonesian poultry industry concentrates more on domestic market as a result of low efficiency in poultry management. For instance, in breeding there was still a high mortality in the growing phasing (3,19 %). Genetic potential of Indonesian chickens was far from optimum use, as can be seen from the retail weight was lower than in Malaysia and Singapore. Another constraints were related to the fact that not all factories' capacity was utilized. In order to support export campaign for poultry and its products, the following aspects need to be improved: (1) nutrition (feed industry), (2) breed quality, (3) disease prevention (vaccine industry), (4) technologies (hatching, equipment, processing, marketing) and (5) management (human resources, credit, institutions). Improvements in efficiency in all aspects of poultry industry are needed if export market will be developed.

Key words: Poultry industry, Global market, Constraints

### INTRODUCTION

In the Sixth Five Year Plan the aim of livestock development policy is to increase farmers' income, encourage food diversification, improvement of human resources and export development. The target growth is 6,4% (Soehadji, 1993). Therefore, a special attention will be given to the smallholder rearers by improving the role of both cooperative and private sectors.

Livestock development is an integral part of national economic development in improving the welfare of the farmers. For the consumers, livestock products play an important role as a source of animal protein while for the producers, animals are significantly useful for increasing farmers' income as well as job opportunity.

One of many livestock enterprises that developed in Indonesia is poultry industry, particularly improved breed producing eggs and meat. The growth of layer industry since the First Pelita always fluctuated. For instance,

in the Pelita I chicken population growth was about 49.4%, in Pelita II 9.9%, in Pelita III 62.1%, in Pelita IV 7.1% and in Pelita V was 14.3% per year. Layers population in 1984 was 29,559,000 heads and in 1993 was 56,479,000 heads. Eggs production in Pelita IV increased by 8.84% per year and in Pelita V was 9.01% (Anonymous, 1994).

In order to increase poultry population as well as production of improved breeds, various efforts had been carried out by the government, such as by importing some chicken breeds (1959-1961), chicken Mass Guidance pilot project (1961-1971) and investment (1971-1981). In the last decade or so, various chicken industries developed sharply both for upstream and downstream industries and many investments for poultry processing.

The fast growing poultry industry resulted some emerging large-scale enterprises specializing in poultry industries and in its development this progress created unhealthy competition with smallholder. As a result, there

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are disharmonies between the two because the large-scale enable to integrate their business vertically from breeding, feeds, production and distribution. Also, this fast growing poultry industry followed by some price fluctuations of DOC, feeds and its products such as eggs and meat. This situation always tends to create some problems among the smallholder.

In order to avoid those problems some government regulations had been issued, whether in the form of ministerial decree or even in the form of presidential decree. Those regulations aimed to protect the smallholder. However in its implementation those regulations were unable to be carried out effectively, such as the partnership system in the poultry industry, to promote export market. Therefore in order to understand better poultry production system whether for domestic market or for export, research had been conducted to study breed performance and its products, business efficiency and marketing and also export market condition.

## MATERIALS AND METHODS

To obtain primary data from poultry industry in the production centers, i.e. North Sumatera, Riau and West Java provinces survey method was applied. Secondary data relating with poultry industry also obtained from those provinces. A part from that, secondary data on marketing both domestic and export, particularly Singapore, were also gathered. Descriptive analysis was carried out to follow this data collection. Table 1 shows the location and the number of sampled farms in each location.

## RESULT AND DISCUSSION

### 1. North Sumatera

North Sumatera is one of many provinces regarded as one of the potential province to conduct poultry export, especially to Singapore. Medan as Capital City of North Sumatera also become the third biggest city in Indonesia with almost all supporting economic facilities.

Poultry industry in North Sumatera developed quite fast because of domestic

market potential. According to 1992 data, there were some 4.4 million broilers and 3 million layers. Poultry industry in this province also act as supplier for surrounding areas. Chicken industries were dominated by production activity both for broilers and layers with DOC mostly from Java.

Production of both eggs and meat in North Sumatera tended to increase over time. Data 1992 indicated that egg production was 22,590 ton while meat was 33,000 ton. In particular for meat production, figure for 1989 was only 8,260 or increase by 4 times in 3 years. This data simply indicated the strong chicken demand in North Sumatera.

Identified constraints to make North Sumatera as broiler exporter were high transport cost to Singapore and also high production cost. The high transport cost made North Sumatera was incapable to compete with Malaysia. Beside that because local market was still widely open and highly profitable, most producers preferred to sell their product to local market.

### 2. Riau

Riau province has direct border with Singapore. Riau also the second richest province in Indonesia after East Kalimantan because of its oil. Batam development as industrial compound and center of international trading will also increase the province potentials.

Poultry industry in this province mainly to supply local market. Export to Singapore still considered as a big challenge by poultry industry because of its strict competition.

Because of its location, poultry industries in Riau have to bring some input components from other areas, for instance, from Medan or Java. High production cost will also make selling price higher. However, one poultry industry already started to export live chicken to Singapore regularly.

In addition, Singapore is a free market. Any commodity offered will be viewed based on its quality and price. This reality contributes an opportunity to all livestock industries located close to Singapore. Therefore, Riau has privilege in term of distance, but it should be remembered that lower transport cost would not guarantee low selling price if other input

Table 1. Number of sampled farms in North Sumatera, Riau and West Java

Enterprise	Sites		
	North Sumatera	Riau	West Java
Broiler breeder	2	1	5
Layer breeder	1	-	2
Broiler production	12	1	10

component price were not competitive enough.

Livestock industries in Riau will not be able to compete with the same industry in Medan, the big Jakarta (Jabotabek) area and Surabaya because feed factory and breeder were not available in Riau. However, Riau has at least two potential commodities for export to Singapore i.e. pig and live chicken.

### 2.1. Market Potential in Batam and Bintan islands

It was hoped that by developing Batam and Bintan islands that had been started some years ago would attract foreign investors, particularly from Singapore. Industrial centers and all supporting facilities such as hotels and tourist resorts had been built in these two islands. This development can be seen as an opportunity for livestock industries subject that they can utilize this chance. Therefore, it can be said that the success of development in Batam and Bintan islands will give a positive impact on agro-industries in Riau. As illustration, data from Batam authority indicated that there were some 60.5 million eggs required in 1991/1992, while requirement for beef and chicken were 950 ton and 373 ton respectively. Tourism and industrial sectors will always demand for livestock product more regularly in the future.

### 2.2. Constraints

As mention earlier, that some input components for livestock industries in Riau still rely on other areas. The high transport cost will influence the high price of livestock products in this province. Other constraint was the fact that many livestock products from other areas always overflow to Riau. As a result, livestock industries can not compete in Riau.

### 3. West Java

Positive impact from West Java position was the enormous development of both infrastructure facilities and institutions that support industrialization, including poultry industry that covers feed mill, chicken production, breeding, vaccines, medicines, slaughter house and processing plants.

Data in 1993 showed that chicken industry developed very rapidly in West Java. Chicken population for instance, increased 15.51 % per year from 1989 to 1993 for layers while for broiler was 29.60 % per year for the same period.

Markets for chicken products in West Java consist of market within the province as well as market outside the province. The main market is the big Jakarta area (Jabotabek), broilers and 2.3 million DOC final stock followed by Central Java, Kalimantan and East Java. In 1993, West Java supplied the big Jakarta as many as 225 million eggs, 515,913 layers and 4.6 million broilers. Apart from that, West Java also supplied 45,000 DOC parent stock layers, 1.4 million DOC final stock layers, 1.3 million DOC parent stock broilers.

In the contrary, West Java also received various products from other provinces such as, Jakarta, Central Java, East Java and Medan.

### 3.2. Export Potential

Export of various chicken products such as eggs for consumption, eggs for hatching, DOC for breeding, DOC for production and chicken meat had been carried out. Table 2 summarizes export realization from West Java. Export destination was Singapore, Malaysia, Thailand, Vietnam, Cambodia, Philippine, Pakistan, Suriname, Bangladesh, Korea and Franc. The Table also shows instability in quantity as indicated by its fluctuating figures.

Table 2. Export of various chicken products from West Java

	1992	1993	1994	1995
A. Consumption eggs (000 eggs)	11,880	-	7,072	-
Destination	Hongkong	-	Hongkong	-
B. Hatching eggs (000 eggs)	-	6,006	-	2,292
Destination	-	Philippine Malaysia Bangladesh Vietnam Thailand	-	Malaysia Pakistan Suriname
C. DOC broilers (000 heads)	-	1,232.92	44.95	31.00
Destination	-	Philippine Singapore	Franc Vietnam	Singapore Vietnam Korea Malaysia Brunei
D. DOC layers (000 heads)	-	290,230	15,000	
Destination	-	Philippine Singapore	Singapore	
E. DOC for production (000 heads)	-	64.89	1,901.32	749.80
Destination	-	Thailand Malaysia Vietnam Bangladesh Cambodia	Malaysia Korea Suriname Pakistan	Singapore Korea Spain Malaysia Bangladesh Tanzania
F. Chicken meat (ton)	719.00	544.00	1,103.00	922.80
Destination	Japan	Japan	Japan	Japan

Note: Export Data of DOC in 1995 up to July  
Source: Directorate General of Livestock, 1996.

### 3.3. Local Market Potential

There are about 7 breeders in West Java that produced 49 million Final Stock layers in 1994. If demand for this type of layers nationally in the same year was 51 million DOC, it meant that West Java alone supplied 96 % of the national requirement. The national demand for DOC broilers annually about 308 million, while West Java alone requires 29 % of national broilers production. As comparison, North Sumatera required 9 %, Riau 5 %, Central Java 16 %, and East Java 11%. Other provinces demanded the remainder. For DOC layers West Java requires 26 %, East Java 27 %,

Central Java 11 %, North Sumatera 6 % and other provinces demanded Riau 1 % while the remainder. From those figures, it was evident that domestic market for DOC was centered in Java. Meanwhile, the annual growth rate of DOC broiler demanded was 9.80 % per year and for layer was 4.80 % per year.

### 3.4. Constraints

Inefficiency was the obvious constraint in the poultry industry in West Java. For instance, in some companies, full capacity of plant can not be optimized,

Table 3. Layers and broilers distribution in North Sumatera, Riau and West Java

Sites	Layers		Broilers	
	(head)	%	(head)	%
North Sumatera	2,773,144	5.07	4,808,225	0.91
Riau	641,935	1.17	3,789,170	0.52
West Java	12,165,861	22.23	17,555,620	3.33
Indonesia	54,736,070	100	526,959,622	100

Source: Statistical Book of Livestock, Dit. Gen. of Livestock, 1994.

therefore, as consequence of that depreciation rate was higher than it should be. A part from that, in general these companies also employ more people that it was required. Although supporting facilities were available in West Java, because the main production components were still relatively costly, therefore, they can not compete with overseas price. As result, all poultry industries concentrate more on domestic market.

From those three provinces studied, West Java was the most progressive, followed by North Sumatera and Riau. Table 3 indicates the distribution of layers and broilers in these provinces.

#### 4. Export Market

Export of livestock commodities was one of the government targets in livestock development. Poultry, particularly chicken and its products also targeted to be able to compete in international markets. However, at the moment these objectives still far from realization because of some constraints those need to be solved. So far, export of chickens had been carried out, however such effort apparently still in the stage of promotion. Table 4 shows export realization of DOC from

Indonesia. Beside that Table 2 presents specially export from West Java between 1992 to 1994.

In relation with the two Tables Table 5 shows chicken production, demand and import figures of chicken by Singapore. Singapore is the closest market from Indonesia, Singapore demand for chicken can partly be supplied by chicken producers in Indonesia. A part from that reason, Singapore slowly will cut down their chicken production because of environmental reason, therefore, Singapore market is very potential. The question need to be answered is how far Indonesian producers ready to compete with other countries to enter Singapore market. Data indicated that production cost of chicken in Indonesia is higher than its competitors. High interest rate and slow distribution system contribute to the high price. The inefficiency in using the established breeding facilities, feed mills and other industries very much relate with the low performance of poultry industry as a whole, such as investment inefficiency and productivity. In other words, efficiency in poultry industry needs to be increased. Table 6

Table 4. Export Realization of DOC from Indonesia

Products	Year		Destination
	1993	1994	
Final Stock	62,893	1,901,317	Thailand, Malaysia, Vietnam, Cambodia, Suriname, Pakistan, Korea and Bangladesh
Parent Stock :			
Broiler	1,232,917	29,950	Philippine, Singapore and Vietnam
Layer	290,230	15,000	

Table 5. Chicken production, demand and import by Singapore

Year	Production (Ton)	Demand (Ton)	Import (Ton)
1985	32,118	85,656	53,538
1986	28,080	88,482	60,402
1987	21,096	95,887	74,791
1988	10,114	92,378	82,264
1989	6,440	87,968	81,528
1990	4,690	94,232	89,542
1991	2,784	100,299	97,515
1992	1,745	102,797	101,052
1993	1,661	111,512	109,851
1994	2,175	125,760	123,585

Country of origin: Indonesia, Malaysia (live); USA, Denmark, Thailand, Brazil (frozen)

presents the comparison of some production parameters and investment in Indonesia and in other countries for broiler in 1994. In term of broiler price, the most expensive price is in Indonesia, although the price of feed was cheaper than in Thailand.

In term of production cost per kg of live broiler, cost in Indonesia still lower than in Thailand and China. The interest rate in Indonesia was the highest, followed by Brazil. In Brazil (the big chicken exporter) production cost was far lower than in Indonesia, although feed and labour wage slightly high, the price of DOC is lower.

Table 7 shows comparison between carcass weight of broiler in Indonesia, Singapore and Malaysia. The average carcass weight in Indonesia was 0.8 kg/chicken, 1.5 kg/chicken in Singapore and 1.2 kg/chicken in Malaysia.

Those weights different very much relate with the optimization of the use of breed, feed and labour. If chicken is harvested too early it can reduce the genetic performance of the particular breed, particularly if DOC price is higher. Carcass weight has strong relation with market demand and in general, overseas market has a bigger carcass.

#### 5. Export prerequisite for livestock to Singapore

In order to increase livestock export, including export of live chicken to Singapore, Indonesia has to give an attention to all health requirements set by Singapore. For instance, any export has to be accompanied with import license issued by the Department of Agriculture in Singapore. Beside that export also must be accompanied by Veterinary

Table 6. Production cost of broiler chicken in selected countries, 1994

Country	Cost per kg live (Rp)	Price DOC/head (Rp)	Cost of feed/kg (Rp)	Wage per month	Int. rate per year (%)
Indonesia	2,380	900	630	250,000	16 - 18
Japan	3,790	1,768	884	2,054,000	5
Thailand	2,527	632	834	379,050	12
USA	1,769	556	581	2,527,000	6
Brazil	1,769	632	632	505,400	16
China	2,654	758	682	252,700	9

Source: Poultry International, June 1995

Table 7. Number of chicken slaughtered, carcass weight and meat production (1994)

Country	Number of slaughtered (million)	Carcass weight (kg/chicken)	Chicken meat production (000 ton)
Indonesia	720	0.8	576
Malaysia	505	1.2	606
Singapore	40	1.5	60

Certificate from the exporting countries. This certificate will guarantee that exported livestock free from certain disease infection (Pulungan and Pambudy, 1992; Anonym, 1993).

Livestock imported live to Singapore no need to be quarantined, but it will be directly transported to the slaughterhouse and has to be slaughtered in 48 hours. Immediately after livestock arrived Veterinarian Staff will examine the health condition of stock and also all accompanied documents, therefore, importers have to inform Veterinary office all details about the arrival. If every thing is perfect i.e. stock healthy and document complete, then it can be brought straight to the slaughterhouse. Suppose sick animals are observed or documents are incomplete, they will be shipped back to the country of origin or destroyed and the importer will be charged.

In case of Indonesia, apart from that above details, all exported livestock to Singapore must come from farms that has been recommended by the Directorate General of Livestock in Indonesia and also by the Primary Production Department (PPD) in Singapore. List of exporter can be obtained from PPD office. Any importer must own an import license.

The most concerned chicken disease in Singapore is *Salmonella enteritidis*, while cholesterol content does not become an important consideration. In the contrary, chemical residue and its amount become important criteria to evaluate the quality of imported chicken meat.

#### 4. Factors that influence the development of poultry industry

In the following, factors that influence the development of poultry industry in the three provinces and its relation with efforts of

increasing export of chicken products to both Singapore and Kuala Lumpur will be identified.

Production potential of layers and broilers from the three provinces has been summarized in Table 3 and Table 4. Indeed improved chicken production centered in West Java. This is a direct effect of better facility of infrastructures, beside that West Java also relatively closer to the central government, therefore, all administrative problems can be dealt quickly.

From production and marketing aspects there are 5 factors that support the ability of poultry industry to develop and respond to higher demand.

- (1) Nutrition (feed industries)
- (2) Improvement of breed's genetic (breeding)
- (3) Disease prevention (drug/vaccine industries)
- (4) Technologies (hatching, equipment, processing and marketing)
- (5) Management (human resource, credit, institutions)

In developing those above facilities big investment will be absorbed, so improvement in business efficiency and productivity can be achieved much better. How much these factors can influence business efficiency can be studied from production cost structure. Literature study indicated that feed component was the biggest contributor in cost of production, followed by breed, disease control, labour and others.

Therefore, in order to improve efficiency, stabilize industrial structure through joint venture need to be developed in the upstream sector with the development of zones to produce raw materials for feed, while in the downstream sector, joint venture concept is needed to minimize the marketing risk.

Because improvement on efficiency and productivity is a system of improvement, therefore, joint venture must be implemented simultaneously in all sectors.

### CONCLUSION

From those above discussions can be concluded that management quality of livestock enterprises need to be improved to the stage of professional producers who will be able to improve the efficiency of production factors (breed, feed, disease prevention, marketing and investment facilities) comparable to other countries. Because globalization era will require strict competition, therefore, joint venture institutions need to be improved in order to produce bigger synergic effects.

The role of government will be directed as facilitator who will produce policies to motivate efficiency and productivity improvements and also to motivate relationship between upstream and downstream sectors and production.

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