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Study on Growth and Composition of Cattle Markets in Eastern Dry Zone of Karnataka

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Abstract

An ex-post facto research design was adopted to study the growth and composition of cattle markets in eastern dry zone of Karnataka. The study sample comprised of six cattle markets and two annual cattle fairs. Ten sellers, ten buyers and five brokers from each market and cattle fair were selected randomly. The study revealed that sale of cows and bullocks in Chikka ballapur were stagnant over the years, whereas in Mulbagal, market sale of bullocks decreased at 39.54%. Prices of both cows and bullocks increased substantially over the years in the study area. Price of cows increased at 14.2 per cent per annum in both the markets and rapid increase in price of bullock was seen in Mulbagal (15.27% per annum) market. Sale of bullocks as well as price was higher in May, June and July months while, cow sales were higher in May and June months and prices were higher in July and August. Efforts have to be made to stabilise sale and price by introducing fairly high competition through facilitating movement of animals to deficit areas.

Key Words: Growth, Composition, Markets, Cattle, Karnataka.

Introduction

Agriculture and animal husbandry are major sources of livelihood of majority of the rural households. Marketing in livestock sector plays an important role to connect producers and consumers. Further, presence of regulated market for trade in animals helps in smooth and efficient transactions. The regulated markets are considered to be responsible institutions in discharging all the functions connected with the sale of outputs, keeping in view the overall interest of the farming community and also the ultimate consumers. Efficient functioning of a market is an essential pre-requisite of a sound cattle marketing system to provide remunerable prices to the seller and buyer. In the recent years, the economy has been liberalized and has allowed the private sector to participate in the trade of livestock. Keeping all these in view, the present study was undertaken to analyze the growth and composition of cattle markets in eastern dry zone of Karnataka.

Materials And Methods

An ex-post facto research design was adopted to study the structure and performance of cattle markets in eastern dry zone of Karnataka. Five regular cattle markets and two annual cattle fairs were selected for the study. One regular cattle market from each district namely, Chandapur, Chikkaballapur, K G Temple, Mulbagal and Sugganahalli from Bangalore Rural, Chikkaballapur, Tumkur, Kolar and Ramanagar districts, respectively, were selected randomly. Among the cattle fairs,

Subramanya cattle fair, Ghati and Siddaganga cattle fair, Tumkur were the larger cattle fairs in the study area, hence they were selected purposively for the study. In each cattle fair ten sellers, ten buyers and five brokers were selected, randomly. From each selected market ten sellers, ten buyers and five brokers were selected randomly. A total of 50 sellers, 50 buyers and 25 brokers from cattle markets and 20 sellers, 20 buyers and 10 brokers from cattle fairs were selected randomly. In total, 70 sellers, 70 buyers and 35 brokers constituted as the sample for the study. Growth is operationalized as increase in number of animals marketed and increase in value of cattle over a period of time. Composition refers to percentage constitution of draft and milch animals in the market. The growth rate of sale of animals and value of cattle were determined from secondary data obtained from APMC, Chikkaballapur and APMC, Mulbagal. The growth rate of volume of sale and value of cattle for selected markets were estimated by using exponential growth function and expressed as compound annual growth rate. To determine seasonality in sale and price of animal, seasonal indices were calculated by least square technique and expressed in tabular form.

Results And Discussion

Growth and composition of cattle markets

Analysis of growth in sale of cows and bullocks in Chikkaballapur market during 2001-02 and 2011-12 and in Mulbagal market during 2006-07 to 2011-12 were calculated and presented in Table 1. Due to mechanization of agriculture, the utility of bullocks had decreased and dependency on pair of bullocks also greatly reduced. This might be attributed to stagnation in sales. Prices of cows and bullock have shown 14.28 per cent and 11.31 per cent increase between 2001-02 and 2011-12. Cow prices increased more rapidly than bullocks by 3.97 per cent. Greater emphasis on dairy by the government and development of cooperative milk societies encouraged dairying, because of which prices of cows had gone up rapidly. Sale of both cows and buffalos had decreased in Mulbagal market. Sale of cows decreased by 1.814 per cent, but this decrease is statistically insignificant indicating that sale of cows was stagnant over the years. Sale of bullocks decreased significantly during the period at a rate of 39.54 per cent. Due to mechanization of agriculture, the utility of

Table 1: Trend in volume of sale and price of cows and bullocks in Chikkaballapur and Mulbagal market

	Chikkaballapur market			Mulbagal market		
Particulars	**Equation**	**CGR**	**t-value**	**Equation**	**CGR**	**t-value**
Volume of sale of Cows	Y=283.0+03t	1.1	1.14^{NS}	y=139.3-0.06t	-1.814	-0.727^{NS}
Volume of sale of Bullocks	Y=142-0.303t	-4.195	-1.392^{NS}	y=103.5-1.2t	-39.54	-9.577*
Price of Cow	Y=8356+303.7t	14.28	16.808*	y=25409+329t	14.27	5.047*
Price of Bullock	Y=5422+235.2t	11.31	4.206*	y=20519+490t	15.27	6.728*

Note: (1) *denote significance at 1 per cent level (2) NS denotes Non significant (3) CGR= Compound growth rate

bullocks has decreased and dependency on pair of bullocks also greatly reduced. This can be attributed to decrease in sales. Prices of both cows and bullocks increased rapidly at a rate of 14.27 per cent and 15.27 per cent, respectively. The results of this study differ with findings of Rooparani (2007), who reported 21.99 per cent and 16.4 per cent growth per annum in arrivals of cows and bullocks in Davanagere market during the period of 1995-96 to 2005-06.

Table 2: Seasonal indices in Sale and Price of cows and bullocks in different markets

	Sale of cows		Sale of bullocks		Price of cows		Price of bullocks	
	Chikka-ballapur	Mul-bagal	Chikka-ballapur	Mul-bagal	Chikk-aballapur	Mul-bagal	Chikka-ballapur	Mul-bagal
January	104.8	100.32	108.57	77.85	84.66	100.00	89.66	92.13
February	96.6	104.94	80.43	103.84	96.67	105.98	142.04	118.30
March	94.4	90.71	71.29	87.08	97.56	95.65	52.67	94.69
April	84.9	83.87	80.22	61.19	115.37	89.25	80.79	78.03
May	109.9	133.79	137.05	146.26	86.35	120.14	51.56	150.52
June	134.1	113.74	141.48	161.52	97.53	107.43	71.27	160.26
July	104.7	104.42	123.35	127.69	101.36	110.84	138.56	120.78
August	98.3	103.77	114.18	109.11	130.26	86.56	93.68	99.70
September	84.2	95.12	41.45	88.22	101.67	101.70	107.07	77.23
October	94.0	92.51	99.70	63.57	82.86	100.81	111.51	70.36
November	86.8	88.99	87.97	82.93	106.14	91.96	218.15	68.70
December	107.3	87.84	84.32	90.74	99.58	89.67	43.04	69.30

Seasonal variation in sale of cows and bullocks (Table 2) divulge that sales were higher during the month of May and June in both Chikkaballapur and Mulbagal markets. During these months of summer, farmers lacked water and fodder forcing them to sell their animals. Similarly, sales in bullocks were higher during May, June and July since it was pre-monsoon season and hence, farmers purchase bullocks for agricultural activities. Analysis of seasonal variation in price of cows (Table 2) revealed that prices were higher in the months of August (130.26) and April (115.37) and lower during October (82.86) and May (86.35) in Chikkaballapur market. In Mulbagal market prices

Table 3: Composition of different Markets

Cattle Market	Cows	Bullocks	Buffalos
Chandapur	60 (71)	25(29)(2	0(0)
Chikkaballapur	319 (73)	92 (21)	25 (6)
K G Temple	120 (13)	800 (87)	0(0)
Mulbagal	250 (86)	42 (14)	0(0)
Sugganahalli	60 (40)	75 (50)	15(10)
Tumkur	250 (1)	30000 (99)	0(0)
Ghati	500 (1)	45000 (99)	0(0)

Note: Figures in parentheses indicate percentage.

were higher in May (120.14) and July (110.84) and lower in the month of December (89.67). Bullocks were found costlier in May, June and July months. Price of bullocks were higher in this period because of their increased demand for agricultural activities.

Perusal of Table 3 depicts majority of animals brought for sale were bullocks in K G Temple market and in cattle fairs, Tumkur and Ghati. In Chandapurmarket, cows were the major animals brought for sale. More number of goats were presented for sale in Chikkaballapur and Sugganahalli. The results show that cattle fairs were major annual events where large scale transaction of bullocks took. The findings differ with the findings of Pandit and Dhaka (2004) and Singh *et al*. (2011).

Conclusion

The study concluded that there was a wide seasonal fluctuation in sales and price of cows and bullocks, and hence, efforts have to be made to stabilise sale and price by introducing fairly high competition through facilitating movement of animals to deficit areas. Price fluctuations can be narrowed down by declaring reasonable price for cow and bullock. Since prices of bullocks were higher in pre-monsoon and monsoon season, advising farmers to buy bullocks in other seasons would reduce their cost on purchase of animals.

Conflict of Interest: All authors declare no conflict of interest.

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