BALI CATTLE MARKETING CHANNELS AND MARGINS IN THE COVID-19 ERA

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ABSTRACT

Carried out research on Channels and Raising of Bali Cows in the Covid-19 Era to know Bali cattle's marketing channels and margins in the Covid-19 Era. The study was carried out in 2021 for two months at the Karya Laksana and Karang Ayu Bali cattle groups located in the Abiansemal Swing Village of Badung Bali. The research method used is a survey method using primary data and secondary data. Preliminary data obtained by direct observation and measurement of the sample. Sampling was carried out by purposive sampling; namely, determined the selection based on the group invited to cooperate, the Bali Karang Ayu and Karang Laksana cattle groups. The results of the study found four marketing channels, and the most carried out in the Covid-19 Era was Channel III, namely breeders selling their livestock through intermediary traders, namely Belantik as much as 67.5%, breeders did this to reduce the risk of Covid-19 due to crowding in the animal market, avoiding livestock. To not be stressed and increase the breeders' bargaining value in the sense that if the price has not found an agreement, the breeders will not sell their livestock. Livestock marketing through the channel I was 12.5%, Channel II was 15%, and channel IV was 5%. The lowest marketing margin occurs in channel I, where the farmer sells his livestock directly to the final consumer in the cattle pen without intermediaries. The shorter the marketing channel through which the marketing margin is getting smaller so that the price at the end consumer level is also low. Conclusion in the Covid-19 Era. The safest marketing channel which breeders widely apply is channel III, namely, the breeders selling their livestock to Belantik in the cattle sheds as much as 67.5%. Bali cattle's lowest marketing margin in the Covid-19 Era was channel I because breeders sold their livestock directly to end consumers without intermediaries. The longer the marketing channel, the higher the marketing margin, which resulted in higher prices at the end consumer level.

Keywords: Channels, Margins, Marketers, Covid-19 Era.

INTRODUCTION

Covid-19 has changed the order of human life, which is unusual into a habit that must follow for the sake of life. Badung Regency is one of the districts with a large enough Balinese cattle population, with development areas in Sobangan and Ayunan, Mengwi Badung. Bali cattle is one of the national Germplasm that needs to preserve. Bali cattle have the advantages of high fertility, more resilience to unfavourable environmental conditions, quick adaptation when faced with a new environment, fast breeding, and low carcass fat content [1]. Bali cattle have a more efficient production performance; with a high pregnancy rate and birth rate (80 per cent), body

weight gain with good feed can reach 0, 7 kg/day (adult males) and 0.6 kg/day (adult females). The percentage of carcass ranges from 51.5–59.8 per cent, with a bone percentage of less than 15 per cent carcass weight, and the meat is low in fat. 2]. Efforts to increase livestock productivity should be carried out from the beginning so that development and growth in the early stages will determine the achievement of development and growth in the future [3].

The village of swing, Abiansemal sub-district, Badung Regency, is surrounded by fertile rice fields and plantations. Abiansemal Village's population is ± 2600 people in 2018 [4] and has an area of 500 hectares, most of which is productive agriculture. Geographically, Ayunan Village in Badung Regency has some untapped potential. Karang Ayu. Farmers raise cows only as part-time to fill their spare time and as savings for needs that require a large amount of money, such as traditional ceremonies, sending children to school and improving houses. Farmers in their management still use the conventional system. The conventional cattle raising procedures that they apply, the conventional cattle raising guidelines must change to a more professional one [6]. Bali cattle are of no less competitive quality than imported cows. Until now, they are still the only source of Germplasm which is a national asset. Bali cattle have the advantage of surviving in an inadequate environment, for example, without being penned (heat and rain resistance). In places where their feed quality is low, there is a decrease in production and reproduction [7]. Lack of knowledge, application of technology at the farmer level, and low productivity of Bali cattle and dependence on imported meat are weaknesses that hinder Bali cattle's development into beef cattle in the Bali area. Bali cattle can increase by increasing the raising of livestock for breeding both scale farmers and in the form of private and government breeding companies [8].

Cannot separate the success of a cattle breeding business from marketing. Therefore, the initial steps of various problems faced in cattle marketing in Bali include inappropriate marketing policies. Market structures tend to lead to monopsony markets, long market chains, playing weighing games, smuggling, buying and selling of cattle expenditure quotas, in addition to the low entrepreneurial spirit of breeders [9]. This condition must be improved so that it can improve the welfare of breeders. One of the alternatives that breeders do is to sell through marketing agencies. The problem faced is that a marketing agency's existence will cause product prices to change after it reaches consumers. Marketing agency tries to carry out marketing functions that add utility of an item to increase marketing costs [10]. High marketing costs are usually borne by producers or consumers by rising consumer prices or reducing producer prices [11]. A more efficient marketing margin must be considered so that cattle breeders get a higher additional income. The increase in revenue will encourage them to raise more cattle [12]. It will indirectly increase the cattle population in Bali. Therefore, research on marketing channels and margins in the Covid-19 pandemic era is vital.

METHOD

Time and Place of Research

The research was conducted in 2021 for two months at the Karya Laksana Bali cattle group and Karang Ayu cattle, located in the Abiansemal Ayunan Village of Badung Bali.

Research Methods

The research method used is a survey method using primary and secondary data—preliminary data obtained by direct observation and sample measurement. Sampling was carried out by purposive sampling. Namely, determined the sample based on group members involved in two Bali cattle groups who invite to cooperate. Secondary data related to the research obtained from the Department of Animal Husbandry and Animal Health, Bali Province.

Qualitative data includes 1) respondent characteristics, among others: age of farmer, number of family members, number of broodstock raised. 2) the motivation of the farmer to sell his cow. 3) costs and income of farmers from selling their livestock and 4) marketing data: selling age, selling prices of male and female Bali cattle, and the problems faced by Bali cattle breeders in Bali, in terms of marketing their cows, marketing agencies involved in the channel/chain marketing.

The margin for each marketing agency is calculated using the formula [13]:
M = He - Hp
Where
M = Marketing Margin (Trading)
Hp = Price paid to the first sale (Rp / tail)
He = Price paid to the last purchase (Rp / tail)

Margin per Marketing Channel [13]
Mt = M1 + M2 …… + Mn
Where
Mt = Marketing Funnel Margins
M1 = Marketing Margin of 1st Marketing Agency
M2 = Marketing Margin of 2nd Marketing Institution
Mn = the nth Marketing Agency Curious Margin

Data Collection Techniques

Collected the data obtained in this study in four ways: 1) direct interviews using a structured questionnaire prepared. 2) in-depth interview using an available list of questions as an interview guide. 3) Observation observing the activities and results of Bali cattle marketing activities that breeders and marketing agencies have carried out. 4) Search literature or documentation related to research. All data collected were then analyzed descriptively quantitatively, with some comparisons using previous studies from the literature.

RESULTS AND DISCUSSION

Overview of Research Sites

Badung Regency is one of 9 regencies/municipalities in Bali Province and is located in the middle of Bali Island, stretching from north to south end. Geographically, Badung Regency is located between 8014'20 "-8050'48" South Latitude and 115005'00 "-115026'16" East Longitude. Administratively, Badung Regency consists of six sub-districts, namely Petang, Abiansemal,

Mengwi, Kuta, North Kuta and South Kuta districts, 62 villages sub-districts. Badung Regency has 418.52 Km2, with the land's designation as rice fields covering an area of 29,970 hectares, dry land covering an area of 8,191. Ha, plantation area of 6,420 ha, community forest of 2,122 ha, idle land of 231 ha, two areas of land designated for ponds/ponds.

The Badung Regency area's condition varies greatly, so it is divided into three parts: the northern part of Badung, the central region, and the southern part. The northern part of Badung Regency, namely Petang and Abiansemal Districts, is a mountainous area with cool air. The Abiansemal sub-district has an altitude of 75-350 m above sea level. Meanwhile, Petang District, which is at the northern tip, is at an altitude of 275-2075 m above sea level. The dominance of community activities in the north of Badung is plantation activities and agro-tourism [16]. Buleleng Regency borders the northern part of Badung. The central part of Badung Regency, namely Mengwi District, has an altitude between 0-350 m above sea level. Mengwi sub-district is a rice field area dominated by agricultural activities and cultural tourism. The central part of Badung is bordered by Gianyar Regency and Denpasar City in the east, while in the west, it is bordered by Tabanan Regency. The southern part of Badung Regency, namely Kuta, North Kuta and South Kuta Districts. The south part of Badung is a lowland with an altitude ranging from 6.6-65 m above sea level, with white sandy beaches. Community activities in southern Badung dominated by tourism, trade and education activities. The south part of Badung is directly adjacent to the Indonesian Ocean [17]. The research location is in the village of swing, Abiansemal sub-district, Badung district, a plantation and agro-tourism area, and most of the population raises Balinese cattle. Almost every household grows a cow behind the house as an investment and part-time to finish the main job.

Characteristics Respondent

Age of Respondent

Working productive age based on the Manpower Law No. 13 of 2003 Chapter I article 1 paragraph 2 is any person who can do work to produce goods and or services either to fulfil their own needs or for the community in the age range of 15 - 64 years, [18]. Based on these regulations, Can see that several 60% of respondent breeders in the two livestock groups are in the productive age range, namely: 7.5% are in the age range of 21 - 35 years, 20% are in the age range 36 - 50 and 32.5% are in the age range 51 - 64 years (Table 1).

TABLE 1
DISTRIBUTION OF RESPONDENTS BY AGE

Serial number		Livestock Group		Livestock Group		Total	
	Age	Laksana's work		Karang Ayu			
	(Year)	amount	Per cent	amount	Per cent	amount	Per cent
		(Person)	(%)	(Person)	(%)	(Person)	(%)
1	≤ 20	0	0	0	0	0	0
2	21 - 35	0	0	3	15	3	7.5
3	36 - 50	2	10	6	30	8	20
4	51 -	10	50	5	25	13	32.5

	64						
5	≥ 65	8	40	6	30	16	40
Total		20	100	20	100	40	100

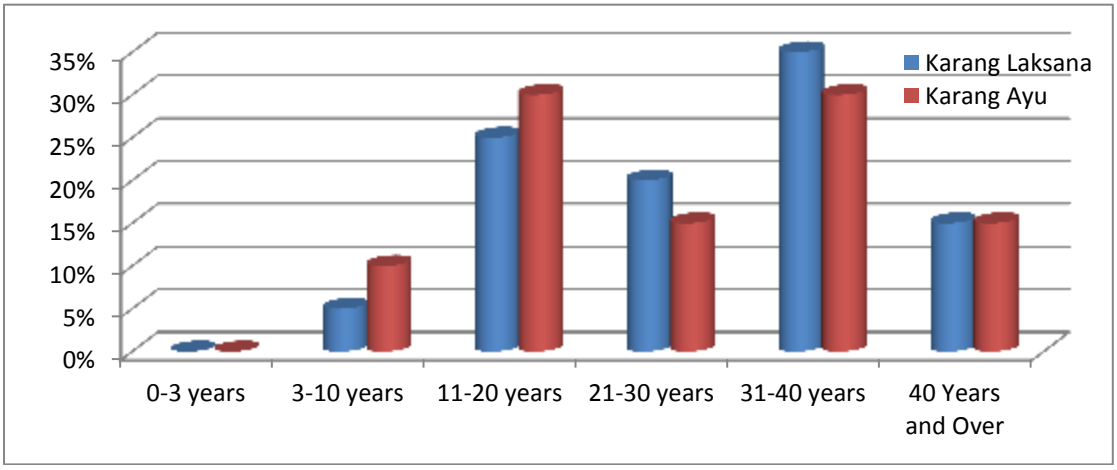

FIGURE 1
DISTRIBUTION OF RESPONDENTS BY AGE

Only 16 people, or 40% of the respondent breeders in this study, were outside The productive age limit. Namely, the respondents were above 64 years of age, namely 66 years. Breeders at this old age have no other entertainment than to continue raising livestock which has been a hereditary tradition. Older breeders are usually passionate about the practice, and it is challenging to provide insights that can change the way they think, work and live. Older breeders are generally apathetic towards innovation, while young and productive breeders have typically high morale, high curiosity and high interest in adopting innovations [19]. Young breeders have a high level of education typically, so they tend to adopt innovations and technologies more quickly [20]. The high percentage of respondent breeders in the productive age will provide an excellent opportunity to increase their livestock business productivity further.

Livestock Knowledge

The knowledge of raising cattle is the length of time the farmer spends in the cattle breeding business. Learning can be a joint for the development of science. In running a business, breeders will find many new things. If these new things are observed and learned as part of knowledge, the length of time spent in raising livestock will provide the farmer with knowledge and skills.

TABLE 2
EXPERIENCE RAISING COWS

No.	Time	Livestock Group		Livestock Group		Total	
		Laksana's work		Karang Ayu			
	(Year)	amount	Per cent	amount	Per cent	amount	Per cent
		(Person)	(%)	(Person)	(%)	(Person)	(%)
1	<3	0	0	0	0	0	0
2	03-Oct	1	5	2	10	3	15
3	Nov-20	5	25	6	30	11	27.5
4	21 - 30	4	20	3	15	7	17.5
5	31 - 40	7	35	6	30	13	32.5
6	> 40	3	15	3	15	6	15
Total		20	100	20	100	40	100

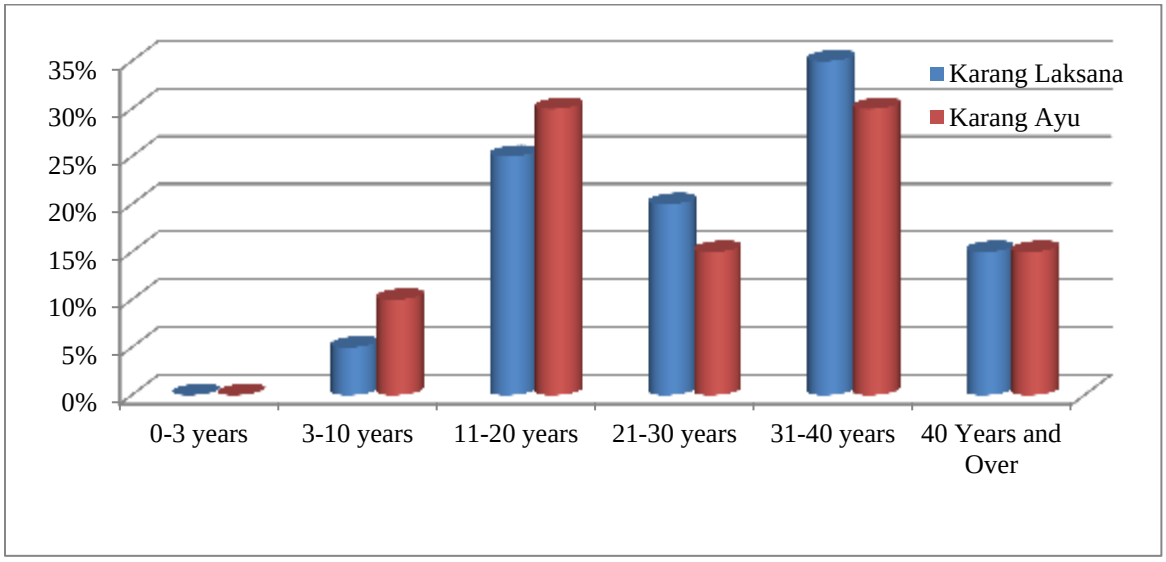

FIGURE 2
EXPERIENCE RAISING COWS

Long enough farming experience indicates that the respondent breeder has adequate knowledge and skills in cattle raising. The more experienced a person is, it will help improve his skills [21]. More ample business experience can affect breeders' attitude, mindset, and behaviour in running their business [22]. Experience is a foundation for knowing when a person works. He will encounter new things. If he understands the new things as knowledge so that they become his, it means he has gained unique work experience.

Marketing Functions

Marketing is the spearhead of a business's success and is one of the links in the livestock agribusiness system, which has a vital role in developing a commercial enterprise. Based on the

results, the respondent breeders' marketing of cattle was not well managed. The majority of breeders are still focused on the production sector (on the farm) and have not thought about the opportunities to enter the market directly. Most of Bali's marketing in the Covid-19 era, Cows is carried out in their respective locations. The farmer is afraid that he will injure during transport, and his cows are stressed.

Marketing agencies' marketing function involves marketing a commodity and forming a marketing channel, often referred to as a marketing system [24]. The marketing function is very important to overcome the obstacles faced by producers in satisfying consumers. These obstacles are related to time constraints, a distance of place, differences in valuation and property rights of a product. Marketing agencies carry out marketing functions to expedite the process of delivering goods or services. Marketing agencies' marketing functions are classified into exchange function, physical function, and facility function. We can see marketing functions in Bali cattle marketing in Table 3.

TABLE 3
MARKETING FUNCTION OF EACH MARKETING AGENCY

Marketing Agency	Marketing Function	Activity
1. Breeder	Exchange function	Sales
	Physical function	-
	Facility function	-
2. Belantik	Exchange function	Buying and selling
	Physical function	Transport and storage
	Facility function	Risk bearing and financing

The farmer carries out the same activities in all Bali Cows marketing channels because all breeders carry out the same transaction. Performs an exchange function, namely sales activities, to all marketing agencies. Respondent breeders sell their livestock to other breeders or the Netherlands or directly to the animal market with a cash payment pattern. The marketing function carried out by the Dutch is related to other buyers/breeders. Marketing functions performed by the Dutch are exchange, physical and facility functions. Exchange function in the form of buying and selling functions. The purchase function is carried out by buying Bali cows from breeders with cash payments. *Belantik* bears its own risk for the cost of transportation or transportation. The Dutch's physical function is to transport cattle from the place of purchase using a pick-up car to the animal market. The facility functions carried out by the *Belantik* are in

the form of risk-bearing and financing. The risk-bearing function is in the form of animals being injured or killed during transportation. During this study, no cows died during transport.

The formation of the price of cattle begins with an interpretation, not weighing it. At the beginning of the trade/cattle breeder opens the price for the cattle to be sold, a bargaining process will occur between the farmer and the buyer. Breeders will determine a high price if the cattle being sold are of good quality in terms of gender, age, agility and body size.

Marketing Channels for Bali Cows in the Covid-19 Era

Marketing channels are marketing activities that facilitate and facilitate the delivery of goods and services from producers to consumers. Most of the Balinese cattle marketing control by the Dutch. The various limitations that breeders have, including lack of capital, low level of farmer knowledge in the marketing process, lack of entrepreneurial spirit from breeders. Based on direct observation, Bali cattle have several marketing channels that involve several marketing agencies, namely breeders and *Belantik*, Figure 3.

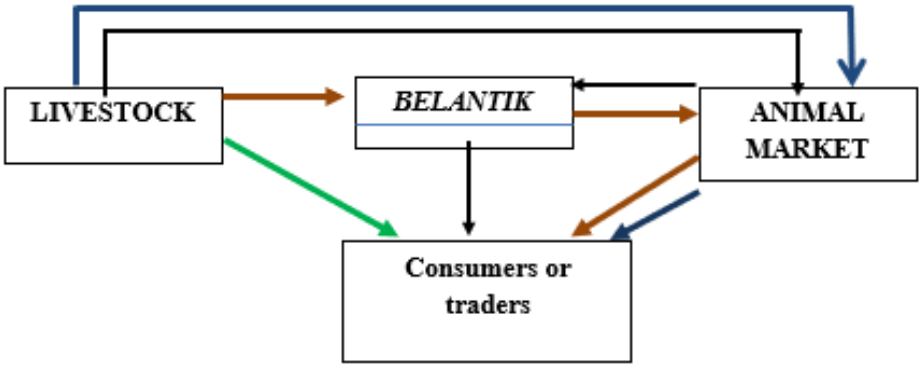

FIGURE 3
BALI CATTLE MARKETING FLOW IN TWO GROUPS EXAMINED

From the picture above, there are four marketing channels for cows in the covid-19 era, namely:

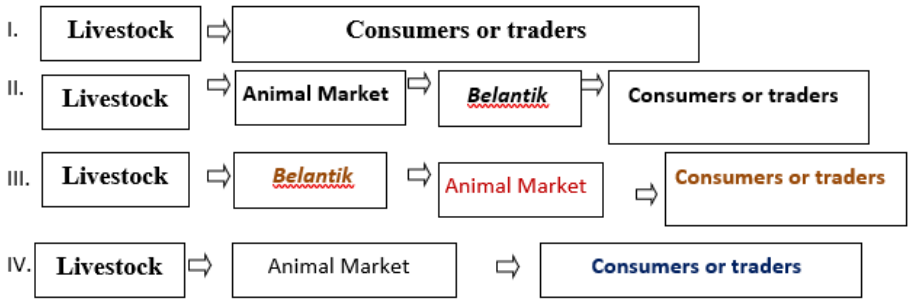

FIGURE 4
CATTLE MARKETING CHANNELS IN THE COVID-19 ERA

In Figure 4, We can see that the marketing channels for Bali cattle in the Covid-19 era were through four tracks, namely direct sales to other consumers/breeders, direct sales to the nearest animal market as soon as the animal market was taken by *Belantik* for further sale by *Belantik* to consumers. Sales to intermediaries/ *Belantik* traders and direct sales to the animal market in the animal market by *Belantik* direct to consumers. Marketing uses a marketing channel that shows how the flow of commodities flows from producers to end consumers. The marketing agencies involved in distributing Balinese cattle in the Covid -19 era are breeders and *Belantik*. These marketing channels vary, and the selection of these marketing channels based on several things, including selling price, purchase price, transportation costs, source of purchase and purpose of investment.

Marketing Channel I, Farmers sell their livestock directly to consumers in cattle sheds and do not use intermediaries as much as 12.5%. This marketing channel is a direct marketing channel where the cattle marketing channel is not involved with intermediary traders. This channel is generally carried out in cattle production areas, where consumers/buyers directly come to the pen's breeders. These consumers are usually residents around the research location who buy cows to hold traditional ceremonies (*mecaru*) or raised them according to maintenance purposes. The average selling price received by breeders is Rp. 5,250 / head for a female calf and Rp. 7,500,000/head for a male calf, with a cash payment system. The selling price of a cow influenced by gender and age, performance (appearance) of the cow, the fatter, more agile, and the fresher the price will be higher because the purchase of cattle is based on chop, not on a scale.

The principle of direct marketing channels, namely marketing aimed at end consumers without intermediary traders, is much cheaper because there is no cost charged to consumers for intermediary traders [25]. Channel I is the safest in the Covid-19 Era because it does not require contact with people, meeting only with breeders and buyers in cattle sheds. Besides, livestock is safe from experiencing stress because it is still in a cage. Even breeders have a high bargaining value. If the price does not match, breeders can still maintain their livestock, no need to lose transportation costs and fees to the animal market-fresh. The price will be higher because cattle purchase is based on branch, not on a scale. The principle of direct marketing channels, namely marketing aimed at end consumers without intermediary traders, is much cheaper because there is no cost charged to consumers for intermediary traders [25]. Channel I is the safest in the Covid-19 Era because it does not require contact with people, meeting only with breeders and buyers in cattle sheds. Besides, livestock is safe from experiencing stress because it is still in a cage. Even breeders have a high bargaining value. If they don't match the price, farmers can still maintain their livestock, no need to lose transportation costs and fees to the animal market. Fresh the price will be higher because cattle purchase is based on branch, not on a scale.

Marketing channel II is the marketing channel for breeders to sell to the animal market as much as 15%. Upon arrival at the animal market, the Dutch buy them. Almost all *Belantik* in the animal market bid for cattle at the same low-price variation so that breeders will release their cows to those that offer higher prices. Marketing channel II from breeders to final consumers through several intermediary traders, namely, breeders, animal markets, *Belantik* and last consumers. The final consumer, cattle marketing through two intermediary traders, namely breeders and *Belantik* and the animal market, has a long route. Indirect channels are marketing channels through marketing institutions such as breeders, animal markets, *Belantik* and end consumers [26]. The *Belantik* buys almost all cows that enter the Beringkit animal market, and then the *Belantik* sells to consumers at a much higher price. *Belantik* is very clever in playing

with the cost of cows. The breeders' cleverness very much influences the price of cattle in bargaining. The more intelligent the breeders are in the bidding, the lower the price. Besides, the price of a cow is very dependent on the sex and age of the cattle.

The marketing channel III, cattle are sold to the Dutch in the breeders' pen as much as 67.5%, then the *Belantik* is brought to the animal market to be sold to breeders who need it. The sales process on channel III is that the farmer calls his subscribed *Belantik* so that the dutch comes to the cage to bargain until a price agreement reach. The marketing agencies involved in marketing channel III are breeders, *Belantik* and end consumers. The marketing channel for cattle is through indirect marketing channels. Cows are marketed to the final consumer through several institutions, namely from breeders bought by Dutch who come to the pen. After a price agreement is reached, the buyer pays 50% of the agreed price. After that, it is deposited in several breeders' cells. *Belantik* looks at the cows in the village because the town of Ayunan located close to the animal market. The *Belantik* takes the cows in the afternoon before the market, where the market at the animal market folds every Wednesday, Saturday and Sunday. The remaining payment is paid by *Belantik* when the cow collects with cash payment. Then the *Belantik* is brought to the market for the animal to be sold to the final consumer / inter-island merchant. The average selling price received by breeders on channel III is IDR 5,750,000 / head for female breeds and IDR 8,000,000 for male species.

The high percentage of sales of breeding cows through *Belantik* is because the Dutch have been subscribed to by breeders for a long time, and the distance between the breeder house and the Dutch house is quite close. Its credibility is known, and breeders feel that they are compatible with the price offered compared to bringing directly to the animal market full of risks, including rent. *Belantik* is a professional in marketing cattle. This study supported the results by [27], who stated that only a small proportion (6.45%) of the respondent breeders marketed their cows directly to the animal market. Most of the respondents prefer to sell their cows at the location of the farmer's pen. The reasons for farmers are reluctant to sell their cows directly to the animal market include market games (market mafia) such as weighing games, the risk of bringing them back home, transportation costs, and insufficient market information. Besides, breeders' reluctance to sell directly to the animal market is influenced by the lack of entrepreneurial spirit or trade spirit among most breeders, both cattle breeders. Marketing channel IV, the farmer brings his cow directly to the animal market and is assisted by marketing agencies in the animal market until the cow is sold, and the person who helps this gets a fee of IDR 100,000 per cow sold.

TABLE 5
PERCENTAGE OF CATTLE MARKETING CHANNELS IN THE COVID-19 ERA

Channel Marketing	Livestock Group Karya Laksana		Livestock Group Karang Ayu		Total	
	Quantity (person)	Per cent (%)	Quantity (person)	Per cent (%)	Quantity (person)	Per cent (%)
I	2	10	3	15	5	12.5
II	3	15	3	15	6	15
III	13	65	14	70	27	67,5
IV	2	10	0	0	2	5
TOTAL	20	100	20	100	40	100

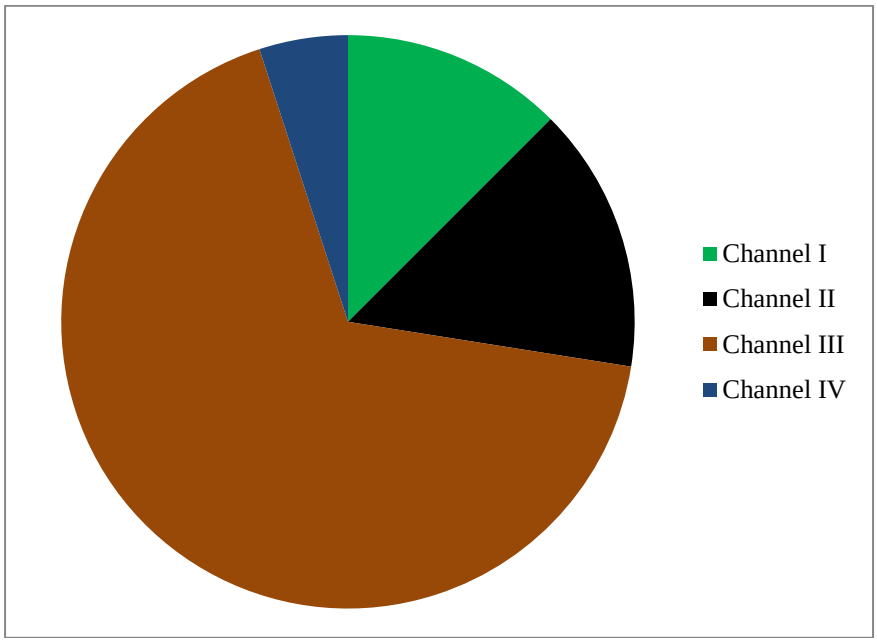

FIGURE 5
PERCENTAGE OF CATTLE MARKETING CHANNELS IN THE COVID-19 ERA

Respondents mainly sell cattle through *Belantik*. Of the 40 respondents, 67.5% chose to sell cows through *Belantik*. In the pandemic situation, breeders reduced meetings. Even if they met, they were obliged to wear masks and maintain distance in communication and reduce travelling to places crowded like an animal market. Most of the respondent breeders have an old age that is vulnerable to being exposed to Covid-19. Respondents sell cattle directly to the final consumer as much as 12.5% and 15% of breeders sell cattle directly to the animal market, with the help of marketing agencies that are common in animal markets, once the cows go down in the animal market, they are taken directly and help with marketing until the cattle sold fee of IDR 100,000.

Marketing Margins

Marketing Margin is the difference between the selling price and the buying price. To know the marketing margin of cattle in each marketing channel, what is essential to know is the selling price and the buying price in each marketing agency. We can see each marketing agency's marketing margin in the cattle marketing channel (Table 6) for male and female cows. The highest margin is in channel II. The increased margin on the sale of cattle in channel II is because of the price of livestock brought to the breeder's animal market at the cost of transporting and a levy per IDR 100,000. In the animal market, it is bought by the Dutch so that the bargaining position of the breeders is low because the farmer fears that their cows will not sell, which will result in having to bring home or rent a place to stay for IDR 50,000 per cow per day without feed. Increase marketing costs so that farmers release their cows at a lower price. *Belantik* buys cows at the animal market so that the *Belantik* does not cover transportation costs and retribution costs. Cows that *Belantik* buys in the animal market directly sold to consumers at the animal market. Consumers generally buy cows now to the animal market so that satisfied consumers can choose cows according to their wishes. Channels II and III have the most

marketing agencies among other marketing channels. The more marketing agencies, the longer the marketing chain, the higher the consumer level. The longer the distance and the more intermediaries involved in the marketing, the higher the marketing costs and the bigger the marketing margins.

TABLE 6
MARKETING MARGIN OF BALI COWS IN THE COVID-19 ERA IN THE AYUNAN VILLAGE

Channel	Marketing	Selling price		Purchase price						
		J	B	J	B	Cost incurred	Margin		Farmer Share (%)	
							J	B	J	B
		In Thousands (Rupiah)								
I	Breeder	7,500	5,250				0	0	100	100
	End Consumers			7,500	5,250		-	-	-	-
II	Breeder	7,500	5,250			100	-100	-100	92	92
	Animal market									
	Belantik	8,000	5,750	7,500	5,250	-	500	500		
	Consumer			8,000	5,750					
III	Breeder	7,500	5,250				-	-	94	94
	Belantik	8,000	5,750	7,500	5,250		400	400	92	92
	Animal market					100				
	Consumer			8,000	5,750					
IV	Breeder	7,500	5,250			200	300	300	90	90
	Animal market									
	Sweaters + consumers			8,000	5,750					

The selling price of livestock influences the marketing margin. Several factors influence the selling price of livestock. One of them is the livestock condition. The market situation in the Covid-19 era is relatively quiet because hotels in Bali are quiet, so beef consumption in Bali is low. The lack of market affects the marketing margin. Even some *Belantik* are ready to lose, releasing their cows at a price below the purchase price, considering that if they do not sell that day, there will be more losses because live cows need sheds and feed.

FIGURE 6
THE ATMOSPHERE OF THE BERINGKIT ANIMAL MARKET IN THE COVID-19 ERA

CONCLUSIONS

Found four marketing channels for Balinese cattle in the Covid-19 era. The safest marketing channel which breeders widely apply is channel III, namely, the breeders selling their livestock to Belantik in the cattle sheds as much as 67.5%. In addition to increasing the farmer's position and avoiding the crowd, channel III is the most suitable in the Covid-19 Era. Belantik is a professional in cattle marketing. Bali cattle's lowest marketing margin in the Covid-19 Era was channel I because breeders sold their livestock directly to end consumers without intermediaries or marketing agencies. The longer the marketing channel, the higher the marketing margins, which resulted in higher prices at the end consumer level.

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REFERENCES

Diwyanto, K. dan L. Praharani. 2010. Reproduction management and breeding strategies to improve productivity and quality of cattle. Abstracts International Seminar Conservation and Improvement of World Indigenous Cattle. 3rdQ4th September. Udayana University, Denpasar Bali Indonesia.

Handiwirawan, E. dan Subandriyo. 2004. Potensi dan keragaman sumber daya genetik sapi bali. Wartazoa 14 (3): 107Q115.

Muladno. 2012. Aplikasi Teknologi Perbibitan untuk Peningkatan Produksi BakalandanKualitasDagingSapiNasional.ProsidingSeminarNasional Peningkatan Produksi dan Kualitas Daging Sapi Bali Nasional. Bali, 14 September 2012.

Monografi dan Data Kependudukan Kecamatan Abiansemal Badung 2018. Pusat Statistik Provinsi Bali. Denpasar.

Ismirandy. A. 2018. Laju Pertumbuhan Dan Ukuran Tubuh Sapi Bali Lepas Sapih Yang Diberi Pakan Konsentrat Pada Kategori Bobot Badan Yang Berbeda. Skripsi. Jurusan Ilmu Peternakan Fakultas Sains Dan Teknologi Universitas Islam Negeri Alauddin, Makassar.

Sampurna, I.P., I.K. Saka , I.G. Oka , And P. Sentana. 2013. Biplot Simulation Of Exponential Function To Determine Body Dimension's Growth Rate Of Bali Calf. Canadian Journal On Computing In Mathematics, Natural Sciences, Engineering And Medicine, Iv(1): 8792.

Suryani, N. N. 2012. Aktivitas Mikroba Rumen dan Produktivitas Sapi Baliyang Diberi Pakan Hijauan dengan Jenis dan Komposisi Berbeda. Disertasi. Program Pascasarjana Universitas Udayana. Denpasar.

Press Release Direktur Jenderal Peternakan dan Kesehatan Hewan. 2012. Supply Demand dagingSapi/Kerbau sampai dengan desember 2012.

Romjali, E. 2018. Pengembangan Inovasi Sapi Potong melalui Pendekatan Laboratorium Lapang. Wartazoa Vol 28 (2): 069 – 080. DOI: http://dx.doi.org/10.14334/wartazoa.v28i2.1797

Supriadi,AliAgus,M.Darwin,Rijanta,danA.Pertiwiningrum.2017.Adopsi Inovasi Peternakan Terintegrasi. Studi Kasus: Desa Argorejo dan Argosari Kecamatan Sedayu, Kecamatan Bantul Propinsi D. I. Yogyakarta. Buletin Peternakan Vol 41(3): 338 –348

Astiti, Ni Made Ayu Gemuh Rasa Astiti. 2019. Penuntun Praktikum Reproduksi Dan Inseminasi Buatan Pada Sapi. Http://Yayasangandhipuri.Penerbit.Org/Index.Php/Books/Article/View/12/10 Jaya Pangus Press Denpasar.

Astiti, N. M. A. G. R., Rukmini, N. K. S., Rejeki, I. G. A. D. S., & Balia, R. L. (2019). The farmer socio-economic profile and marketing channel of Bali-calf at Bali province. SERIES "MANAGEMENT, ECONOMIC ENGINEERING IN AGRICULTURE AND RURAL DEVELOPMENT", 19(1), 47-51.

Koesmara, H., Nurtini, S., & Budisatria, I. G. S. (2015). Faktor-faktor yang mempengaruhi margin pemasaran sapi potong dan daging sapi di Kabupaten Aceh Besar. Buletin Peternakan, 39(1), 57-63.

Astiti, N. M. A. G. R., & Mardewi, N. K. (2006). Motivasi peternak dalam menghasilkan dan memasarkan pedet sapi bali di bali. Tata Kelola Lingkungan Kepariwisataan Menuju Desa Wisata Berbasis Kearifan Lokal, 13-19.

Astiti, N. M. A. G. R., Suparta, I. N., Lanang Oka, I. G., & Antara, I. (2016). Marketing systems of calf Bali. International Research Journal of Engineering, IT & Scientific Research (IRJEIS), 2(11), 73-80.

Suparta, I N. 2009 Tata Niaga Sapi Potong dan Distribusi Bisnis Peternakan Sapi Potong Lokal dan Import. Makalah disampaikan pada acara public trainin "Magemen Pembiayaan Bisnis Ternak Sapi Potong" yang diselenggarakan oleh PT. FABA Indonesia Konsultan, Tgl 18 - 20 Maret 2009

Astiti, N. M. A. G. R. (2019). The Determinant of Beef Prices in Bali. Journal of Advanced Research in Dynamical and Control Systems, 11(6), 1868-1872.

Suryani,N.N.,IWayanSuarna,IGedeMahardika,danNiPutuSarini,2017.Effect of Increasing Energy and Protein Rationon Nutrient Digestibility and Performance of Bali Heifer Calves. Proceeding The 2nd International Conference on Animal Nutrition and Environment (ANIQNUE2017). Thailand.

Suryani,N.N.,IWayan Suarna,IGede Mahardika,dan NiPutu Sarini,2019. Studi Peningkatan Kualitas Daging Sapi Bali. Laporan Penelitian Kerjasama Bappeda litbang Propinsi Bali dengan Lembaga Penelitian dan Pengaabdian kepada Masyarakat UniversitasUdayana

Nangoy, M., Lomboan, A., & Assa, G. (2019). Karakteristik Beternak Sapi Desa Tolok Kecamatan Tompaso Kabupaten Minahasa. Jurnal Lppm Bidang Sains Dan Teknologi, 5(2), 81-85.

Astiti, N. M. A. G. R., & Azizah, S. (2019). Technical feasibility and impact of Balinese cattle marketing toward income of the breeder in Badung regency, Bali. Jurnal Ilmu-Ilmu Peternakan, 29(3), 271-281.

Indrayani, I., & Andri, A. (2018). Faktor-faktor yang Mempengaruhi Pendapatan Usaha Ternak Sapi potong di Kecamatan Sitiung, Kabupaten Dharmasraya. Jurnal Peternakan Indonesia (Indonesian Journal of Animal Science), 20(3), 151-159.

Halim, S. (2017). Pengaruh Karakteristik Peternak Terhadap Motivasi Beternak Sapi Potong Di Kelurahan Bangkala Kecamatan Maiwa. Skripsi. Fakultas Peternakan Universitas Hasanuddin.

Lasaharu, N., & Boekoesoe, Y. (2020). Analisis Pemasaran Sapi Potong. Jambura Journal of Animal Science, 2(2), 62-75.

Wardani, P. I. (2017). Biaya dan Margin Pemasaran Sapi Potong dari Peternak sampai ke Konsumen di Kabupaten Sleman (Doctoral dissertation, Universitas Gadjah Mada).

Alamsyah, A. F. (2015). Analisis Saluran Dan Margin Pemasaran Sapi Potong Di Pasar Hewan Tanjungsari. Students e-Journal, 4(2).

Astiti, N. M. A. G. R. (2018). Sapi Bali dan Pemasarannya. Jayapangus Press Books, i-106.

Koesmara, H., Nurtini, S., & Budisatria, I. G. S. (2015). Faktor-faktor yang mempengaruhi margin pemasaran sapi potong dan daging sapi di Kabupaten Aceh Besar. Buletin Peternakan, 39(1), 57-63.