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Measurement of Household Socio-Economic Status

Introduction

SOCIO-ECONOMIC status of the household influences the behaviour of individuals within the societies. It has, therefore, attracted the attention of sociologists and social scientists who are interested in the differential patterns of human behaviour. Measurement of socio-economic status (SES) of households has assumed paramount importance in recent times. Demographers are also finding it a useful tool as it provides insight into demographic behaviour of individuals such as their attitude towards family size and family planning practice. The main problem is finding viable measurement of socio-economic status. This involves the formulation of suitable scale.

Many different scales have been formulated for the measurement of SES of individuals in a population. The items selected as the constituents of SES differ greatly among them. The commonly used SES scales are : (1) socio-economic status scales for urban families by Kupuswamy (1962) and (2) socio-economic status scale for rural families by Pareek and Trivedi (1965) includes occupation, education, and social participation of the head of the household, the caste of the household, the land owned and the characterisation of household which includes type, size, and other distinctive features of the household. Those items relating both to head of the household and household itself have been graded.

In a document on socio-economic classification in research schemes the Indian Council of Medical Research (ICMR) 1966, has critically examined the existing socio-economic status classification. The document observes that occupation, household income, education, and caste have been used in different scales. It further states that most scales use information related to household or the respondent in respect of education and occupation.

In a study by Nutrition Foundation of India (1984), an index for educational status of household is used. They have considered a person with education up to secondary level as educated and the proportion of educated adults among all adults (aged 15+) in the family has

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been treated as an indicator of household educational status. Households with not a single member educated were said to be low educational status families/households, while those with more than half educated members were treated as high educational status families.

In the present analysis we have made a modest attempt to develop a socio-economic index for the household as a unit giving the weightage to different socio-economic attributes of individuals in the household. Our sample consists of both rural and urban households and so only the aspects which are common and did not interfere in the classification of socio-economic status were taken into account and a scale was developed for the measurement of SES of households.

Study Design, Data, and Sample

The data utilised for the analysis in the study is drawn from a survey conducted in Chikmagalur district of Karnataka state (Patil 1986). The main object of the study was to make direct estimates of birth, death, and contraceptive prevalence rates at the district level.

A multistage random sampling design was resorted. In the first stage the district was divided into four Stratum, Stratum I and II representing urban areas and III and IV representing rural areas. Stratum I included district headquarters, Stratum II all other urban areas. Stratum III included villages with a government medical institution like primary health centre or primary health unit being located in the village while Stratum IV included all other villages. The predetermined sample size was 4000 households. However, the actual coverage was 4286 households.

The data was gathered by a team of trained interviewers through a structured questionnaire. The questionnaire included household information such as religion, income, land ownership and the socio-economic details of members of the household such as their age, marital status, educational attainment, occupation etc.

Area of the study: Chikmagalur district, the area of the present study, is in the southern part of the state of Karnataka. It is a hilly region and receives heavy rainfall. At the time of the survey the district population was over 9 lakh which accounted for over 2 percent of the state's population. Socially the district is much ahead of the state with literacy level being nearly 44 percent as against 38 percent for the state as a whole as per 1981 census. Economically also the state is pre-eminently well known for its enchanting hills, peaks, valleys, falls, forests etc. The district is characterised by excellent cash crops of coffee, cardamom, arecanut etc.

Methodology

Initially it was proposed to include caste, educational status of the household, occupation and the type of house for computing SES of households. Occupation was later deleted because of the difficulty in its objective classification, while type of house was ignored as the data did not describe the structure of the house. So ultimately we have included the per capita income, the caste and the educational status.

As regards the educational status it was felt that the educational status of the household as a whole will be a better index than the educational status of only the head of the household. We believe that the education of all members of the household has greater impact on different aspects of life as compared to that of an individual member. Our index accordingly represents the average educational status of the household based on the literacy level of all adults aged 15 years and above. Since this gives due weightage to the educational level of individual members it is neutral to variation in their size and age structure among the households.

Similarly in place of total household income, per capita annual income has been used. In view of variation in family size, per capita income is a better measure than the total income.

The empirical evidences show that caste continues to be an important factor that influences the behaviour of the individuals and has been an important indicator of social status of the household and hence this has been included as one of the factors in the measurement of socio-economic status.

Thus the average educational status, per capita income, and caste were taken to determine SES of households. Scores were assigned to each of these items which were merged to obtain the SES score.

The range of total score was divided into four equal parts covering 25% of it (range) as described latter. These were designated as lower SES, lower middle SES, middle SES, and upper middle SES. While deciding these categories, care was taken that each household could be placed only under one category. Based on the sample testing, following scoring and categorisation pattern was used for computing SES of households.

(A)	*Per capita annual income*	*Score points*
	Upto Rs. 350	1
	Rs. 350-750	2
	Rs. 75 1-2000	5
	Rs. 200 1-2400	7
	Rs. 2401 and more	9

In the present scale households below poverty line (households with an annual household income of Rs. 6000 or less were considered as being below poverty line in 1985-86) (the first two categories) have been given a lower score because they cannot even meet the basic necessities of life (food, clothing and shelter) and hence their social and economic participation is limited. The next higher categories are assumed to maintain a certain standard of living and thus participate in social and economic life of society and hence higher score has been allotted.

(B)	*Religion/Caste*	*Score points*
	Scheduled caste/Tribe	1
	Backward castes	2
	Musl ims/Christians	3
	Forward castes	5

Since higher prestige and social participation are associated with upper castes, these have been given highest score of 5. As scheduled castes and tribes (SC/ST) have always been at the lowest rung of the society they have been given the lowest score point of 1 only, and the backward castes which are also socially and economically backward but who are considered to be socially higher than SC/ST are placed above SC/ST group with 2 score points and Muslims and Christians are placed in between forward and backward castes with a score point of 3 as large majority of Muslims and Christians had occupation falling outside agriculture and hence the reasoning is that these groups are above the backward classes.

(C) Average educational status of the household (members aged 15 years and above). Total score was obtained as follows.

	Score point
Members illiterate	1
Members literate	4
Members literate primary	7
Members literate secondary	10
Members literate degree	12

The numbers obtained for those five categories were added to obtain the total score. The average educational status of the household was obtained by dividing the total score by the number of members aged 15+.

For the determination of social and economic status, the score points obtained for all the three, i.e. per capita monthly income, caste and average educational status of household members aged 15+ were added up. The total range, i.e. 3-26, was divided into four categories using the following scale.

Categorisation scale was devised in which the difference between the minimum and the maximum score of the said range was obtained and further divided into four equal parts. To form categories the minimum score in the range was added to the values calculated above. The following four groups of SES were obtained.

Lower SES	3 to 8.75
Lower middle SES	8.75 to 14.50
Middle SES	14.50 to 20.25
Upper middle SES	20.25 to 26

Findings and Discussion

In the present study, an attempt has been made to develop a scale for the measurement of Socio Economic Status (SES) of the households using per capita income, caste and average educational status of household members aged 15 years and above. In doing so a differential

priority has been given to these constituent factors giving highest to education, followed by income and then by caste.

Studies conducted in 1970s show that income followed by occupation have been given the top priority, for instance Kuppuswamy (1962) had attached importance to income and occupation. Education though included in the scale in both these studies was kept at the third place. However, as most of us are aware that a great deal of socio-economic change is going on in both the rural and urban sectors of India. The most important social change which is visible is the rise in the levels of literacy both in rural and urban areas. Recent studies have established the importance of education over income and caste. Gopalan (1983) has compared the birth, death and infant mortality and child mortality rates in four of the Indian states (Kerala, Punjab, U.P. and Bihar). The study revealed that these health indicators reflect a much better picture in Kerala (a state with high education level but economically poor) than Punjab (a state with higher income but lower education level). However the situation was still disappointing in U.P. (Uttar Pradesh) and Bihar (the states low in income and education). Importance of education is seen from studies of Jain (1985), Singh *et* a/.(1985) and Pathak and Murthy(1985).

Thus based on the scoring and categorisation procedures described earlier results of the present study have been presented in Table 1.

TABLE 1: DISTRIBUTION OF HOUSEHOLDS OF THE SAMPLE SOCIO-ECONOMIC STATUS (SES)

Stratum	*N*	*Lower SES*		*Lower middle SES*		*Middle SES*		*Upper middle SES*	
		No.	%	*No.*	%	*No.*	%	*No.*	%
I	260	Nil		21	8.1	103	39.6	136	52.3
II	601	Nil		101	16.8	287	47.7	213	35.4
III	550	Nil		447	81.0	22	4.0	81	14.7
IV	2875	214	7.4	2183	75.9	121	4.2	357	12.4
Total	4286	214	5.2	2752	64.2	533	12.4	787	18.4

Mean score 14.2 S.D. 5.4 *X* square 1618.0 $p < .001$ Median score 17.0

Stratum I refers to the district headquarters (Chikmagalur), Stratum II refers to other urban areas of the district. Stratum III includes large villages with at least one government health Institution like Primary Health Centre or Primary health unit while villages in Stratum IV include relatively smaller villages with no health facility located in the village.

The distinguishing feature of Table 1 is that except in Stratum IV there were no households in lower SES category. It is seen from the Table that in Stratum I more than half of the households (52%) were drawn from the upper middle class, if we include middle class along with upper middle class the proportion will be as large as 92 percent and that 8 percent

of the households were found in lower middle SES category. It is interesting to note that in Stratum II the proportion of households (HHS) in lower middle SES category is twice higher (16%) compared to Stratum I. The proportion of HHS in lower middle SES category in Stratum III which represents the rural sector was as high as 81 percent while less than a fifth of HHS were drawn from middle and upper middle category. Stratum IV which includes realtively smaller villages is the only sector characterised by lower SES category (HHS) (7%). 76 percent of HHS were drawn from lower middle group and only 16 percent HHS belonged to middle and upper middle SES category.

The analysis clearly reflects the schism between the rural and urban sectors in respect of the socio-economic status of households. As the urban areas provide ample opportunities for occupations falling outside agriculture, the urban incomes are much higher than rural incomes and secondly the urban occupations require higher skills and hence the educational levels of the urban population is higher than that of rural population. It is, therefore, reasonable to expect a higher proportion of HHS in the category of middle and upper middle SES. It is interesting to note that while differentials do exist between the rural and urban strata, both the urban and rural strata exhibit remarkable homogeneity within the strata.

On application of Chi-square test, the differentials among different groups were found to be significant at .001 level showing large heterogeneity. This is apparent from the large variation observed between the SES of households in the rural and urban sectors.

TABLE 2 (A): DISTRIBUTION OF SAMPLE BY SOCIO-ECONOMIC STATUS USING DIFFERENT METHODS OF CLASSIFICATION

Method of Classification	N	Lower SES		Lower Middle SES		Middle SES		Upper Middle SES	
Stratum-1		No.	%	No.	%	No.	%	No.	%
(A) Mean and SD									
Range of score				3-10.9		10.9-19.9		19.9-28	
Dist. of Sample	260	Nil		21	8.1	103	39.6	136	52.3
(B) Median and SD									
Range of score				3-15.1		15.1-24.1		24.1-33.0	
Dist. of Sample	260	Nil		21	8.0	239	92.0	Nil	
(C) Equal Division' of Range									
Range of score		3-8.75		8.75-14.5		14.5-20.2		20.2-26	
Dist. of Sample	260			21	8.0	103	39.6	136	52.3
Mean= 19.9	Median = 24. 1			SD = 9.0					

It is seen from Table 1 that there are large variations in the distribution of households in different SES categories in each stratum. For instance in stratum I and II, a very large

majority of more than 90 percent belonged to middle and upper middle SES category, while in stratum III and IV a large majority of HHS belonged to lower middle SES group. The mean and the median is greatly affected by this large variation found between the rural and urban stratum. It was, therefore, thought desirable to carry out equal division distribution of the range independent of them and compare the same with classification of HHS by mean minus standard deviation (SD), median minus SD was also studied so as to know whether the distribution of households in various SES categories match with one another. Distribution of sample HHS by all the three methods in each stratum, viz.; stratum-I the district head quarters, Stratum-11 all other urban centres, Stratum-Ill villages with a medical institution located within the village, and Stratum-I V all other vil lages is compared in Tables 2(A), 2(B), 2(C) and 2(D).

TABLE 2 (B)

Methods of Classification	N	Lower SES		Lower Middle SES		Middle SES		Upper Middle SES	
Stratum-II		No	%	No	%	No	%	No	%
(A) Mean and SD									
Range of score				3-14.3		14.3-18.4		18.4-22.5	
Dist of Sample	601	Nil		101	16.8	287	47.7	213	35.4
(B) Median and SD									
Range of score				3-18.7		18.7-22.8		22.8 -26.9	
Dist of Sample	601	Nil		388	64.5	nil		213	35.4
(C) Equal Division of Range									
Range of score		3-8.75		8.75-14.5		14.5-20.2		20.2-26	
Dist of Sample	601			101	16.8	287	47.7	213	35.4
Mean =18.4	Median = 22.8		SD = 4						

It is seen from Table 2(A) that in stratum-I a very large majority of over 90 percent of households belonged to middle and upper middle SES category by the three different methods tried. However there are some variations in the estimation of households by three methods belonging to three different SES categories. It is seen that as per the method equal division of range 8 percent of the households are in lower middle SES category, followed by nearly 40 percent of the households in Middle SES category while the majority of over 52 percent households were found in upper middle SES category, it is gratifying to note that these results perfectly match by the method Mean minus SD. However, the estimates through Median minus SD not only did not match but showed the absence of households in upper middle SES category.

TABLE 2 (C): DISTRIBUTION OF SAMPLE BY SOCIO-ECONOMIC STATUS USING DIFFERENT METHODS OF CLASSIFICATION

Method of Classification	N	Lower SES		Lower Middle SES		Middle SES		Upper Middle SES	
Stratum-Ill		No	%	No	%	No	%	No	%
(A) Mean and SD									
Range of score		3-7.9		7.9-13.5		13.5-19.1		19.1-24.7	
Dist of Sample	550	Nil		447	81.0	22	4.0	81	14.7
(B) Median and SD									
Range of score				3-13.1		13.1-18.7		18.7-24.3	
Dist of Sample	550	Nil		447	81.0	22	4.0	81	14.7
(C) Equal Division of Range									
Range of score		3-8.75		8.7:	5-24.5	14.5-20.2		20.	2-26
Dist of Sample	550	Nil		447	81.0	22	4.0	81	14.7
Mean =13.5	Median =18.7			SD =	5.6				

TABLE 2 (D)

Method of Classification	N	Lower SES		Lower Middle SES		Middle SES		Upper Middle SES	
Stratum-lV		No	%	No	%	No	%	No	%
(A) Mean and SD									
Range of score		3-10.4		10.4-12.9		12.9-17.9		17.9-	20.9
Dist of Sample	2875	214	7.4	2183	75.9	121	4.2	357	12.4
(B) Median and SD									
Range of score		3-15.0		15-17.5		17.5-20.0		20-2	2.5
Dist of Sample	2875	Nil		2397	83.4	121	4.2	357	12.4
(Q Equal Division of Range									
Range of score		3-8.75		8.75-14.5		14.5-20.2		20.2	-26
Dist of Sample	2875	214	7.4	2183	75.9	121	4.2	357	12.4
Mean =12.9	Median =17.5			SD = 2.5					

The findings from Table 2(B) which refers to Stratum-II; the urban areas of the survey region show similar results as in respect of Stratum-I. As for instance the estimates derived from equal division range and Mean minus SD match perfectly with each other, while the estimates derived through Median minus SD differ considerably with no households found in Middle SES category.

Table 2(C); Stratum-Ill which refer to villages with a medical institution located in the village show that the estimates of households derived by al 1 the three methods perfectly match with each other. In respect of Stratum-IV which refers to other villages some discrepancy is noticed in respect of estimates derived through Median minus SD, however the estimates derived through other two methods perfectly match with each other.

The cross classification of sample households by income and education by residence done in the main report (Patil 1986) had earlier indicated that a majority of households in the urban areas belonged to middle and upper middle SES category, while in the rural areas a majority of households were found in lower and lower middle SES category.

The results from the application of the three methods stratum-wise conform to our early findings that a large majority of households in the urban sector belonged to middle and upper middle SES category while in the rural sector it was the opposite with a large majority of households found in the lower and lower middle SES category. As per the analysis a clearer picture is reflected by the method equal division of range and this method was, therefore, used in the present study.

The method adopted was further tested through a detai led study of the two categories low plus lower SES and middle plus upper middle SES. The data clearly indicate apparent differentials between the rural and urban sectors in respect share of households in different SES categories while rural sector has a majority of households in lower SES category the urban sector is characterised by households in middle and upper middle category. Similar differentials were observed in each of the constituent factors of SES, i.e., education, income and caste. Education and income had higher score points in urban than rural sector.

The method adopted here is a convenient tool to get an insight into the SES characteristics of households in rural and urban sector.

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