Business Strategy of Cattle farmers and Bottleneck in Production under The Rise in Beef Price: A Case Study in Malang District

Nuning Nur Laila, Andy Fefta Wijaya, and Fadilah Amin

Brawijaya University, Malang City, East Java, Indonesia

INTRODUCTION

Livestock production in Indonesia has remarkably good prospects. This is indicated by the country’s demand for livestock that tends to increase, following human population growth and economic development. In 2015, the share of livestock in the agriculture GDP was 15%.
while agriculture contributed 10.1% to the total GDP. Interestingly, the share of livestock increased slightly in 2010-2015 while that of agriculture decreased (Ditjennak, 2016).

Indonesia has the largest cattle population in Southeast Asia (Waldron et al., 2015). In 2015, it had 15.4 million cattle and its beef production was 524 thousand tones, an increase of 5.21% from 2014 (Pusdatin, 2015). Indonesia is also categorized as a mid-sized cattle producer, ranking 27th in the world (Waldron et al., 2015). However, this does not enable Indonesia to achieve beef self-sufficiency, which it has strived to gain from 2005 to 2014. Its beef consumption growth rate is higher than its production rate. This has caused a rise in beef prices, which affects the development of cattle farms in Indonesia.

The increase in the beef price has two characteristics that must be addressed properly. On the one hand, the rise is so high that it promises strong profits. Diwyanto et al. (2005) stated that beef consumption, increased annually following population growth, increased revenue and people's awareness of the importance of animal protein. This increase can stimulate an increase of cattle population and beef production. On the other hand, it can also be a problem, because soaring beef prices could reduce the purchasing power of consumers. Consumers would prefer to divert their consumption to other commodities that are considered to be substitutes for beef, such as chicken, which would result in beef producers incurring losses. Pusdatin (2015) stated that the price of beef in Indonesia is equivalent to three times that of chicken. Widiati (2014) asserted that the high beef price is expected to increase farmers' income, and hence, they would be motivated to increase their cattle production. El Dukheri et al. (2010) also emphasized that soaring prices will affect farmers, but mainly smallholders. That is because soaring prices result in risk and vulnerability, but also greater profitability in cattle farming.

It can be concluded, thus, that the rise in beef price can yield substantial profits that could then be used for increasing farmers' welfare. On the other hand, it could also lead to unsafe practices and risky factors that increase their vulnerability. Therefore, it is very important to observe the types of constraints faced by cattle farmers in responding to the rise in beef price and identify strategies to be adopted in order to provide guidance to the government in drawing an appropriate policy.

2. Theory

During 1984-2015, beef production in Indonesia tended to increase by an average 2.68% per year, lower than beef demand (Pusdatin, 2015). This imbalance between production and demand caused rising in beef price. There are a number of obstacles, such as the distance traveled for distribution, either via inter-island transport or transport through land, which can trigger high prices (Pusdatin, 2016). The characteristic of beef price is different from other meats. Beef price will not return to the former price (Ilham, 2009). This could be because the rapid change of the beef price was not followed by production growth. The length of the cattle rearing period to produce beef, the low technology, a traditional rearing system and small-scale farms are the causes of this phenomenon (Widiarti and Kusumastuti, 2014).

As one of the efforts to meet the demand for beef and at the same time to stabilize the beef price, the government has imported beef cattle and implemented some programs to develop cattle farms. Ilham (2009) showed that during the last 40 years, the Indonesian beef industry experienced negative dynamics. In fact, during the 1970-1980 decade, Indonesia was a beef exporter. Indonesia exported about 32,940 heads of cattle just in 1970. This number fell to just 400 in 1978. This decrease was caused by beef cattle demand that increased more than the supply. Since 1990, Indonesia has been importing beef cattle, from 8,061 in 1990 to 429,615 in 2002 (Saputro, 2016). Ilham (2009) also stated that beef cattle demand, stimulated by the population growth and increase of income, increased levels to higher than beef cattle production, which was relatively low due to the long duration of cattle production cycles, the low farming technologies, as well as the fact that the beef cattle business was still considered to be a side job, and the government's development budget allocation for the development of beef cattle was still low. These conditions caused an increase in beef cattle imports, which has further hampered the sustainability of local cattle farmers.

As one of the efforts to meet the demand for beef and at the same time to stabilize the beef price, the government has imported beef cattle and implemented some programs to develop cattle farms. Ilham (2009) showed that during the last 40 years, the Indonesian beef industry experienced negative dynamics. In fact, during the 1970-1980 decade, Indonesia was a beef exporter. Indonesia exported about 32,940 heads of cattle just in 1970. This number fell to just 400 in 1978. This decrease was caused by beef cattle demand that increased more than the supply. Since 1990, Indonesia has been importing beef cattle, from 8,061 in 1990 to 429,615 in 2002 (Saputro, 2016). Ilham (2009) also stated that beef cattle demand, stimulated by the population growth and increase of income, increased levels to higher than beef cattle production, which was relatively low due to the long duration of cattle production cycles, the low farming technologies, as well as the fact that the beef cattle business was still considered to be a side job, and the government's development budget allocation for the development of
beef cattle was still low. These conditions caused an increase in beef cattle imports, which has further hampered the sustainability of local cattle farmers.

Therefore, the Indonesian government has been striving to achieve beef self-sufficiency since 2000. This program was planned in the Strategic Planning of General directory of livestock production 2000-2005, which was expected to minimize Indonesia’s dependence on import needs by optimizing the production of domestic beef. The strategies adopted in realizing beef self-sufficiency included the empowerment of local livestock resources, improvement of farming systems—both breeding and rearing systems—as well as intervention in the market as a form of government protection against local livestock resources.

In practice, beef self-sufficiency in Indonesia has faced quite serious obstacles and challenges from 2000 to the last failure in achieving beef self-sufficiency program in 2014. Scholars have conducted many studies to analyze the problems that resulted in the failure of Indonesian beef self-sufficiency by 2014. Tawaf and Arif (2011) asserted that a factor causing this failure was unmatched data between central and local governments, which misled the decision to reduce imports. This decision caused a high rise in beef price in 2012-2013, which was followed by major de-population. Indonesia lost about 20.62% (Pusdatin, 2016) of its cattle population. This phenomenon showed that Indonesian cattle production is still weak due to the long rearing period and the poor rearing behavior performed mostly by smallholders.

This, emphasizes how important paying greater attention to how Indonesian farmers particularly smallholders face the rise in beef price in order to measure a good policy. Observation by indepth interview to the farmers is expected can give picture clear description on the farmer constraint and strategy taken under the rise in beef price.

3. Research method

A survey of thirteen farmers using qualitative method with in-depth interview was carried out on March 2017 in Malang District in order to observe farmers’ constraints and the strategy taken under the rise in beef price.

Well known as one of the big five cattle region in East Java Province, Malang district supported more than 5% of cattle population in this Province. East java province itself supported 27.92% of Indonesian cattle population (processed data from BPS, 2016).

Following the beef cattle import quota reduction (from 54% to 17.5%) In 2012-2013, Malang lost for about 20.33% of its cattle population (Tawaf, 2014). Interestingly, in 2013-2015 Malang farmers could gained the highest increase of its cattle population (12.52%) among others (Processed data from Livestock Institution of East Java Province, 2016).

The interviewed farmers’ characteristics displayed on the following table:

<table>
<thead>
<tr>
<th>Table 1. Farmers’ and farms’ characteristics</th>
<th>Descriptions</th>
<th>Number of farmers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jobs</td>
<td>Cattle farm as main job</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Cattle farm as said job</td>
<td>10</td>
</tr>
<tr>
<td>Family Members</td>
<td>4 person or less</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>More then 4 person</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Age</td>
<td></td>
</tr>
<tr>
<td></td>
<td>30-50 years old</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>50-60 years old</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Farming Experience</td>
<td></td>
</tr>
<tr>
<td></td>
<td>11 years or more</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Less than 10 year</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Educational Background</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High school or higher</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Elementary school or lower</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Land ownership</td>
<td></td>
</tr>
<tr>
<td></td>
<td>More than 1000m²</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Less than 1000m²</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Cattle farm scale</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Large (more than 6 cattle)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Middle (4-6 cattle)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Small (1-3 cattle)</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Recent farming aim</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Breeding</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Fattening</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Mixed</td>
<td>6</td>
</tr>
<tr>
<td>(Source: Based on survey, 2017)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The table showed that most of the farmers considered cattle farm as their side job, which implies their priority. Most of them has family members 4 persons or less. Family members could be the labour source for cattle farm on the other hand, it could be also burden for the head of the family, particularly if the family members are unproductive and need more daily expenses. All farmers in productive age, 60 years old or below with farming experience mostly more than 11 years. More than 50% of the farmers just finished elementary school or lower and only 2 person who graduated from college. Sonbait et al (2011) said that educational level will affect to the difference of farmer’s mind in adopting innovation and technology. Higher educational level, easier adopting new technology. Farmers aimed their cattle farm for 3 purposes, they are:
breeding, fattening and mixed between breeding and fattening.

4. Result and discussion

4.1. Difficulty in accessing cattle

The number of cattle ownership will be presented in the table 2.

Table 2. Cattle ownership

<table>
<thead>
<tr>
<th>Farmers</th>
<th>Periods</th>
<th>Ownership Status</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2010</td>
<td>2011</td>
<td>2012</td>
</tr>
<tr>
<td>F1</td>
<td>10</td>
<td>10</td>
<td>12</td>
</tr>
<tr>
<td>F2</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>F3</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>F4</td>
<td>5</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>F5</td>
<td>3</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>F6</td>
<td>5</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>F7</td>
<td>2</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>F8</td>
<td>2</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>F9</td>
<td>5</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>F10</td>
<td>6</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>F11</td>
<td>7</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>F12</td>
<td>4</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>F13</td>
<td>5</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

(Source: Based on survey, 2017)

Notes:
Smallholder: cattle ownership between 1-3 cattle;
Middle farmer: cattle ownership between 4-6 cattle;
Large farmer: cattle ownership more than 6 cattle

This table shows that only large farmers’ cattle tend to increase during 2010-2015. This condition shows that, even though rising prices promised profit, not all farmers could capitalize on it, especially smallholders who have limited capital, cattle shed, and power. Therefore, smallholders found it difficult to buy back cattle to increase the cattle numbers. El Dukheri et al. (2010) asserted that rising price could be double-edged opportunity and challenge simultaneously. Price volatility becomes an issue in shaping farm decisions regarding what to produce, how to produce and how much. Large farmers could take advantage of the rising price by enlarging their farms further to get higher profit, but, for a smallholder who is more vulnerable, rising prices will increase the risk and the cost. Moreover, the rising beef price in Indonesia is not followed by the consumer’s rise in power. Therefore, the government tries to lower the beef price by importing beef cattle and such imports could further hamper local farmers. This will increase a farmer’s vulnerability. The government must draw a policy that helps qualified breeders increase cattle production.

Most of the farmers said that their difficulty in accessing cattle is caused mostly because of lack of capital, lack of facilities or other reasons, and most of them joined the cattle sharing system in order to access cattle such as described in the figure 2. This phenomenon is very interesting. What is the cattle sharing system? How can cattle farmers rely on it to access cattle? These questions will be answered in the following section.

![Figure 1. Farmers’ difficulties in accessing cattle](Source: Based on survey, 2017)

4.2. Cattle sharing system

As mentioned before, cattle sharing system is the strategy taken by most farmers who have difficulties accessing cattle, but what exactly is the cattle sharing system? Ifar (1996) showed that the cattle sharing system is meant to open access to cattle for poor farmers. The cattle sharing system can be defined as the cooperation between a cattle owner and a farmer in rearing cattle with defined management roles. Before delving deeper into the cattle sharing system itself, it is important to examine the change in cattle ownership status from 2010 until 2015.

Table 3. Ownership status 2010-2015

<table>
<thead>
<tr>
<th>Ownership Status</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSS</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>SO</td>
<td>7</td>
<td>4</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Mixed</td>
<td>3</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>None</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td>13</td>
</tr>
</tbody>
</table>

(Source: Based on Survey, 2017)

Notes:
- CSS (Cattle Sharing System): joint venture between cattle owner and farmer
- SO (Self-ownership): Farmer who reared his own cattle
• Mixed: Farmer who combined cattle sharing system and self-ownership

Table 3 shows that self-ownership decreased in 2015, as compared to 2010, and moved towards the cattle sharing system as well as a combination between the cattle sharing system and self-ownership. As mentioned already, the most important of the farmers’ reasons for decreasing cattle self-ownership is lack of capital. After selling cattle, the farmer usually cannot buyback cattle so they look for investor’s cattle to be reared (cattle sharing system). The result of our study also showed that in some cases, a farmer did not rear cattle at all, just like F13, who did not find a partner in cattle sharing system while he did not have money to buy cattle for himself in 2013-2014. This condition showed that the cattle sharing system is very useful to provide open access to cattle, particularly for smallholders. This is highlighted in the next figure (figure 7).

![Comparison between cattle number with and without cattle sharing system](image)

**Figure 2.** The comparison between cattle number with and without cattle sharing system. (Source: Based on survey, 2017)

The graph 7 shows that farmers who joined the cattle sharing system have higher cattle numbers than their self-ownership cattle. This means that the cattle sharing system could increase farmers’ cattle numbers.

The cattle sharing system in Malang District can be described as follows (based on observations):

a) There is no written agreement. It is all based on trust. However, the responsibility of both sides already are defined and approved by both sides;

b) The actors involved are mostly neighbors or relatives, which limits the participation of others possibly capable of investing. On the other hand, it also facilitates contracts because both sides know each other’s skill levels. For example, how strong the financial capacity of the cattle owner is, or how good the rearing skill of the farmer. This also ensures the safety of this agreement. Both sides keep an eye on each other to make sure that the agreement runs as it is supposed to;

c) When starting the cattle sharing system, usually the owner and the farmer will go together to the market to look for cattle. The cattle are bought by mutual agreement. However, one farmer reported that it did not require particular cattle. He will just accept what is provided by the owner. This also happens sometimes in profit sharing among relatives, who have cattle as their share, and who want to place it again in the farmer’s care for rearing;

d) There are 3 obligations in the cattle sharing system.  
1) Providing cattle, which is always provided by the cattle owner;  
2) Cattle management, such as providing the cattle shed, rearing the cattle, and foraging, which is usually provided by the farmer; and  
3) Rearing costs such as fodder excluding forage (concentrate or bran or pollard or tofu waste), insemination cost, health support, etc. Rearing cost is shared both sides (farmer’s and cattle owner’s burden). Practically, it will be billed by one of them. The person who bills this rearing cost will get higher authority in management;

e) There are 2 types of management. First is the management initiated by the owner, and the second is management initiated by the farmer. The difference of this system depends on the rearing cost provider. The person who provides rearing cost will have higher authority to make decisions about the fodder used, rearing period, selling channel and the health service.

f) There are different meanings of the profit in fattening and breeding farms. In the fattening farm, the share is defined as the price of the cattle reduced by initial calf price and rearing cost.

\[
\text{The profit fattening} = \text{cattle price} - (\text{initial calf price + rearing cost})
\]

In a breeding farm, the price of calf produced is reduced by rearing cost to define the profit.

\[
\text{The profit breeding} = \text{calf price – rearing cost}
\]

Profit sharing proportion is applied differently as well. In the case of management decided by the cattle owner, the profit sharing is usually 50% for each farmer and cattle owner. In the case of management decided by the farmer, usually the farmer gets higher, about 55%-60%.

There are 2 factors affecting cattle sharing system, namely a farmer’s skill and financial support. Farmer’s skill is needed in order to perform good management such as: feeding cattle and serving the cattle’s health. For example, F5 could make silage and always chopped the forage. Chopping forage is a very simple skill that has the benefit to improve its palatability. However, not
all farmers know about this. F5 could also convince the cattle owner to buy concentrate for the cattle’s diet to ensure good weight gain for the cattle.

On the other hand, financial support also affects the cattle sharing system. Good finance will possibly provide the best fodder or the other cattle needs. For example, F5 could convince the cattle owner to buy concentrate for the cattle. Different cases occur with F13, who gave different fodder while partnering with 3 different partners in the cattle sharing system. First partner provided normal, the second partner asked him to join a farmer group to get concentrate as feed grant, and the third did not want to pay for any additional fodder. So, F13 just fed cattle with forage, which leads to lower cattle weight gain and longer rearing period. This condition describes how important those 2 factors are for increasing cattle production in cattle sharing system.

From the explanation above, it can be concluded that the cattle sharing system could be an alternative for smallholders to increase their cattle number. Cattle sharing system will affect the cattle production positively if it is well-managed.

4.3. Poor feeding behavior

Fodder is one of the most important components in rearing cattle. Fodder must be given considering the cattle’s needs. Fodder availability is also one of the supporting factors for the cattle farm in a single area. Cattle could be fed by using forage and agricultural waste. Therefore, cattle farm and agricultural land usually run together. On one hand, farmers cultivate their land using cattle, even though this trend has decreased, switching to tractor machines, but most of the cattle farmers in Malang District are also listed as land owners, which allows them to have their own source for feeding their cattle. A cattle farm is considerably dependent on the availability of the feed. Examples include Pakis and Turen, where there are many tofu producers, but fatteners are living there in order to use tofu waste for cattle. It is different with Wajak, where the majority are breeders.

The survey shows that most of farmers performed poor feeding behavior. Farmer did not feed cattles as their needs but as farmer’s ability. Only F4 who differentiates fodder as cattle’s needs.

There are 3 factors that could affect feeding behavior, namely:

1) Fodder availability: for example in harvest season, paddy straw becomes the main forage before bulrush. In Pakis Subdistrict and Turen Subdistrict, fattening farmers use tofu waste because of its availability. This differs from Wajak farmers who are the source of breeding farmers;

2) Farmers’ skills: for example F5 could make silages using his agricultural waste, which could increase the nutrition in forage. However, not all farmers can do that.

3) Financial support: to reach good cattle productivity, cattle need to be fed with good fodder, for example, by buying concentrate that could increase cattle’s weight by 1 kg/ day or higher. However, not all farmers take this action. For example, F13 decided not to continue using concentrate because it is too expensive.

From the explanation above, we can see that feeding behavior of farmers in Malang District is still considered poor. This can be seen from the unbalanced composition of fodder for cattle. The availability of the processed feed also becomes a constraint in feeding cattle. Widiati (2014) said that there is no market/shop that provides affordable feed in large quantities. This could be one of the constraints that limits cattle productivity.

The unavailability of fodder in good amount could be another constraint for a farmer. Widiati (2014) said that Indonesian beef cattle industry is not yet shaping into a sustainable agribusiness system, therefore, it makes livestock production expensive mainly in providing feed and access to input market. This condition could hamper the cattle farm sustainability. On one hand, good fodder requires fodder availability, good farmer’s skill and financial support. Umiyasih and Anggraeni (2007) said that there is a fixed formula to create good fodder. Combining available fodder and supplementing from local fodder could create cheap fodder with optimum benefit. However, to be able to process good fodder, farmers need to have particular skills that they could adopt by participating in farmer groups. This aspect will be explained in more detail in the next section.

4.4. Farmer group participation

The result showed that farmers became more interested in joining farmer groups after 2011. This might have been affected by the government effort to promote farmer group for empowering cattle farmer. On the other hand, it possibly showed the interest of farmers to enhance their capacity. Farmer groups can be used as the place for sharing knowledge, joining training and of course, get other benefits in the form of government grants.
Farmers have different reasons for joining a farmer group. Those reasons can be explained as follows:

Figure 3. Farmer group participation (Source: Based on survey, 2017)

Figure 4. The benefits from farmer group (Source: Based on survey, 2017)

43% of the respondents said they are interested to join farmer group because they are interested in the government grant. The government has some farm grants such as fodder, livestock, and other tools needed in rearing cattle. The government required a number of the farmer group as participants of the program. This could be the interesting point of farmer group. This has been described by Nuryanti and Swastika (2011) who have shown that Indonesian farmer groups recently were established in response to government programs that require farmer groups as the acceptor, and not based on the farmer’s initiative.

The other farmers said that they wanted to enhance their skill by sharing good fodder, and other skill in rearing cattle, such as using cattle manure, and other benefits in joining farmer group. F1, F5, and F6 are farmers who fed their cattle with good fodder based on what they have learnt from farmer group. F10 also said that he is able to process his cattle’s manure faster by using recommended starter (for fermentation) than before joining farmer group.

Based on the explanation above, it could be concluded that participating in farmer group could enhance farmers’ skill. However, farmer group activity must be adjusted to the farmers’ needs and a farmer needs to be guided intensively in order to increase their understanding and their willingness to adopt knowledge.

4.5. New market access

Most of farmers sell their cattle to the trader who will sell it in the livestock market. The trader will meet the buyer (bigger trader, collector, butcher, farmer, etc.) in regular transaction. The buyer will make an offer to the seller. Prices are determined by the weight (estimation), age, body performance and gender (Suparyanto et al., 1997).

The result showed that farmers will always be in the earlier stage of the selling channel, which keeps them away from maximum profit. Most of them sell their cattle to the subdistrict trader. Subdistrict traders buy cattle from the owner, paid for by cash, and after that he will sell it to the livestock market to get a higher price. Most of farmers said that they do not have the time or ability for selling cattle by themselves. Using a trader would be more efficient and effective, even though the price they got was lower by Rp 500,000 - Rp 1,000,000/cattle from market price.

Figure 5. Cattle market access

From figure 5, it can be seen that in order to get higher profit, F1 tried another way of selling. Instead of selling living cattle, he sold carcass directly to the beef seller. Using this method, F1 could get at least Rp 1,000,000 more than regular profit. However, this new market is also complicated because some constraints must be considered as follows: (1) it needs more efforts, such as to bring cattle to the slaughterhouse, to slaughter cattle, and to distribute the carcass to the beef seller. Most of the farmers are already busy with their activity in their agricultural land; (2) it needs particular skill and license to be a butcher, and the farmer must join particular training and obtain legal license from the government; (3) it needs a good market link; not all...
farmers have good market link, and, moreover, most of them are farmers who are busy with their agricultural activity, so they are not familiar with the actors involved in the selling channel except subdistrict traders who face them directly. Therefore, this new market access needs to be observed more before its potential can be uncovered.

5. Conclusion

Malang District farmers faced some constraints under the rise in beef price such as: difficulty to access cattle, poor feeding behavior and long selling channel.

Most of the smallholders choose cattle sharing system as their strategy to access cattle. This strategy could be a good alternative to increase the cattle number, if well-managed. Characterized has no written agreement could limit others capable of investing, on the other hand, it also increased its safety because both sides know each skill level very well.

Poor feeding behavior will affect negatively to the cattle production. Some farmers improved their poor feeding behavior by joining farmer groups. To increase its effectivity, farmers need to be guided intensively to convince them to adopt knowledge shared in farmer group.

Farmers have a long selling channel that reduces their profit. Selling carcass to the beef seller could result in higher profit for farmer. However, this new market access has some constraints such as: needs more efforts and takes much time, needs particular skills to be butcher, needs government license, and needs market link. It needs deeper observation to know whether it has potential or not as new market access.

This research is limited on time and the number of farmers being interviewed. Therefore, it needs further quantitative research to complete the findings of this study.

References


