

Beef Cattle Farm Development Policies to Overcome Beef Distribution Problem in Indonesia: A Literature Review

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Abstract: This study aims to formulate policy solutions to the distribution of beef in Indonesia by using a descriptive approach relying on secondary data obtained from various state agencies as well as relevant previous studies literature. This study seeks to address the question as to how to formulate ideal livestock policies to help boost beef production and distribution in Indonesia. The focus of the discussion includes the nature of the policies i.e., beef cattle farm development policies, previous empirical studies and alternative beef cattle farm development policies in Indonesia. The data analysis technique used is descriptive qualitative analysis drawing on the analytical synthesis method, while tool matrix data were used to present the data involved in this study. This study shows that the current livestock policies are helping to improve beef production and distribution throughout Indonesia. The study, therefore, suggests that in regulating beef cattle farm development, the government must use alternative policies taking into consideration local institutions, transportation and communication systems to overcome beef cattle production and distribution problems nationwide.

Keywords: Beef Cattle Farms, Beef Cattle Development Policies, Beef Cattle Distribution

Introduction

Livestock development carried out by the Indonesian government is a part of agricultural development activities to improve beef production and distribution throughout Indonesia. Although beef is one of the popular commodities in Indonesia, its production and distribution remain unbalanced as shown in the Fig. 1.

The success of the implementation of beef cattle breeding development requires government policies that guide the implementation of the development through various programs (Suharto, 2010). Carl Friedrich defines policy as a set of actions/activities proposed by a person or a group of persons or government within a given environment (Carl Friedrich in Agustino, 2007). While Ervin (2000) believes it is a blueprint for any action that will drive and influence the behavior of the people affected by the decision.

The development of animal husbandry in particular beef cattle in Indonesia started in the 18th

century. The Indonesian government has encouraged the farming and development of this commodity due to its imbalance availability or shortage throughout the country. Examples of such a shortage occurred in 2015, in some big cities such as Jakarta where the price of a kilogram of beef dramatically increased from Rp. 100,000,00 (about 7 USD) to Rp. 130,000,00 (about 9 USD). This condition has not only put less meat on the plates of the Indonesian population but has also put many people in the meat industry out of business. One of the reasons for the beef cattle shortage is the enactment of a policy that put a stop to beef imports from Australia to allow national production to meet demand. Although this policy seems reasonable, it failed to meet expectations as beef cattle production centers are located far from the demand areas, hence making distribution very difficult (Indonesian Ministry of Agriculture). Therefore, this study aimed to formulate policy solutions to overcome the beef production and distribution problems in Indonesia.

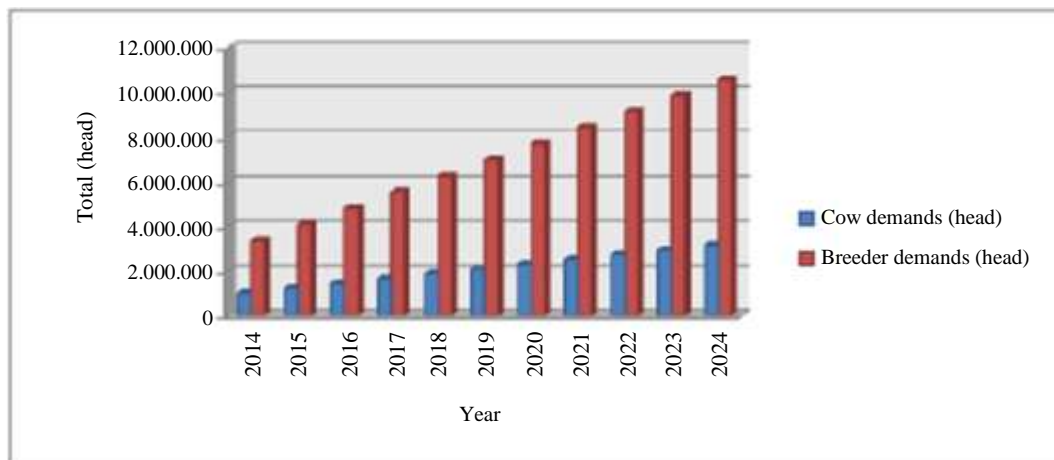


Fig. 1: Projection of the Shortage of cows in Indonesia

Methods

This is descriptive research relying on secondary data obtained from various agencies and a review of previous related and relevant studies. The focus of the discussion in this study includes the nature of the policy, policy for beef cattle farms development in Indonesia, previous empirical studies; alternative development policy for beef cattle farms in Indonesia. The data analysis technique used is a descriptive qualitative analysis using the analytical synthesis method, while the data matrix tool was used to present the data (Miles and Huberman, 1992).

Discussion

The Essence of the Policies

Policy and development are two interrelated concepts. Development is the context in which the policy operates. Meanwhile, the policy development framework guides the implementation of development goals in various programs and projects (Suharto, 2010). According to Ealau, a policy is a determination that has a consistent and repetitive characteristic (Suharto, 2010). According to Carl Friedrich in (Agustino, 2007) policy is a series of actions/activities proposed by a person or a group of persons or a government within a given environment where obstacles exist and for which the policy is proposed to overcome. According to (Marzali, 2012), a policy is a tool or instrument to regulate the population from the top down. While (Ervin, 2000) defines policy as a blueprint for action that will drive and influence the behavior of people affected by the decision.

Public policy is a series of events that have a specific purpose to be followed and implemented by an actor or group of actors dealing with a problem (Anderson, 1984).

According to (Bridgman and Davis, 2004), public policy is whatever the government is trying to do or not to do. Hogwood and Gunn (1990) argue that public policy is a set of government actions designed to achieve certain results. Public policy decisions are characterized by consistency and repeatability behavior of those who make and those who obey the decision (Agustino, 2007). According to (Young and Quinn, 2002), the understanding of public policy helps discuss some of its key concepts such as:

1. The government authorities according to which a public policy is an action that is made and implemented by government agencies that have the legal authority, political and financial authority to do so
2. The reaction to the needs and problems faced by the population
3. A set of goal-oriented actions

Bridgman and Davis (2004) observe that public policy has three interlocked dimensions, namely: A destination, a lawful course of action and a hypothesis. From what precedes, it can be said that public policy has several main characteristics (Agustino, 2007):

1. Policy demands
2. Goal-oriented decisions
3. Policy statement: Formal expression or articulation of political decisions such as statutes, decrees and executive orders, administrative regulations, etc.
4. Policy outputs and outcomes

Beef Cattle Development Policies in Indonesia

Chronologically, efforts made by the government regarding the development of beef cattle can be seen in the Table 1.

Table 1: Chronology of government policies on the development of beef cattle

Year	Production policies
1600-1690	Zebu cow in East Java and crossbred cows that produce offspring in Java, Madura and Sumatra (Sudardjat and Pambudy 2003; Pane, 1993).
1806-1812	East Java Governor of Bengal imported stud cows to improve the quality of local cattle (Sudardjat and Pambudy, 2003).
1838	Prohibition of female cows slaughtering (Sudardjat and Pambudy, 2003)
1890	Bali cows were brought to the island of Sulawesi by the king of Goa (Herweijer, 1950: 9; Sudardjat and Pambudy, 2003).
1910	Java cows were crossed with Zebu (Ongole) produced PO cows, Import of SO cows to Java in 1915, 1919 and 1929 (Dwiyanto, 2008).
1912	Beginning of government's interference in animal husbandry through Ordinance No. 432/1912 (Dwiyanto, 2008; Sudardjat and Pambudy, 2003)
1917-1920	Massive imports of Ongole cattle from India (Sudardjat and Pambudy, 2003).
1936	Java Bulls were castrated and cows were crossed with SO cows (Hardjosubroto, 1994).
1955	To improve production, Madura cows were crossed with Danish Red cows (Red Deen) through artificial insemination (Pane, 1993).
1967	The enactment of Law No. 6/1967 on Basic Provisions for Animal Husbandry and Animal Health.
1974-1975	a) The private sector imported 523 Brahman cows, 563 Santa Gertrudis and 8 Charolais (Sudardjat and Pambudy, 2003). b) The beginning of the GATT Livestock Business Program.
1976	Inauguration of the operation of artificial insemination centers Lembang.
1976-2000	Bali, Ongole, Brangus, Hereford, Simental, Charolais, Limousin, Santa Gertrudis, Belmont Red, American Milking Zebu, Draught Master, Brangus, Taurindicus, Charbra and Angus cows were used for the production of frozen semen in 2001 BIB Lembang.
1989	a) Production of frozen semen from Hereford cattle stopped. b) Starting of the production of frozen semen from Brangus cattle. c) High demand for Frozen Semen from Simental and Limousin.
1997-1998	West Nusa Tenggara crossed 2,200 Brahman cattle breeding imported from Australia with Brangus cattle.
2000	The production of Ongole cows' frozen semen stopped due to low demand.
2006	Beginning of the National Livestock Breeding System (SITBITNAS) on August 31, 2006.
2008	a) Determination of standard procedures for the production of breeders in beef cattle breeding; b) Determination of technical guidelines for the development of ex-imported Brahman cross cattle breeding;
2009	a) Enactment of Law No. 18/2009 on Animal Husbandry and Animal Health; b) Credit Facilitation for cattle breeding (KUPS); c) Establishment of guidelines for the implementation of KUPS; d) Guidelines for the genetic improvement of the quality of Bali cows;
2010	a) Establishment of a clump of Bali cows. b) Determination of the guidelines through cattle breeding development. c) Establishment of beef cattle breeding development guidelines
2010-2014	Establishment of Beef Self-Sufficiency Program (PSDS)
2015	Beef cattle breeding development to support national food self-sufficiency, especially animal origin food.

Previous Empirical Studies

Livestock development policies from 2010 to 2014 was a popular beef self-sufficiency program. To achieve the program objectives, (Priyanto, 2011) recommends three strategies, namely; (a) undertake the development of livestock production centers and quarrying cheap feed resources; (b) to control import beef and cattle to protect people's farms; (c) create a good coordination between the institutions of the central level and the regions to assist the implementation of policies in the field.

In 2002, the government made a policy on central areas of cattle production by cattle integrated with rice (Program Rice-Livestock Systems Integration/SIPT). The purpose of this policy is to help meet feed cattle in the central areas of cattle breeding. However, this program was so small in size that it failed to improve

production. It was suitable for rice farmers, not cattle farmers (Nurasa and Hidayat, 2005).

According to (Yusdja and Ilham, 2004), so far, the livestock development policy implemented by the government has failed to improve the availability of beef cattle and meat. Restructuring livestock needs a development policy that allocates resources equitably to all provinces, not just prioritizing areas of beef cattle production centers such as East Java, Central Java, South Sulawesi, Bali, East Nusa Tenggara, Lampung and West Nusa Tenggara. Governments should facilitate market infrastructure in the form of animal functioning markets, slaughterhouses and strict rules and market information. The role of government is needed to support each pattern in the form of policies, such as (1) Synchronization regional agribusiness development with other agri-commodities (farm, food and fisheries);

(2) Determine the priority development of beef cattle in certain areas corresponding to the adaptability of livestock, such as Sumbawa with no grazing land into agricultural areas and forest industry.

Beef cattle farm development in Indonesia can be achieved by formulating a parent program. The livestock development master program is consistent with problem-solving and strategy development. As stated earlier, in 2015, the Indonesian government prioritized policies supporting the development of animal husbandry in Indonesia. Some of these policies include: (a) An increase in the quantity and quality of seeds and breeding stock, (b) increased production of livestock, (c) an increase in the production of fodders, (d) the control and prevention of animal diseases, (e) guaranteeing beef cattle productivity and competitiveness, (f) providing management and technical support.

To achieve beef cattle farms development goals formulated by the government, it is important to learn from countries that have been able to overcome difficulties to become the world's largest beef exporters, as illustrated in the following Table 2.

The success of the countries above in becoming the world's biggest beef cattle producers and exporters cannot be separated from the role of the government in implementing efficient beef cattle development policies along with modern technology supported by farmers' motivation and determination to achieve beef cattle breeding development goals (Table 2). One of the most attractive livestock policies in the United States is the agricultural insurance aimed at protecting agriculture and farmers. The role of the United States government in protecting the agricultural sector can be seen in the Farm Security and Rural Investment (FSRIA) Act of 2002, which consists of soil conservation programs and agricultural environment. This regulation stipulates that matters concerning land administration and the distribution of agricultural products between the states and the Federal Government, as well as the export of agricultural commodities shall be supervised and regulated by the US Government. The program supports loans and regulates agricultural investments. The government also provides program credits that guarantee exports for farmers to remain productive. The regulation also provides farmers with health insurance and direct subsidies for agricultural commodities and access to foreign agricultural trade (export aid of several commodities).

Table 2: World's largest beef cattle producing Countries

No	Countries	Production quantity (ton)	Export quantity(ton)	Cow population	Total population
1	USA	11.230	1.141tn	87.730	321.034.355
2	Brazil	9.920	2.030	207.960	204.451.000
3	China	5.760	550.000	104.188	1.353.821.000
4	Indian	4.000	1.875	329.700	1.276.267.000
5	Argentina	2.900	200.000	51.745	43.417.000
6	Australia	2.240	1.560	28.250	23.892.000

Source: <http://bisniskeuangan.kompas.com>

Alternative Beef Cattle Development Policies

By 2015, the government has formulated several priority activities to achieve goals beef cattle farms development goals in Indonesia, these include (a) an increase in the quantity and quality of seeds and breeding stock, (b) increased production of livestock production, (c) an increase in the production of feeds, (d) the control and prevention of animal diseases, (e) guaranteeing animal productivity and competitiveness, (f) providing management and technical support. As pointed out at the outset of this paper, the biggest problem faced by beef cattle development in Indonesia is the unbalanced availability of beef cattle throughout Indonesia which is due to a lack of efficient beef cattle distribution channels from the producing areas to the demanding ones.

Bahri *et al.* (2005) believe that the Indonesia beef cattle trade and marketing system has been inefficient due to the concentration of production in limited areas such as East and West Nusa Tenggara, Bali, Lampung, Central Java, East Java and Sulawesi Highly populated areas such as Jakarta and West Java remain the big importers followed by Riau, East Kalimantan, West Kalimantan, North Sulawesi (Table 1).

Taking into consideration the problems mentioned above and the government's response, we may say that the policies put in place have been unsuccessful because they fail to target the right problem i.e., the distribution problem. Therefore, new alternatives policies to overcome these problems must be sought that would include:

1. Formulating beef cattle regulations reflecting the Indonesian marketing system from production centers to areas with high demand
2. Creating a system of institutional marketing aimed at organizing coordination, collecting data, coaching, developing, empowering, monitoring and evaluating related beef cattle marketing activities in Indonesia
3. Establishing effective transportation patterns and infrastructure for marketing and distribution nationwide
4. Creating an online communication network that can help governments, businesses and the population to have updated information about beef cattle availability and demand condition

Conclusion

Indonesia has abundant resources to create an adequate agricultural sector, especially the livestock sector. For many the government has focused its effort to improve this vital sector on policies that failed to address the core problem of beef cattle development i.e., the high concentration of beef cattle production in areas with low population density and therefore low demand in meat, these areas include East Java, Central Java, South Sulawesi, Bali, East Nusa Tenggara, Lampung and West Nusa Tenggara. While areas with high population density and therefore high demand for meat consumption such as Jakarta and West Java, Riau, East Kalimantan, West Kalimantan and North Sulawesi were left behind. In conclusion, we believe that the policies put in place have not been successful as they fail to target the right problem i.e., the distribution problem. Therefore, alternative policies must be issued by the government that consists of creating a system relying on regulations, institutions, transportation and communication to overcome the problem. We believe that the success of beef production and distribution largely depends on the formulation and enactment of policies considering the role of the government, the needs of farmers and livestock technology. However, these variables alone are not the sole ingredients for the development of the cattle business in Indonesia. More studies are needed to identify other difficulties faced by this vital sector.

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Author's Contributions

All the authors equally contributed in this paper.

Ethics

This study was approved by Andalas University Scientific Research Committee of Ethics.

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