

## **A STUDY ABOUT EXTENT OF SOCIO-ECONOMIC CHARACTERISATION OF MILK PRODUCERS IN SALEM DISTRICT: MILK PRODUCTION AND MARKETING**

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**Abstract:** This paper focuses on socio-economic characterization of milk producers with focus on milk production which was purposively conducted in Salem district of Tamilnadu by following exploratory research design. A total of 150 milk producers (75 from DCS +75 from Private agency) were interviewed with the pre-tested interview schedule. The general impression of the study is that socio-economic variables of the milk producers are expressing relationship to their daily milk production. The regression model fitted using eleven independent variables had accounted for 100.00 per cent of variation in milk production among overall sample milk producers. The plethora of studies on milk production and marketing were reviewed in which socio-economic characterization was not studied. So, this study examines the socio-economic characterization and consistently suggested that socio-economic determinants should be an inbuilt component while framing policies to promote sustainable and profitable Dairying.

**Keywords:** Status of Milk production, DCS, Private players, regression analysis.

### **Introduction**

Milk production in India has risen by a historic 6.25% in 2014-15, reaching 146 million tonne. This increase is indeed a boon if it can be sustained as there is an urgent need to increase the growth rate in milk production, to meet the growing domestic market for milk and milk products and ensure that India remains self-sufficient in milk. (Rajeswaran and Naik, 2016). Compared with other major milk producing countries, like USA and Poland, India is growing its milk production at a faster pace of 4.7% annual growth rate for the last 15 years. This growth is however mostly coming from the increasing number of farms ([www.businesswire.com](http://www.businesswire.com)). According to latest research report Indian Dairy Industry Outlook 2022, with an annual output of 138 million tonnes, India is the largest producer of milk in the world. It is also one of the largest producers and consumers of dairy products. The Indian dairy industry also offers good opportunities to both domestic and foreign investors for entry

and expansion (Hemme et al, 2015). The dearth of information available on characterization of socio-economic variables on smallholder dairy production has led to incongruent policy interventions in the dairy sector. Hence, it is inevitable to know what interventions, either in the Private or public sector, are suitable to make dairying profitable and sustainable.

### Methodology

Multistage stratified random sampling procedure was adopted to select the sample milk producers. Five blocks were selected randomly from 20 blocks of Salem district. Five villages were selected randomly from the selected five blocks. Thirty farmers from one village (15 milk producers from DCS +15 milk pourers of Private agency) were selected. Thus a total of 150 respondents were selected randomly and were interviewed personally with the help of pre-tested semi-structured interview schedule. The collected data were tabulated, categorized and analyzed statistically by multiple linear regression models.

### Results and Discussion

Table 1 reflects the multiple regression analysis of the consequent variable i.e. milk production with eleven predictor variables (Socio-economic variable). The contribution of socio-economic factors towards milk production status among overall sample was studied by using multiple regression analysis models. The regression analysis showed that the value of co-efficient of multiple determination was found highly significant ( $R^2= 1.00$ ). All the eleven independent variables considered in the analysis had accounted for 100.00 per cent of variation in milk production status among overall sample of respondents for both milk producers of DCS and private agency. The results in Table 1 indicate that milk consumption, milk sales and income from dairying showed positive and highly significant ( $P<0.01$ ) contribution. The other socio-economic variables fitted in this model did not contribute at statistically significant level in influencing milk production status of the respondents. It's important to note that Sharma (2015) reported that Farmers supplying milk to the organized sector are said have a higher income on account of higher milk yields while farmers supplying milk to the unorganized sector receive a higher price.

**Table 1: Extent of relationship of socio-economic variables to milk production**

S.No	Variables	DCS “r”	Private “r”
1	Age	.000	.000
2	Family size	-.002	.008

3	Education	.003	.004
4	Land holding	-.002	-.002
5	Experience in dairying	-.001	.001
6	Herd size	-.002	-.006
7	Income from agriculture	4.642E-7	4.051E-7
8	Income from dairying	-1.057E-5**	7.816E-6**
9	Milk consumption	.986**	.960**
10	Milk sales	1.001**	.997**
11	Distance of MPC	.014	-.041

\*\* Significant at 0.01 level of probability

Association between the independent variables containing nominal and ordinal data with milk production was analyzed by using  $X^2$  test and results are presented in Table 2. The Table indicates that Age has significant association with milk production status at 0.05 level of significant. On the other hand milk producers belonging to private agency Primary occupation and Secondary occupation has significant association with milk production status at 0.01 level

**Table 2: Association between the independent variables with milk production**

S.No	Variables	DCS “ $X^2$ value”	Private “ $X^2$ value”
1	Sex	-46.22*	38.39
2	Primary occupation	56.30	97.82**
3	Secondary occupation	71.45	167.77**

\* Significant at 0.05 level of probability

\*\*Significant at 0.01 level of probability

**Table 3: Prioritization and characterization of socio-economic variables influencing milk production of milk producers of DCS**

Factor	Variables	Factor Loading	% Variance	Re-Named Factor
1	Income From Agriculture	0.803	25.99	Economic assets
	Land Holding	0.796		
	Income From Dairying	0.755		
	Herd size	0.737		
2	Family Size	0.792	17.76	
	Milk Consumption	0.705		
3	Distance of MPC	0.785	9.5	Situational factors
	Experience in Dairying	0.594		
4	Education	0.792	42.92	Socio-personal factors
	Age	-0.764		

### **Prioritization and characterization of socio-economic variables influencing milk production of milk producers of DCS**

The role of dairy farmers is very important in the socio-economic development of the society (Chaudhari et al., 2007). The first factor was named as “*Economic determinants*” which interlaced with five variables viz., Income from agriculture, Land holding, Income from dairying and Herd size. The per cent of variance explained by this factor has been 25.99. The second factor consisted of two variables viz., family size and milk consumption. It may be named as “*Socio-personal factors*”. This factor explained 17.76 per cent variance. The third factor influencing milk production was named as “*situational attributes*” as it comprised of Distance of MPC and Experience in dairying. It explained the nine per cent of variance.

### **Prioritization and characterization of socio-economic variables influencing milk production of milk producers of private**

The first factor influencing milk production was named as “*Livestock capital*” convoluted with three variables viz., milk sales, Income from dairying and herd size. It exerted the variance of 13.92 %. The second factor was reticulated with three variables namely Income from agriculture, Land holding and Milk consumption which was renamed as” *Agriculture land capital*”. This factor explained 20.31 % variance. The third factor was encompassed with two variables viz., Age, education and family size. The factor can be named as “*Socio-personal attributes*”. This factor exerted the highest percentage of variance (49.69). The fourth factor was encompassed with two variables viz., Distance of MPC and experience of dairying. The factor can be named as “*Socio-personal attributes*”. This factor exerted 9.89 per cent variance.

**Table 4: Prioritization and characterization of socio-economic variables influencing milk production of milk producers of private**

Factor	Variables	Factor Loading	% Variance	Re-Named Factor
1	Milk Sales	0.959	13.92	<i>“Livestock capital”</i>
	Milk Production	0.954		
	Income From Dairying	0.871		
	Herd Size	0.628		
2	Income From Agriculture	0.906	20.31	<i>Agriculture land capital”</i>
	Land Holding	0.892		
	Milk Consumption	0.465		
3	Age	-0.817	49.69	<i>Socio-</i>

	Education	0.810		<i>personal attributes</i>
	Family size	0.502		
4	Distance Of MPC	0.815	9.89	<b>Situational attributes</b>
	Experience In Dairying	0.692		

### Conclusion

From the overall study it can be concluded that except age other variables viz., Family size, Education, Land holding ,Experience in dairying, Herd size, Income from agriculture, Income from dairying, Milk consumption, Milk sales and Distance of Milk procurement centre influenced the milk production status of milk producers.

This study recommends that the Milk Procurement agencies (Co-operatives and Private agency) should play an impeccable role to promote the landless people and small holders' livelihood through profitable and sustainable dairying by providing due consideration to socio-economic indicators while formulating and implementing suitable strategies for improving the milk production status as well as productivity of milch animals.

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