

## CATTLE MARKETING CHAIN AND SOCIAL CAPITAL IN BALI

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### ABSTRAK

Pulau Bali tidak saja dikenal sebagai tujuan daerah pariwisata, tetapi juga dikenal sebagai salah satu daerah penghasil ternak sapi potong di Indonesia. Sapi Bali banyak diantarpulaukan untuk memenuhi permintaan daging sapi di Jakarta. Hal ini membuka peluang bagi pengembangan sapi di Bali, karena tidak hanya untuk memenuhi kebutuhan local, tetapi juga kebutuhan pariwisata. Tulisan ini bertujuan untuk menjabarkan rantai pemasaran sapi potong di Bali dan para pemangku kepentingan di dalam rantai tersebut. Selanjutnya, mengidentifikasi peranan kelompok tani sebagai modal sosial dalam membantu petani kecil untuk memiliki akses yang lebih besar dalam rantai pemasaran. Hasil penelitian menunjukkan bahwa rantai pemasaran sapi potong di Bali merupakan hal yang kompleks terbentuk dari gabungani faktor ekonomi, sosial dan lingkungan. Pemangku kepentingan dalam rantai pemasaran ini adalah peternak, pengumpul, pemotong, makelar, pengecer daging, pedagang lokal maupun antar pulau, hotel, restoran dan institusi, pengemas daging serta konsumen akhir. Modal sosial yang dimiliki kelompok ternak dan kemampuan kelompok untuk memanfaatkannya ditentukan oleh banyak faktor antara lain kualitas kepemimpinan kelompok dan pentingnya ternak bagi anggota kelompok.

Kata kunci: sapi Bali, rantai pemasaran, modal sosial

### ABSTRACT

Worldwide the island of Bali is known for extensive tourist destination. However, the island is also known as the source of beef cattle for Indonesia. Bali cattle are sent off the island regularly to fulfill the beef demand in Jakarta. This opens opportunity to cattle development in Bali, not only to fulfill the local demand but also for tourist consumption. This study aims to define cattle marketing chain in Bali and describe the role of stakeholders within this chain. It then identifies the role of farmer groups as as social capital may play in assiting smallholders to have greater access to the market. Results of the study show that the cattle marketing chain in Bali is driven by a complicated mix of economic, social and environmental factors. The key stakeholders in the cattle marketing chain include farmers or smallholders, collectors, butchers, brokers, retailers, local or domestic traders, inter-island traders, hotel and restaurant institutions, meat packers and final consumers. The presence of social capital and the ability of the group to mobilise it may in turn be influenced by



many factors such as the quality of the leadership and the importance of cattle to the individuals.

Key words: *Bali cattle, marketing chain, social capital*

## INTRODUCTION

The island of Bali is known for tourist destination worldwide. However, in the national level Bali is also known as one of the main cattle producing areas for Indonesia. The cattle population in Bali in 2008 is 668,065. Over the last five years, the cattle population in this island has grown at an average of three per cent per annum. Only Bali Cattle (*Bos sondaicus*), an indigenous Indonesian cattle breed, are allowed to be bred in Bali despite the wide spread of this breed throughout the country. Bali cattle are known for their pleasing traits, such as good adaptation to dry conditions, high fertility and highly efficient in producing lean beef. About 60% cattle traded in Bali are sent off the island, especially in Jakarta.

Beef is a small but growing part of the meat industry in Bali. Smallholder farms dominate beef production, as they do the majority of Indonesian agriculture. Demand for beef in Bali comes from two different markets: the wet market and the higher end market (also known as HRI market). Beef demand from the wet market is fresh beef and comes from the local population and is supplied entirely from domestically slaughtered cattle. Meanwhile frozen and chilled beef are imported to fulfil the tourist demand. This imported beef, most of it from Australia, competes with the local beef in the tourist sector.

A study by Antara (2002) on linkages between tourism and agricultural sector in Bali using a Social Accounting Matrix (SAM) Approach found that tourism has positively effect to the Bali's economy. Agricultural sector, including cattle development, has an opportunity to fulfill demand for local and tourist consumption. However, smallholders have difficulties to take full advantages of the market opportunities. These include obstacles to smallholders accessing knowledge of how to achieve the productivity and quality improvements needed to capture an increasing share of these market opportunities.

Some researchers have turned their attention to the potential for smallholders to act as a group to achieve the economies of scale needed to reduce transaction and production costs to competitive levels, given the difficulties faced by individual

smallholders in accessing market opportunities. According to Thorp et al. (2005) group formation has large potential to empower and raise the incomes of poor people. Acceptance of such institutional arrangements by policy makers as a complement to conventional options has increased substantially since the early 1990s. Putnam (1993) identified social capital as features of social organisations, such as trust, norms and interpersonal networks, that improve the efficiency of the social organisation by facilitating coordinated actions.

Uphoff (2005) indicated that the particular assets comprising social capital can be distinguished from the benefit stream flowing from them, which can be specified as mutually-beneficial collective action. In addition, Uphoff (2005) argued the assets comprising social capital can be distinguished into two subcategories: cognitive and structural. Cognitive social capital includes mental states and representations, including norms, values, attitudes and beliefs, that prompt people towards collective action. The assets comprising structural social capital are those derived from social structure and organisation, such as roles, rules, patterns and procedures that facilitate collective action.

The importance of social relations for market access is also illustrated by Smith (2006) on the study of timber supply chains in Cameroon. These obstacles derive in large part from communities lacking the personnel and financial capital they need to establish and maintain the requisite social relations for monitoring market conditions as well as locating and negotiating with buyers.

The government of Indonesia (GOI), including Bali administration has formed and used community groups as the institutions through which they distribute cattle to the poor. This is to allow not only cost effective distribution of cattle and extension support but also to encourage farmers to work together and support each other in regard to cattle marketing. The GOI facilitates the means through which individual cattle owners can take advantage of economies of scale and in turn have better links with the marketing chain. However, a potential limitation restricting cattle industry development in the island is the inability of smallholders to access a marketing chain that rewards cost-effective production of a quality product.

The ability of government or group to deliver extension, financial and other forms of support to group members may be influenced by the strength of the networks and trust inherent in the particular group; that is the group's 'social capital'. Uphoff (2005) argued that social capital can be just as important for



smallholders access to market opportunities as their access to physical, financial and human capital. However, it depends on prior access to social capital that facilitates scale economies through collective action or the forging of links between smallholder groups and relevant figures of authority or sources of information.

### **Objectives of the study**

This study aims to define cattle marketing chain in Bali and describe the role of stakeholders within this chain. It then identifies the role of farmer groups as social capital may play in assisting smallholders to have greater access to the market.

## **METHODOLOGY**

The data collection and analysis in this study involved three phases. Firstly, data collection and preliminary definition of the cattle marketing chains in Bali were developed. Desktop studies and interviews to key informant were undertaken to define the supply chain, identify the roles of stakeholders in the chain. Secondly, focus groups were conducted to confirm the structure of the supply chain and identify the critical factors in determining the nature and limitations of the market. Participants in each focus group included producers, input suppliers, industry and community leaders, traders, government agencies and other relevant stakeholders identified in the initial industry definition.

Finally, survey communities (via community leaders) were conducted to determine the importance of group and leader characteristics in influencing market participation. This is more focused evaluation of the role of social capital in assisting cattle producers to link with the market. A survey was carried out to determine characteristics of leaders and leadership structures and linkages with cattle marketing chain. Thirty cattle group leaders was selected through the following procedures. Five out of nine districts were selected on the basis of the larger wet area within the district. Based on the list of groups and secondary data collected from each district, selection was carried out to exclude the groups that were not met the two criteria such as the group must at least two years old and at least raising 20 cattle. All data obtained were analysed descriptively.

## RESULTS AND DISCUSSION

### **Role of cattle in culture**

Cattle have important roles in farms in Bali. Cattle are still used for land preparation and the manure can be a source of fertilizer. Renting cattle to other farmers for land preparation is an important source of income, which farmers receive either as cash or as in-kind benefits. Manure is used as fertilizer, providing input cost savings to farmers on their cropping land. Excess manure is also a source of cash when sold to other farmers. In a society where smallholders still have difficulty accessing financing facilities, cattle can be a liquid asset for farmers to sell when they need cash for particular religious requirements, such as cremation ceremonies or for school payment. To the Balinese farmers, owning more cattle also reflects a higher social status. Cattle rearing can also enhance community cohesion. Raising cattle encourages farmers to work together in a group (a collective shed), to prevent their cattle from being stolen, and to address issues of environmental pollution.

The government provides noteworthy assistance to smallholders through cattle development and distribution programs. These are used both to improve cattle production and productivity, and to improve community and smallholder welfare. An opportunity to develop an efficient industry producing a competitive local product for the domestic market may also arise from cattle development program. These multiple objectives of producers and government lead to an industry where producers range from those who are keen to develop their cattle program into profit maximising enterprises to those who are content to buy and sell cattle when required to meet personal and social needs.

While cattle tend to be owned or managed by individual farmers, cattle are only distributed if recipients are members of farmer groups. In communities such as in Bali where other forms of capital (for examples human and financial) may be limited, the importance of social capital and the ability to utilise it may well be an important key in assisting the development of smallholder communities.

### **Cattle marketing chain in Bali**

Previous study by Ambarawati (2003) noted that the beef industry on the island of Bali involves multiple markets and marketing stages. In this study, further marketing chain is presented in Figure 1 based on desktop study, key informant interviews and focus group discussion.



The cattle marketing chain in Bali is driven by a complex mix of economic, social and environmental factors. The key stakeholders in the cattle marketing chain include farmers or smallholders, collectors, butchers, brokers, retailers, local or domestic traders, inter-island traders, hotel and restaurant institutions, meat packers, exporters, and final consumers. The role of each stakeholders in the marketing chain reveals in Table 1.

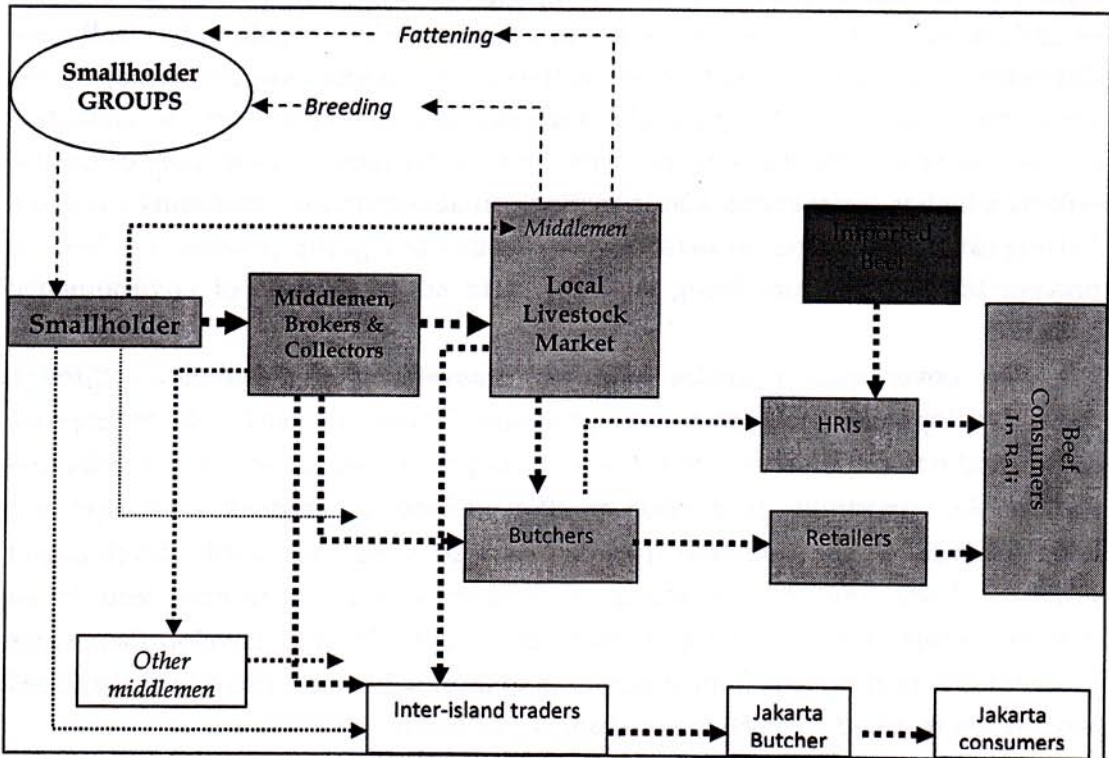


Figure 1. Cattle marketing chain in Bali

The meaning of marketing chain for most smallholders is a simple means of selling stock, requiring little marketing chain knowledge of quality and price. It also allows farmers to sell cattle on-farm and receive quick payment. The process of transporting and selling is labour intensive and actively discourages smallholder involvement. For some smallholders, however, this disengagement is limiting their ability to produce a timely quality product. Some smallholders would prefer to have more input or linkage into the marketing of their cattle. However, some

smallholders found it difficult to get a good price when selling their cattle by themselves at the local market.

**Table 1. Roles of Each Stakeholders in the Cattle Marketing Chain in Bali**

<b>Stakeholders</b>	<b>Roles in the marketing chain</b>
Smallholders	<ul style="list-style-type: none"> <li>• Rearing cattle for fattening and/or breeding</li> <li>• Selling cattle at the cattle market or in the village</li> <li>• Buying cattle from local markets, other smallholders, or collectors</li> </ul>
Brokers	<ul style="list-style-type: none"> <li>• Play a facilitating, intermediary role in cattle transactions</li> <li>• Find the cattle sellers</li> <li>• Make an agreement with sellers</li> <li>• Find buyers</li> <li>• Negotiate price</li> <li>• Hold the "rope" of cattle to be sold</li> </ul>
Collectors	<ul style="list-style-type: none"> <li>• Purchase cattle from smallholders or other collectors at the local market</li> <li>• Sell cattle to local butchers, local consumers, or to exporters</li> <li>• Look after cattle until they can be sold</li> </ul>
Butchers	<ul style="list-style-type: none"> <li>• Buy cattle from smallholders or collectors at the local markets</li> <li>• Produce beef from cattle</li> <li>• Sell beef to local consumers, meat packers, or local meat retailers</li> </ul>
Meat retailers	<ul style="list-style-type: none"> <li>• Buy meat from butchers or slaughter houses</li> <li>• Sell beef to local consumers at the local (wet) market</li> </ul>
Traders	<ul style="list-style-type: none"> <li>• Buy cattle from collectors and smallholders at local markets.</li> <li>• Transport cattle to other islands or provinces such as Jakarta,</li> <li>• Sell beef cattle in Java or Jakarta</li> </ul>
Government (Department of Animal Husbandry Office)	<ul style="list-style-type: none"> <li>• Provide production inputs such as: funds for collective pen construction; breeding and beef cattle; cooled sperm for Artificial Insemination; credit; etc.</li> <li>• Provide policy support</li> <li>• Technical assistance, e.g. training for smallholders in artificial insemination, and others areas</li> <li>• Promote and administer cattle development programs and activities</li> <li>• Issue licenses to exporters</li> </ul>
Final consumers	<ul style="list-style-type: none"> <li>• Buy beef and other cattle products from retailers.</li> </ul>

Qualitative findings from the cattle marketing chain are discussed below.

1. Decisions to sell cattle from smallholders are mainly based on a need for a cash rather than maximum returns. Other factors may influence timing for sale and purchasing include availability of feed and cash and social responsibilities.



2. Smallholders prefer to buy at the market but to sell on-farm. They prefer to sell on-farm for the following reasons: better price; less chance of being cheated; less chance of injury to cattle; and lower transport costs. Buying cattle at the market by smallholders gives them a greater choice.
3. Brokers and collectors' involvement is important for smallholders in the cattle marketing. These participants play a significant role in buying and selling decisions, the provision of price information, and transport and linkage with buyers and sellers. Basically they provide the easiest method of sale and, for smallholders who are not necessarily seeking to maximise returns, they provide a convenient option. Price formation is set through negotiation between farmers and collectors at the farm gate. Smallholders noticed that collectors have the power in this relationship.
4. Market is most preferred place for collectors to buy cattle for the following reasons: more competition, difficulty of negotiating price on-farm as smallholders do not know the market price, and it is easier to meet requirements of traders and butchers given the greater selection of cattle available at the market.
5. Traders find it easier to buy cattle at the market and it is easier to load a truck holding approximately 14 head. However, they would prefer to purchase on farm if numbers could be guaranteed.
6. Collectors, meat packers and butchers are satisfied with current arrangements and think no need to change in the near future.
7. Smallholders, collectors, traders and government support agencies find benefits in working with farmer groups. All stakeholders believed the role of farmer groups would become more important in the future. At present, however, farmer groups do not play a major role in cattle marketing. Cattle marketing tends to be done by individuals.
8. District (*kabupaten*) governments provide assistance to cattle owners only through existing groups. This assistance is provided in the form of loans or cattle. Monitoring, repayments, and so on, are controlled by the group through local customary rules (*awig awig*) and peer group pressure.
9. The involvement of private companies (e.g. PT Sarana Bali Ventura) in business arrangements with cattle fattening groups was thought to increase commercial linkages in the future.



10. The current marketing system is adequate for satisfying domestic demand for beef in places like Bali, but is not able to compete with imported product due to the system's lack of quality control.

### Farmer groups social capital

Table 2 provides major reasons for group establishment. Of the 10 groups that had 'other' major reasons for being established, their second most important reasons were access to cattle from government or NGO schemes. A non-cattle motivation for group establishment may lead to less emphasis on marketing efficiency.

Table 2. Major reasons for group establishment

Reasons	Number of groups	Percentage
Improved security of cattle	1	3.33
Reduce workload and/ or cost of raising cattle	0	0.00
Improved access to extension services	6	20.00
Improved access to subsidised credit	3	3.33
Access to cattle from government or NGO Schemes	7	23.33
Facilitate collective on-farm selling of cattle	2	6.67
Facilitate collective marketing in other ways	1	2.67
Others	10	33.33

All groups surveyed had a formal group structure. Apart from the group head, every group had a secretary and a treasurer. Selection for office bearers and committee members was using nomination by members, followed by a ballot. Farmer groups in Bali were also more likely to have formal and informal rules to determine who would be elected to positions of responsibility. About 83% of groups interviewed had formal rules concerning how the group will be managed. The most important criterion for selection is 'competency', which includes education (ability to read and write), experience and leadership ability.

Group strength and the peer group pressure within Bali groups and Balinese culture in general, may make non-contribution unlikely. The groups often expect some in-kind support, meanwhile no groups will get sanction if members do not contribute. A sense of group 'connectedness' or trust is important in the group, as well as the understanding whether or not this trust can be turned into action; i.e.,

whether or not there is a high level of 'agency' within the group. This group agency variable was determined from an understanding of how groups would respond to issues or difficulties facing the group

### **Group leader social capital**

The individual social characteristics of the leader may also play an important role in market linkages for smallholders. One of these characteristics is the linkages and networks that the group leader had developed. This includes understanding the sources of leader information, reflecting to which leaders are in touch with news and information outside the group. Results of leaders surveyed indicated that group leaders tended to have more contact with influential industry and government contacts within and outside of their community. They were more likely to have met government technology and extension officers.

Another important social characteristics of the leader in linking market for smallholders is the level of leadership that the group leader has attained. About 36% of the 30 leaders surveyed were also leaders of a larger agricultural group. Another proportion of 33% had local government leadership roles at village through to provincial level.

Leaders were also a source of advice for smallholders. Fifty per cent leaders provided advice and information to group members six or more times per month. This may well indicate the level of respect that leaders have in their communities, a respect which influences the level of impact they can have on community and group decision making. Group leaders in Bali were committed to attending community meetings.

Group leaders were asked to assess the type and level of cattle marketing support that the group provides for group members. They were asked to specify whether or not the group played an important role, a role, or no role in providing the following types of support:

1. access to market price information,
2. increased bargaining strength with cattle buyers/collectors,
3. look for and identify buyers,
4. increased bargaining strength with middlemen (e.g. truck drivers and brokers)
5. access to information about quality and quantity demanded by the market, and
6. organised transport to market.



The most prevalent role that the group plays in Bali is in the provision of price information. Respondents also believed that group was able to improve the bargaining strength for individual producers.

### **Group marketing support and social capital**

Results from the survey indicated that a group that provides significant marketing support to its members consists of members who have cattle as their main source of income and has cattle as the main activity or focus of the group. It will also be a group that is able to access funding from a number of government programs and has a formal structure. Accordingly, if the government plans to improve welfare and cattle productivity through the distribution of cattle through smallholder groups it is important to understand the characteristics of smallholders and groups in encouraging the group to provide assistance in linking with the market.

It can be seen that the group social capital plays an important role in market orientated groups. Groups with high levels of trust and an ability to put this trust into action (group agency) are more likely to be groups that provide marketing support. These groups tend to be led by leaders who have high levels of education and more land. Leaders also will tend to have low levels of professional contact with external agencies and regard this group as their highest level of leadership responsibility. They will also have a confidence and self-belief in their ability to lead. The group and leader social capital has a significant effect on a group's willingness to provide assistance in marketing of cattle.

If policy makers wish to improve a group's emphasis on providing market support for its members the most important factors to develop would be 'group trust', 'group agency' and 'leadership style'. It is these social capital variables where the greatest gross payoff will accrue. This analysis supports the belief that social capital plays a significant role in a group's ability to assist smallholders to link with the market.

Social relations as described above are identical with the concept of social capital, which Putnam (1993) defined significantly as features of social organisations, like trust, norms and interpersonal networks, that improve their efficiency by facilitating coordinated actions.

Selling cattle on-farm is the most common and easiest selling method for smallholders in Bali. However, it is not preferred by all groups. While the majority

of group leaders believe that smallholders have a stated preference for selling on farm, there are groups where the members are more likely to sell at the market. These groups have a high percentage of members who have cattle as their main source of income and larger herds. They tend to be located closer to the market and have cattle as the major activity of the group. Similarly to the groups that provide marketing support was the ability of these groups to turn group trust into action. These groups also tended to have leaders who were predominantly farmers, that is, they relied on farming/livestock as their major source of income.

The importance of this result is that the smallholders with larger herds who are relying on their cattle for a high proportion of their household income are choosing to market their own cattle and source their own price data. They are less reliant on the group for marketing support and less reliant on the social capital inherent in the group. They may rely more on their own networks and market linkages. These farmers tend to be able to organise (with or without the group's assistance) and minimise transport costs. When farmers make selling decisions based on non-profit maximising criteria (e.g. ease of selling, need for cash) they are more likely to sell on farm.

## CONCLUSION

This study has provided significant information concerning cattle marketing chains in Bali. The important aspect for this study is to identify the factors that affect a smallholder's ability and ability to link with the marketing chain. That is to develop an understanding of who the smallholders deal with (in conjunction with buying and selling cattle and market information).

The presence of social capital and the ability of the group to utilise or mobilise it may in turn be influenced by many factors such as the quality of the leadership and the importance of cattle to the individuals.

## RECOMMENDATION

If smallholders are intended to be part of the marketing chain it is important, in the light of previous research and present government policy, to evaluate the potential for smallholder groups to assist in this process. The motivations of smallholders will play an important role in their desire and ability to link into the marketing chain. While there may be many farmers who are quite satisfied with the present marketing arrangements there will be others who do wish to maximise productivity and provide quality products for growing inter-island or tourist



markets. It is important for the government to determine how they can better deliver support and encouragement to these entrepreneurial smallholders.

If policy makers plan to improve farmer groups to put emphasis on providing market support for its members, the key factors to develop would include 'group trust', 'group agency' and 'leadership style'. It is these social capital variables where the greatest gross compensation payment will grow. This analysis supports the argument that social capital plays a significant role in a group's ability to assist smallholders to link with the market.

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### ACKNOWLEDGEMENT

The author wishes to thank Dr Graham Marshall and Dr Ian Patrick of Institute for Rural Future, University of New England, Australia, as well as Dr Muktasam of University of Mataram for sharpening discussion of the study and writing. Also very grateful to ACIAR (ADP/2004/028) for funding this research.